ADB

Technical Assistance Report

Project Number: 48387-001
Regional—Capacity Development Technical Assistance (R-CDTA)
December 2014

Updating and Constructing the Supply and Use Tables for Selected Developing Member Economies

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
DMC	–	developing member country
ERD	–	Economics and Research Department
ERDI	–	Development Indicators and Policy Research Division
GDP	–	gross domestic product
ICP	–	International Comparison Program
IOT	–	input–output table
NIA	–	national implementing agency
NSO	–	national statistics office
SNA	–	system of national accounts
SUT	–	supply and use table
TA	–	technical assistance
UN	–	United Nations

NOTE

In this report, "$" refers to US dollars.

Vice-President	B. N. Lohani, Knowledge Management and Sustainable Development
Director General	S. J. Wei, Economics and Research Department (ERD)
Director	R. Hasan, Development Indicators and Policy Research Division, ERD
Team leader	C. Palanyandy, Lead Statistician, ERD
Team member	M. J. Mariasingham, Statistician, ERD
	E. Capilit, Economics and Statistics Officer, ERD

CONTENTS

CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data **Project Number:** 48387-001

Project Name	Updating and Constructing the Supply and Use Tables for Selected Developing Member Economies	**Department /Division**	ERD/ERDI
Country	REG	**Executing Agency**	Asian Development Bank
Borrower	n/a		

2. Sector	**Subsector(s)**	**ADB Financing ($ million)**
✓ Industry and trade	Industry and trade sector development	0.30
	Trade and services	0.20
Public sector management	Economic affairs management	0.25
	Total	**0.75**

3. Strategic Agenda	**Subcomponents**	**Climate Change Information**	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project	Low
Regional integration (RCI)	Pillar 2: Trade and investment		
	Pillar 4: Other regional public goods		

4. Drivers of Change	**Components**	**Gender Equity and Mainstreaming**	
Governance and capacity development (GCD)	Institutional development	No gender elements (NGE)	✓
	Organizational development		
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas		
	Knowledge sharing activities		
	Pilot-testing innovation and learning		
Partnerships (PAR)	Bilateral institutions (not client government)		
	Implementation		
Private sector development (PSD)	Promotion of private sector investment		
	Public sector goods and services essential for private sector development		

5. Poverty Targeting		**Location Impact**	
Project directly targets poverty	No	Regional	High

6. TA Category: B

7. Safeguard Categorization Not Applicable

8. Financing

Modality and Sources	**Amount ($ million)**
ADB	**0.75**
Sovereign Capacity development technical assistance: Technical Assistance Special Fund	0.75
Cofinancing	**0.00**
None	0.00
Counterpart	**0.00**
None	0.00
Total	**0.75**

9. Effective Development Cooperation

Use of country procurement systems	Yes
Use of country public financial management systems	Yes

I. INTRODUCTION

1. The compilation of supply and use tables (SUTs) is one of the critical recommendations in the United Nations (UN) System of National Accounts (SNA). SUTs are considered the most integrated framework showing the sources of supply of goods and services—produced in the domestic economy or imported—and where and how these are used, either for intermediate consumption or final use.[1] Likewise, SUTs provide the basic framework for the construction of national and international input–output tables (IOTs). The latter are an essential input into the analysis of a variety of important economic phenomena. An important application of an international IOT is in improving the economic content of standard trade statistics.[2] International IOTs are also key to understanding structural transformation across economies; measuring the extent of regional integration in production and trade; and documenting key aspects of vertical specialization and how certain policy shifts, such as reductions in tariffs and transport costs, can lead to extensive vertical specialization, large trade growth, and large gains from trade. These are relatively new knowledge frontiers for which data is lacking in developing member countries (DMCs) of the Asian Development Bank (ADB).

2. The proposed technical assistance (TA) is part of the continuing efforts of ADB's Economics and Research Department (ERD) to support evidence-based decision making with improved and detailed information on national accounts estimates. Its outputs will provide the tools for analyzing a range of economic phenomena, including the analysis of global value chains. The TA will also enable ERD to continue its collaborative statistical work with national statistics offices (NSOs), and to support and sustain the development of IOTs for guiding policy making on both inclusive growth and regional cooperation and integration issues. The design and monitoring framework is in Appendix 1.[3]

II. ISSUES

3. In April 2008, the UN Statistical Commission recommended the adoption of the 2008 SNA to bring the national accounting framework in line with new developments and to meet the increasing demands of data users. It acknowledged that the economic environment in many economies had evolved significantly since the development of the 1993 SNA and that recent methodological research had led to improved methods of measuring some of the more difficult components of the national accounts. The adoption of the 2008 SNA also supports the implementation of the Regional Program on Economic Statistics endorsed by the heads of NSOs of member economies at the UN Economic and Social Commission for Asia and the Pacific's Committee on Statistics, of which ADB is a member.

