ADB

Technical Assistance Report

Project Number: 49218-001
Regional—Research and Development Technical Assistance (R-RDTA)
December 2015

Key Indicators for Asia and the Pacific 2017

Asian Development Bank

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RESEARCH AND DEVELOPMENT TECHNICAL ASSISTANCE AT A GLANCE

1.	Basic Data			Project Number: 49218-001
	Project Name	Key Indicators for Asia and the Pacific 2017	Department /Division	ERCD/ERDI
	Country Borrower	REG	Executing Agency	Asian Development Bank

2.	Sector	Subsector(s)	ADB Financing ($ million)
✓	Industry and trade	Industry and trade sector development	0.22
	Education	Education sector development	0.12
	Finance	Finance sector development	0.12
	Health	Health system development	0.12
	Information and communication technology	ICT infrastructure	0.12
	Public sector management	Economic affairs management	0.12
	Transport	Transport policies and institutional development	0.12
		Total	**0.94**

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 4: Other regional public goods		

4.	Drivers of Change	Components	Gender Equity and Mainstreaming	
	Governance and capacity development (GCD)	Institutional development	Some gender elements (SGE)	✓
	Knowledge solutions (KNS)	Knowledge sharing activities		
	Private sector development (PSD)	Conducive policy and institutional environment		

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	**0.94**
Research and development technical assistance: Technical Assistance Special Fund	0.94
Cofinancing	**0.00**
None	0.00
Counterpart	**0.00**
None	0.00
Total	**0.94**

9. Effective Development Cooperation

Use of country procurement systems	No
Use of country public financial management systems	No

I.   INTRODUCTION

1.   *Key Indicators for Asia and the Pacific*, prepared by the Economic Research and Regional Cooperation Department, is one of the annual flagship publications of the Asian Development Bank (ADB). It provides the latest comprehensive compendium and analysis of trends in economic, social, financial, and Millennium Development Goal (MDG) and Sustainable Development Goal (SDG) indicators of ADB's regional members.[1] It also contains a special chapter with in-depth, data-intensive analysis of an important policy issue. In general, *Key Indicators* offers strong data and information support for evidence-based policymaking.[2]

2.   *Key Indicators* is considered a premier knowledge product of ADB, consistently among the top downloaded ADB publications over the last 5 years. The proposed regional research and development technical assistance (TA) will support the preparation of the 48th edition of the publication, which will continue to supply high-quality statistics and economic analysis to meet increasing demand for knowledge for development. The design and monitoring framework is in Appendix 1.[3]

II.   ISSUES

3.   The region's experience with economic growth—wherein concerns have been raised about its lack of inclusiveness—indicates a need to assess rigorously the types of policy and institutional frameworks needed for more inclusive development.[4] A number of topics are important in this context and require timely empirical analysis. Additionally, to assist analysis and decision making, an improved statistics portal, which disseminates information regarding statistics resources available in ADB and offers helpful facts on non-ADB data resources, and a statistical database system (SDBS), which features a user-friendly interface, automation, and statistics on a variety of economic and social themes, is also needed. Overall, the TA will make *Key Indicators* more responsive to the developing member countries' (DMCs) knowledge demand in the following ways.

4.   First, the project aims to add a supplement to the *Key Indicators* report. Like the report, the supplement will include a special chapter dealing with an important policy issue for the region, and for which analysis of survey data (especially at household and enterprise levels) is necessary to shed useful light on policy issues. Candidate topics for the two special chapters are (i) the role of information and communication technology (ICT) in development, (ii) entrepreneurship, (iii) urbanization and jobs, and (iv) global value chains (GVCs).[5]

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[1]   The SDGs have been formally adopted as the new framework for monitoring future international development initiatives. http://www.un.org/en/ecosoc/about/mdg.shtml (last accessed on 19 November 2015)

[2]   The *Key Indicators 2015* had five major parts: Part I—the special chapter; Part II—the MDGs; Part III—the regional tables; and Part IV—the global value chains. A fifth part—country tables containing socioeconomic data of ADB developing member countries, Australia, Japan, and New Zealand—is only available online and also disseminated on USB flash drive.

[3]   The TA received concept clearance from the Office of the Vice-President (Knowledge Management and Sustainable Development) on 30 October 2015, and first appeared in the business opportunities section of ADB's website on 9 November 2015.

[4]   This concern is based on various types of evidence, such as rising income inequality as captured by household income and expenditure surveys, reductions in the share of aggregate value added going to labor, persistence of employment in low-paid jobs in the informal sector, and/or a growing share of "contract" work in many ADB developing member countries since 2001. For details, see R. Kanbur, C. Rhee, and J. Zhuang, eds. 2014. *Inequality in Asia and the Pacific: Trends, Drivers and Policy Implications.* Manila: Asian Development Bank.

[5]   While inclusive development is the primary focus of these topics, analysis through the lens of environmentally sustainable growth will also be conducted wherever appropriate.

5.   Inclusive growth is about creating equal opportunities for people, and ICT offers much equalizing potential. ICT has now begun to affect the lives of the middle class as well as the low-income families, and carries the potential to influence their thinking and behavior profoundly. For instance, ICT applications such as mobile banking and "e-wallet" have promoted financial inclusion in many areas where access to financial services was a challenge. Internet-based e-commerce not only helps people purchase cheap products conveniently, but also enables them to start their own businesses and sell customized products far away from their home. In fact, ICT has been playing an increasingly significant role in promoting inclusive development. A study that contains innovative analysis of cutting-edge application of ICT to development will greatly help inform policymakers in the DMCs.

6.   Entrepreneurship plays a key role in transforming innovation into productivity and jobs. The topic on entrepreneurship and innovation in Asia will be explored through the lens of Asian firms. The study will first present the stylized facts on the growth of firms in the manufacturing and service sectors of selected DMCs, describing which types of firms have been the drivers of productivity growth and employment creation, and investigating the factors—policy and otherwise—that influence firms' decisions, e.g., to adopt new technologies, invest in innovation, enter new markets. The study will then delve into the types of regulation and public support required to spur entrepreneurship and innovation among the region's firms. Overall, it will give guidance on what can be done to promote firms' productivity to better support countries' inclusive development at different income levels.

7.   While Asia is rapidly urbanizing and its cities are the locus of much structural transformation, the nature of some of these urbanizations does not seem to be particularly conducive to cities meeting their potential as engines of growth. Moreover, concerns arise about the ability of emerging cities to generate "good jobs" for the medium- and less-skilled workers that dominate, and will continue to dominate, Asian workforces. Therefore, it is proposed to look into the topic of "Future of Asian Cities: Urbanization and Jobs" as a special chapter in *Key Indicators 2017*. To start with, stylized facts on Asian cities with respect to their size, mode of formation, and governance and regulation will be developed. These will then pave the way for the examination of the evolving structure of production and employment across different types of cities. In particular, the project could look into how policies on land use regulations and public decision-making processes—e.g., the role of local governments in planning and financing of urban infrastructure and services—impact firms' formation and growth, and job creation. The study aims to shed light on the sound urban policies and institutions that Asian cities should adopt to promote inclusive growth.

8.   Expansion of the GVCs has accelerated, involving the production of goods and services through interlinked stages of production scattered across national borders. Asia and the Pacific, as a region, has been the most active participant in this wave of GVC expansion thanks to its conducive economic environment, e.g., lower labor cost, fewer trade barriers, and efficiency in logistics. Despite the enormous benefits to entrepreneurs and workers in Asia and the Pacific, however, very few quantitative measures are available and the labor market link is poorly understood. Moreover, the innovation-driven process of task unbundling as well as dramatic reshuffling and mergers in the GVC network are likely to characterize future GVC development. How should the firms and labor force respond? How should public policy be informed and driven to ensure that the region continues to enjoy the benefits of GVCs? Based on the latest GVC literature, the project will conduct policy-related research to better understand the dynamics of GVCs, and inform policymakers so as to maximize development effects. Therefore, it is proposed to look into the topic of the GVCs as another potential special chapter in *Key Indicators 2017*.

9.	Second, building on the work carried out for *Key Indicators 2015*, the TA will enable statistics-related work on GVCs to become a regular feature of *Key Indicators*. These statistics are the results of initiatives taken by ADB's Development Economics and Indicators Division to pioneer the production of original data and information and so facilitate quantification and analysis of the phenomenon of international production sharing in the globalized economy. While measuring the scale and structure of a GVC is highly complicated, Koopman, Wang, and Wei (2014)[6] and Wang, Wei, and Zhu (2013)[7] provide a powerful framework to the measurement. Building on these developments, the proposed study will help the DMCs to improve data collection for more credible measurement and policy analysis of GVC issues.