4. In 2012 ADB published a research study on the Supply and Use Tables for Selected Economies in Asia and the Pacific, under a regional TA project.[4] It contains national SUTs for 18 economies based on the 1993 SNA. Being a first for most participating economies, the SUTs varied in their reference year, with some going as far back as 2005. Further, in the recently

---

[1] The SUT framework ensures consistency of data at the detailed product level between industries and products (intermediate consumption), and final uses, and the reconciliation of estimates of gross domestic product from the production, expenditure, and income approaches.

[2] The growth of international trade in intermediate inputs means that trade statistics can give a misleading picture of the real patterns of production behind world trade. International IOTs based on high-quality SUTs allow trade patterns to be decomposed into components that better reflect the underlying location of the value addition linked to exports.

[3] The TA first appeared in the business opportunities section of ADB's website on 26 November 2014.

[4] ADB. 2013. Technical Assistance Completion Report: *Adopting the Supply and Use Framework towards 1993 System of National Account Compliance in Selected Developing Member Countries.* Manila (TA 6483-REG); ADB. 2012. *Supply and Use Tables for Selected Economies in Asia and the Pacific, A Research Study*. Manila.

concluded 2011 International Comparison Program (ICP), only 5 out of 22 economies have adopted the 2008 SNA; 13 are compliant with the 1993 SNA; and 4 are at different levels of 1968, 1993, and 2008 SNA compliance. There is a need therefore, to sustain the gains of the research study to further develop the statistical capacity and skills acquired in SUT compilation; and strengthen data sources to fill data gaps at product, industry, and enterprise levels. It is also critical to assist countries in adopting the recommendations of the 2008 SNA in compiling the benchmark and annual national SUTs to further improve statistical capacity building in ADB's developing member economies.

5. Apart from being important for national economic analyses and planning, consistent and internationally comparable SUTs are imperative in a highly globalized market. SUTs are critical in constructing international IOTs used for inter-country analysis of trade in value addition and global value chains. Despite the critical role of input–output statistics in both national accounts and economic analysis, comparable and consistent IOTs for Asian economies in existing international IOT databases[5] are limited and are available only for certain benchmark years. The TA will not only help economies adopt the 2008 SNA to the extent possible, it will also provide new internationally comparable data for consistent industrial analysis at a detailed sector level and international IOTs over time. It will maximize the benefits of having the national perspective of economies to address the underlying limitations of existing international IOT databases, especially in terms of understanding the uniqueness of each economy and in further decomposing enterprise and household data in relation to national and international trade and transactions.

III. THE CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE

A. Impact and Outcome

6. The impact will be increased implementation of international standards in national accounts compilation and increased comparability of data across economies. The outcome will be improved capability of NSOs for measuring levels of economic output and increased availability of SUT data for upstream and downstream analysis and research. By the end of the project, it is envisaged that (i) all participating economies are able to compile benchmark and/or updated SUTs based on latest data and in accordance with international standards, (ii) gross domestic product (GDP) estimates of participating economies will incorporate 2008 SNA recommendations to the extent possible, (iii) reliable and accurate data for measuring and monitoring economic output will be made available, and (iv) outputs are used for time series and cross-country analysis of economic outputs and structures for the region.

B. Methodology and Key Activities

7. Twenty-one ADB member economies will be invited to participate in the TA.[6] To achieve the desired outcome, the TA will have five major activities: (i) preparatory work; (ii) updating and

[5] In terms of coverage, the Institute of Developing Economies–Japan External Trade Organization covers seven DMCs; the Organization for Economic Cooperation and Development, six; and the European Commission for the World Input–Output Database, three.

[6] The 21 economies are: Bangladesh; Bhutan; Brunei Darussalam; Cambodia; People's Republic of China; Fiji; Hong Kong, China; India; Indonesia; Lao People's Democratic Republic; Malaysia; Maldives; Mongolia; Nepal; Pakistan; Philippines; Singapore; Sri Lanka; Taipei,China; Thailand; and Viet Nam. Brunei Darussalam; Hong Kong, China; Singapore; and Taipei,China will be requested to fund their own participation. Except for the Lao People's Democratic Republic, Pakistan, and the Philippines, these economies participated in ADB. 2008. *Technical Assistance for Adopting the Supply and Use Framework Toward 1993 System of National Accounts Compliance in Selected Developing Member Countries*. Manila (TA 6483-REG, completed in December 2013). The

constructing of the benchmark national SUTs based on the 2008 SNA recommendations; (iii) estimating the time series annual national SUTs for selected economies incorporating the latest available data; (iv) constructing the time series Asian international IOTs that are harmonized with national SUTs, and bilateral trade statistics; and (v) conducting regional and in-country technical discussions, workshops, and training for national accounts staff, statisticians, and economists in economies on compiling and updating SUT and GDP aggregates following the 2008 SNA recommendations.

8. **Preparatory work** will involve the recruitment of consultants, building partnerships with economies, and a project inception workshop. Bearing in mind the detailed data requirements for implementing the TA, it is recommended that participating economies be grouped by level of compliance and scope of implementation of the SNA; and the availability of a SUT either as produced by the country or as an output of ADB's TA on Adopting the Supply and Use Framework Toward 1993 System of National Accounts Compliance in Selected Developing Member Countries. Assessment of economies based on these two criteria will help determine data availability, the level of statistical capacity, and the type of assistance that will be required to produce the outputs. Initial institutional capacity assessment will be conducted by ERD, in consultation with the economies. Since it will also involve data assessment and SNA compliance review, the correspondence tables of international standards and classification systems[7] developed by ERD under the said TA will be updated to incorporate the latest available standards from the UN Statistics Divisions.

9. Estimating the **updated and/or benchmark national SUT for participating economies based on the 2008 SNA recommendations** will include the review of concepts and methodologies related to the 2008 and 1993 SNA recommendations. Economies' sources of products (domestic production plus imports) will then be identified and classified in the supply tables. Likewise, the uses of the products (intermediate consumption, final consumption, and export) and other primary factors, as well as the derivation of gross value added (the difference between gross output and intermediate consumption) will be developed to construct the use tables. The two tables will be linked to form a matrix table such that the total supply of a product will always be equal to the total use of that product. For the 18 economies that were part of ADB's TA for Adopting the Supply and Use Framework toward 1993 System of National Accounts Compliance in Selected Developing Member Countries, the possibility of increasing the level of disaggregation of the SUTs from 51 products by 32 industries will be considered, apart from updating their benchmark SUTs using the latest available data. For the other three economies, benchmark SUTs will be constructed using ADB's phased approach to SUT compilation, which was instrumental for the successful estimation of the SUTs in the said TA. Conduct of censuses and surveys vary from country to country, which implies that the reference years for updated and benchmark SUTs at this stage will be different across economies.

---

same economies were also part of the 2005 and 2011 ICPs and, at a meeting of the heads of national implementing agencies in April 2014, signified interest in sustaining collaborative work on the ICP, including improvements in national accounts estimation. Myanmar, although part of the 2011 ICP, is excluded from the TA to avoid duplication with the ongoing ADB. 2013. *Technical Assistance to the Republic of the Union of Myanmar for Capacity Development of the National Statistical System*. Manila (TA 8377-MYA), which includes development of national accounts with SUTs as one of its major outputs.

[7] The UN Statistics Division maintains the international classifications of activity, product, and expenditure according to purpose, while the World Trade Organization maintains the Harmonized Commodity Description and Coding System, also known as the Harmonized System of tariff nomenclature (latest of which is 2007). Correspondence tables between each classification system, where applicable, are available from the UN Statistics Division website at http://unstats.un.org/unsd/cr/registry/regot.asp?Lg=1.

10. The **time series annual national SUTs for selected economies incorporating the latest available data** will be estimated. The TA will also utilize the results of household and enterprise (economic) surveys and censuses, and maximize the use of administrative sources, to minimize response burden and reduce costs. The updated and benchmark SUTs, produced by each economy at the earlier stage, will be the starting point for estimating the time series SUTs. Upon evaluation of available methods for updating SUTs, and assessment of the availability of additional data required for constructing national and international IOTs, time series national SUTs will be estimated for selected economies. To maintain consistency with official statistics and increase the reliability of results, estimation of the time series SUTs will be harmonized with the published national accounts estimates of each economy. Evaluation and reconciliation of trade statistics are also crucial at this stage given that international IOTs will be constructed.

11. In constructing the **time series annual international IOTs that are harmonized with national SUTs and bilateral trade statistics,** the national SUTs will serve as the building blocks for constructing the proposed international IOTs. This is a similar to the approach adopted in the construction of the World Input–Output Database. Nonetheless, alternative approaches for transforming SUT to IOT will also be explored, apart from adopting the fixed-product sales assumptions used in the construction of the World Input–Output Database. Similarly, identification of errors followed by manual and mechanical balancing, adopted by the Institute of Developing Economies–Japan External Trade Organization in constructing the Asian IOTs will also be explored. To the extent possible, the Association of Southeast Asian Nations (ASEAN) Plus Three economies will be included in the initial set of international IOTs. For other major trading partners of economies in the region and the rest of the world, estimates will be obtained from existing international IOT databases or other sources, as deemed necessary.

12. **National accounts staff, statisticians, and economists in economies** will be **trained on estimating and updating SUT and GDP aggregates following the 2008 SNA recommendations** through conduct of regional and in-country technical discussions, workshops, and training as well as on-line technical assistance. ADB's phased approach to SUT compilation, as taken in the TA for Adopting the Supply and Use Framework toward 1993 System of National Accounts Compliance in Selected Developing Member Countries, which worked well without overwhelming the national implementing agencies (NIAs), will be used again. This phased implementation means that regular technical discussion and workshops at each stage of compilation will be conducted. The approach encourages participative, consultative, and learning-by-doing practices that are essential for the success of the project, the sustainability of the national SUT compilation, and the regular updating of international IOTs.

13. ADB will also convene periodic regional meetings of heads of NIAs and/or national coordinators and technical staff to review the status of TA implementation, provide inputs into the evaluation of the quality of country data submitted, and provide guidance toward further improving the TA processes and/or outputs. Where identified methodological and data issues are country-specific and cannot be resolved in regional meetings and/or workshops or via e-mail or videoconferencing, country missions may be conducted. Additionally, TA project specialists and/or staff will participate in meetings and/or seminars organized by the UN Statistics Division and other relevant international organizations to keep abreast of current developments relevant to the TA, such as new or revised international standards. The latter is considered within the scope of the TA because it will increase the relevance of the project outputs.

14. The TA will use several avenues to disseminate good practices and lessons learned such as (i) sharing experiences and discussing issues related to data quality and estimation

procedures during regional workshops, (ii) in-country technical missions, (iii) participation in regional and international meetings and/or seminars in areas related to the TA, (iv) publication of working papers and notes, (v) publication of the TA results, (vi) Communication, coordination and collaboration Tools Website on SNA for knowledge-sharing, and (vii) maintenance of the data and research web page in the ADB portal.

C. Cost and Financing

15. The TA is estimated to cost $750,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). The cost estimates and financing plan are in Appendix 2. The governments of NIAs will provide counterpart support in the form of office space, staff resources, and other in-kind contributions. Where applicable, cost sharing and eligibility of expenditures for ADB financing[8] will be adhered to.

D. Implementation Arrangements

16. ADB will be the executing agency, and ERD will handle the TA administration in collaboration with the NSOs of selected economies, which will be the NIAs over a period of 3 years. The NIAs will coordinate country-level activities. Where costs of country-level activities (such as data collection, country workshops, and trainings) are to be administered by the NIA, funds will be disbursed in accordance with the procedures and requirements of ADB's advance payment facility. No-objection confirmation will be obtained from the government of each participating DMC prior to starting the TA activities in each DMC, in coordination with the respective regional departments.

17. The TA will be implemented from January 2015 to December 2018, and will finance 80 person-months of consulting services: 6 person-months international and 74 person-months national. Consultants will be selected and engaged individually by ADB in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time). The outline terms of reference for consultants are in Appendix 3. The Development Indicators and Policy Research Division of ADB's ERD will designate a national staff member for contract administration on a regular basis to ensure smooth TA processing and implementation. Collaboration with selected international organizations will be established, wherever possible, in the course of TA implementation[9], and individual resource persons will be engaged for not more than 10 working days to source expertise for providing need-based technical support.

18. Procurement and disbursement will conform to ADB's Procurement Guidelines (2013, as amended from time to time) and *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). Proper turnover of equipment, where applicable, will also be ensured at the project's completion date.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $750,000 on a grant basis for Updating and Constructing the Supply and Use Tables for Selected Developing Member Economies, and hereby reports this action to the Board.

[8] Please refer to ADB. 2012. Cost Sharing and Eligibility of Expenditures for ADB Financing. *Operations Manual.* OM H3/BP and H3/OP. Manila, specifically item 5 referring to the expanded list of eligible expenditures.

[9] The TA will explore the possibility of partnership with agencies such as the Institute of Developing Economies – Japan External Trade Organization and other United Nations agencies, and expert groups that specialize in economic statistics and have substantial experience in the development of SUT and international IO databases.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Increased implementation of international standards in national accounts compilation and increased comparability of data across economies	At least 50% of participating economies will be able to produce time series SUTs following 2008 SNA recommendations on a sustainable basis.	Workshop documents, reports, and/or papers by implementing agencies (NSOs and ERD), consultants, and researchers	**Assumption** Full cooperation and support from participating DMC governments and implementing agencies will sustain the activity on a regular basis. **Risk** NSOs will experience high turnover and/or transfer of staff who are highly trained and are skilled in handling national accounts and trade statistics.
Outcome Improved capability of NSOs for measuring levels of economic output and increased availability of SUT data for upstream and downstream analysis and research	By the end of the project: All participating economies are able to estimate benchmark and/or updated SUTs based on latest data and in accordance with international standards. GDP estimates of participating economies will incorporate 2008 SNA recommendations. (Baseline: 10 economies) Reliable and accurate data for measuring and monitoring economic output will be available. (Baseline: 10 economies)	NSO websites and publications on national accounts; published tables, reports, and technical papers; consultants' reports; review missions; country reports; and final project report Consultants' reports; review missions; and NSOs' data, reports, and workshop presentations	**Assumptions** Willingness of NSOs to compile time series SUTs and adopt 2008 SNA recommendations Government budgetary support and commitment to produce the tables regularly International organizations' willingness to share data **Risks** Selected NSOs' inability to access timely administrative and survey/census data relevant to SUT compilation Inability to secure services of good consultants
Outputs 1. Updated and/or benchmark SUTs for participating economies based on the 2008 SNA	All participating economies will have benchmark national SUTs. 150 printed copies of	Workshop documents, reports, and/or papers by implementing agencies (NSOs and	**Assumptions** Implementing agencies are able to access the required national and international data at the most detailed level of

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
recommendations	country reports and/or background and/or economics working papers on SUTs and IOT (Baseline: 5 reports) 400 printed copies of SUTs for Asia and the Pacific are distributed.	ERD) and consultants; NSO websites Number of publications distributed	disaggregation. Willingness and ability of participating NSOs to take on additional statistical work like harmonizing bilateral trade statistics for the import use tables and time series international SUTs **Risks** Lack of cooperation from implementing agencies, and other government agencies and line ministries Unavailability of timely and accurate economic census and/or survey results Failure to secure services of good consultants
2. Time series annual national SUTs for selected DMCs incorporating the latest available data	Selected DMCs will have time series national SUTs (Baseline: 10, nine from ASEAN + PRC)	Workshop documents, reports, and/or papers by implementing agencies (NSOs and ERD) and consultants; NSO websites	
3. Time series annual international IOTs that are harmonized with national SUTs and bilateral trade statistics	Availability of time series Asian international IOTs (Baseline: 15, nine from ASEAN+6 (PRC, Republic of Korea, Japan, United States, Europe, rest of the world) 400 printed copies of Asian international IOT publications are distributed	Workshop documents, reports and/or papers by implementing agencies (NSOs and ERD) and consultants; NSO websites Number of publications distributed	
4. National accounts staff in Economies trained in estimating and updating SUT and GDP aggregates following 2008 SNA recommendations	Conduct of regional and in-country training and /or meetings and /or technical discussions on 2008 SNA, such as changes in scope and coverage; constructing SUTs and IOTs; and understanding bilateral trade statistics (Baselines: At least 5 regional and 10 in-country)	Workshop documents, reports, and/or papers by implementing agencies (NSO and ERD) and consultants; NSO websites	

Activities with Milestones	Inputs
1. Preparatory work (Dec 2014–Jun 2015) 1.1. Recruit consultants (Dec 2014–Jan 2015) 1.2. Build partnerships with Economies (Jan–Apr 2015) 1.3. Project regional inception workshop (Apr 2015) 1.4. Assess data based on 2008 SNA (Jan–Jun 2015) 1.5. Update correspondence tables of international standards and classification systems based on latest available versions from the United Nations Statistics Division (Jan–Mar 2015) **2. Output 1: Updated and/or benchmark SUTs for participating economies based on 2008 SNA recommendations** (Apr 2015–	**ADB: Technical Assistance Special Fund (TASF-V) $750,000** Note: The governments of NIAs will provide counterpart support in the form of office space, staff resources, and other in-kind contributions.

Activities with Milestones	Inputs
Jul 2016) 2.1. Update and develop SUT matrices (Feb–Mar 2015) 2.2. Collect and harmonize data (Apr–Jun 2015) 2.3. Background papers on construction of SUTs (Feb–Jun 2015) 2.4. Construct preliminary SUTs (Apr 2015–Mar 2016) 2.5. Regional technical discussion and/or review workshop (Sep 2015 and Feb 2016) 2.6. Present preliminary results and/or second conference on SUTs in Asia and the Pacific and technical discussion and/or review workshop (May 2016) 2.7. Finalize updated and /or benchmark SUTs (May–Jun 2016) 2.8. Prepare and publish the report on benchmark SUTs for selected economies in Asia and the Pacific (Feb–Jul 2016)	
3. Output 2: Time series annual national SUTs for selected DMCs incorporating the latest available data (Jun 2016–Dec 2017) 3.1. Identify economies for inclusion (Mar 2016) 3.2. Determine the years covered (Mar 2016) 3.3. Regional technical and /or discussion meeting (May 2016) 3.4. Estimate time series SUT (May–Nov 2016) 3.5. Data review, validation, and balancing of time series SUTs (Aug 2016–Jan 2017) 3.6. Present time series national SUTs (Feb 2017) 3.7. Finalize time series national SUTs (Feb–Mar 2017) 3.8. Report on the SUTs for selected economies in Asia and the Pacific (Jun 2016–May 2017) **4. Output 3: Time series annual international IOTs that are harmonized with national SUTs and bilateral trade statistics (**May 2015–Mar 2018) 4.1. Construct bilateral trade database **(**May 2015–Mar 2016) 4.2. Construct international SUTs (Jun–Sep 2017) 4.3. Balancing of Asian international SUTs (Sep–Dec 2017) 4.4. Estimation of Asian international IOT (Jan–Mar 2018) 4.5. Regional technical evaluation meetings (Apr 2018) 4.6. Report on Asian international IOT (Jun 2017–Jul 2018) 4.7. Advocacy and /or dissemination workshop and /or meeting and /or conference (Aug–Dec 2018) **5. Output 4: National accounts staff, statisticians and economists in economies trained in estimating and updating SUT and GDP aggregates following 2008 SNA recommendations** (Feb 2015–Dec 2018) 5.1. Conduct regional meetings and /or technical discussions and /or training 5.2. Conduct in-country training and /or meeting on demand basis	

ADB = Asian Development Bank, ASEAN = Association of Southeast Asian Nations, DMC = developing member country, ERD = Economics and Research Department, GDP = gross domestic product, IOT = input–output table, NSO = national statistics office, PRC = People's Republic of China, SNA = system of national accounts, SUT = supply and use table.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN

($'000)

Item	Amount
Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	80.0
ii. National consultants	150.0
b. International travel[b]	25.0
2. Equipment[c]	15.0
3. Workshops, seminars, and conferences[d]	235.0
4. Surveys[e]	150.0
5. Miscellaneous administration and support costs[f]	20.0
6. Contingencies	75.0
Total	**750.0**

[a] Financed by the Technical Assistance Special Fund (TASF-V) of the Asian Development Bank (ADB).

[b] Includes airfares, incidentals, and per diem, and shall be implemented in accordance with the memo on travel expenses of consultants under technical assistance and government officials in connection with nonmember countries dated 29 October 2013.

[c] Includes purchase of laptops and other hardware. The procurement of any equipment will be done in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). Proper turnover of equipment will be ensured upon project completion.

[d] Includes travel and related expenses of resource persons, including ADB staff as resource persons, participants' travel cost and per diem; conduct of workshops and/or meetings and/or trainings; representation costs such as alcoholic beverages, which shall be implemented in accordance with ADB's Budget, Personnel, and Management Systems Department and Strategy and Policy Department memo dated 26 June 2013; and other related costs.

[e] Includes data collection, data processing, documentation, and related costs.

[f] Includes software procurement, communications, report preparation and dissemination activities, printing, and other related costs.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. National Accounts Expert (international, 4 person-months, intermittent)

1. The expert should preferably be an economist or statistician with extensive experience working on national accounts, particularly on updating and developing benchmark national and international supply and use tables (SUTs) and input–output tables (IOTs). The expert must be well versed in the 1993 and 2008 system of national accounts (SNA) recommendations, international classification systems and standards, and have in-depth knowledge about international trade, including the concept of the global value chain and trade in goods and services. The expert will have sufficient and practical knowledge of household and enterprise census and survey data; as well as administrative data. Preferably, the expert must have working knowledge of the statistical systems of the economies of the ADB that will participate in this technical assistance. The expert will

(i) review the current system of national accounts and estimation procedures of participating Economies; determine the scope of production, expenditure, and income data collection that economies will need for updating and/or constructing the national SUTs and IOTs; and prepare and submit an assessment report;
(ii) assess the extent to which participating economies compile their national accounts on the basis of the 1993 (or 1968) SNA; construct a bridge table that will reconcile these accounts with the recommendations of the 2008 SNA to ensure consistency in approach among economies in the Asia and Pacific region; and prepare working paper and presentation materials on the findings and recommendations;
(iii) recommend templates and data assessment forms to be filled up by economies to identify data gaps and recommend critical activities to close these gaps;
(iv) on the basis of (i), (ii), (iii), and discussions with participating economies, (a) establish the concepts, definitions, and procedures to construct and update SUTs within each country; (b) recommend the most appropriate strategy to fill in the data gaps; (c) define sets of proxy indicators and methods that can be implored to increase 2008 SNA compliance; (d) develop a framework to estimate time series national SUTs and IOTs; and (e) provide a standard tabulation plan to meet all deliverables;
(v) establish mechanisms and methods for estimating bilateral trade flows for selected economies;
(vi) provide technical guidance for the development of harmonized trade and international SUT data, and for prescribing the appropriate methods for international SUT and IOT balancing;
(vii) work with the national statistics offices of participating economies, national consultants, and ADB staff to prepare the national and international SUTs and IOTs;
(viii) provide technical guidance as resource person in workshops and trainings;
(ix) provide technical guidance and/or comments on working papers related to the project;
(x) review the preliminary set of national SUTs submitted by participating economies, and send comments as applicable; and
(xi) prepare reports on items and assist in writing a paper for the international IOT.

2. The outputs include background papers*;* country-specific case studies, and/or technical reports*;* prototype templates; harmonized trade and SUT data; time series national and

international SUTs and IOTs; and presentation materials. The tasks may also require international travel as deemed necessary.

B. Economics Writer (international, 1 person-month, intermittent)

3. The economics writer should preferably be an economist or statistician with very extensive experience working on national accounts, and with proven track record in data analysis of SUTs, IOTs, and international trade. The economics writer will

(i) perform the required economic and statistical analysis related to international IOTs,
(ii) prepare a report outline for approval by appropriate authorities,
(iii) serve as the lead writer in preparing the report on the Asian international IOT,
(iv) perform other related tasks that may be necessary in the publication of the international IOT, and
(v) other tasks as assigned by the Development Indicators and Policy Research Division (ERDI) of ADB's Economics and Research Department.

4. The outputs include tables and charts; outline, executive summary, highlights, and draft of the main Asian international IOT report.

C. Manuscript Editor (international, 1 person-month, intermittent)

5. The manuscript editor should have extensive experience in editing economic and statistical publications, and preferably be familiar with national-accounts-related work. The manuscript editor will

(i) reorganize the text so that the subject matter is easy to understand and is logically presented;
(ii) eliminate wordiness and repetition, and reduce ambiguity;
(iii) query substantive discrepancies, possible typographical errors, and non-English terms;
(iv) edit tables and figures, and recast if required;
(v) ensure that subheadings are consistent and logical;
(vi) conduct data consistency checks of the manuscript to ensure data integrity and internal consistency;
(vii) liaise with the typesetter designated by ERDI to ensure that all editorial comments are incorporated in the typeset manuscript and that the manuscript is ready for final printing;
(viii) edit in conformity with ADB's editorial style and usage (including identifying and resolving issues regarding politically and legally sensitive material);
(ix) liaise with the typesetter on the encoding of editorial corrections, and incorporation of edited and/or corrected tables, charts, and boxes in the manuscript;
(x) prepare the table of contents, definition of terms, and list of acronyms;
(xi) review the typeset manuscript for digital printing;
(xii) check and sign off on the layout; and
(xiii) perform other relevant tasks as assigned by ERDI.

6. The output includes a manuscript-edited special chapter, highlights, and presentation materials.

D. Three Economists and/or Statisticians and/or Data Specialists (national, 73 person-months, intermittent)[1]

7. The specialists should have a strong background in economics and statistics, and extensive prior work experience in the area of national accounts, specifically the development of a supply-and-use framework and the compilation of SUTs and IOTs based on the 1993 and 2008 SNA recommendations, is an advantage. The specialists should have sufficient practical experience in handling international trade data from national and international sources and be knowledgeable on international standards and classification systems, specially the latest versions of the Harmonized System; and the Industrial and Central Product Classifications. The specialists should have sufficient and practical knowledge in household and enterprise survey data as well as administrative data, and must be adept in a statistical analysis software and database management. Under the overall guidance and supervision of the project officer, the specialists, who must be Filipino residents, will

(i) provide technical and administrative support to the project officer, ERDI staff, and international consultant of the technical assistance;
(ii) evaluate raw trade in goods and services data from various sources, including the United Nations' Commodity Trade data, national balance of payments, and other international data sources;
(iii) generate bilateral trade flows for selected economies;
(iv) identify and document issues concerning the estimated trade flows;
(v) assist in the preparation of the supply-and-use framework and the 1993 SNA compliance reports of participating economies;
(vi) reconcile national accounts and international trade statistics, where applicable;
(vii) prepare briefing notes regarding the processed data;
(viii) assist in the preparation and organization of relevant materials and/or outputs for data assessment, research, training, and workshops;
(ix) assist in the preparation of the final report (publication) of the project; and
(x) perform other tasks as needed.

8. The outputs will include background papers, briefing notes and technical reports, data assessment forms, harmonized trade and SUT data, time series national and international SUTs and IOTs, and presentation materials. The tasks may also require international travel, as deemed necessary for the successful implementation of the project.

E. Graphic Designer (national, 1 person-month, intermittent)

9. The graphic designer will be responsible for designing the cover and interior, and the layout of the Asian international IOT report, including its highlights. The graphic designer will

(i) format tables and charts of the report,
(ii) prepare cover designs and interior templates,
(iii) encode corrections of the report,
(iv) submit consolidated proof of final report and highlights,
(v) finalize PDF report and highlights, and
(vi) perform other related duties as the need arises.

10. The outputs include the text layout, encoded corrections, re-layout, and formatted graphic elements of the Asian international IOT, including the web version.

[1] Each consultant will require similar skills because they will perform the same tasks for assigned economies.

OUTLINE OF THE FINAL REPORT

THE ASIAN INTERNATIONAL INPUT–OUTPUT TABLES

I. INTRODUCTION

II. SOURCES AND METHODS

III. MAJOR RESULTS AND FINDINGS

IV. ADDRESSING THE KEY CHALLENGES

V. MILESTONES, LESSONS LEARNED, AND WAY FORWARD

VI. ECONOMIES' EXPERIENCES IN COMPILING BENCHMARK AND ANNUALIZED SUPPLY AND USE TABLES

VII. USES AND APPLICATIONS

VIII. DETAILED RESULTS

- A. National Supply and Use Tables
- B. International Supply and Use Tables
- C. Asian International Input–Output Tables

IX. DEFINITIONS