10.	Third, most tables and figures provided by *Key Indicators* are sourced from ADB's statistics portal and SDBS. The process of data generation and validation to populate the SDBS involves a lot of back-and-forth stages, many of which are time-consuming for the DMC counterparts as well as ADB staff. An upgrade of ADB's statistics portal and SDBS will enable easier access to the latest information in real time in a more user-friendly interface for the DMC stakeholders. It will also help increase data sources, allow for harmonization and visualization across surveys, and provide more flexibility in system maintenance. Options for integration with other international portals to enrich its contents, widen its scope, and increase its usage and relevance will also be explored. Furthermore, the upgrade will guarantee continued delivery of high-quality statistics, reports, and relevant studies, and support several ongoing statistical activities linked to the *Key Indicators* publication in a more efficient manner.

11.	Finally, the project will support some follow-up studies on topics related to the *Key Indicators* special chapters, and preliminary studies to explore strategically significant topics for future *Key Indicators* editions. Publication of *Key Indicators* by no means suggests conclusion of the studies on the topics covered in the special chapters. More often, it provokes thoughtful feedback and interesting discussions within and outside ADB. In this case, some follow-up studies could generate considerable knowledge returns. For subsequent editions, the Economic Research and Regional Cooperation Department will continue to focus on themes related to inclusive development. Candidate topics may include skill mobility, multidimensional poverty index, and infrastructure for inclusive development.

## III.	THE RESEARCH AND DEVELOPMENT TECHNICAL ASSISTANCE

### A.	Impact and Outcome

12.	The impact of *Key Indicators 2017* will be high-quality statistics and economic analysis to meet increasing demand for knowledge for development in the DMCs supported. The outcome will be that by the end of 2018, policymakers, economic researchers in and outside ADB, and the public at large make sustained use of *Key Indicators* analysis, and its data and information support system. Potential performance targets would be citations by major newspapers and publications, and usage of *Key Indicators* contents in corporate materials and planning documents.

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[6]	R. Koopman, Z. Wang, and S. Wei. 2014. Tracing Value-Added and Double Counting in Gross Exports. *American Economic Review*. 104 (2). pp. 259–294.
[7]	Z. Wang, S. Wei, and K. Zhu. 2013. Quantifying International Production Sharing at the Bilateral and Sector Levels. Working Paper No. 19677. National Bureau of Economic Research.

B. Methodology and Key Activities

13.   The TA will support *Key Indicators 2017* by (i) preparing background research papers for the special chapters of the *Key Indicators*; (ii) implementing the modernization of the ADB statistics portal and SDBS; and (iii) publishing and disseminating the *Key Indicators*. The inputs for the *Key Indicators* are highly data intensive. One major impediment to timely completion of the outputs is delays or obstacles in accessing necessary data.

14.   The special chapters will rely on several types of analyses, such as (i) literature review encompassing theory and empirics of the topics finally selected, (ii) descriptive and causal analysis of relevant cross-country as well as intracountry data sets, and (iii) country case studies using a mix of qualitative and quantitative methods. Workshops and seminars will be held with key researchers, government officials, policymakers, and other stakeholders. These workshops and seminars are crucial for (i) discussing the general direction of the special chapters, (ii) developing the story lines of the special chapters, and (iii) firming up the initial findings of the background research papers. Distinguished experts will be invited to give their views so that the outputs of the workshops will be useful in finalizing the *Key Indicators*. Research, consultations, and discussions with staff from regional and other departments of ADB will also be conducted to further validate the relevance of the research findings, and to pinpoint emerging concerns that can be potential topics for future *Key Indicators*.

15.   On the statistics side, the TA will conduct a review and update of the current set of MDG and SDG indicators. In addition, GVC-related indicators will be prepared and included in the statistics tables as a theme of importance to policymaking and unique part of the *Key Indicators* statistical presentation. Modernization of the statistics portal and SDBS will require undertaking a comprehensive review of the existing data repositories and portals from both architectural and content perspectives. A plan will then be developed to upgrade the portal and SDBS—(i) identify priority areas for modernization based on user feedback and requests, (ii) propose new functionalities to be added to the portal, (iii) select a new system or process to be used, (iv) implement changes to the statistics portal and SDBS by balancing business and technical requirements, and (v) regularly update and maintain the two databases. Proper documentation of the applied changes and enhancements will be produced and disseminated as well.

C. Cost and Financing

16.   The TA is estimated to cost $935,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). Appendix 2 presents the cost estimates and financing plan.

D. Implementation Arrangements

17.   ADB will be the executing agency for this TA. The Development Economics and Indicators Division will be the TA supervising unit and will coordinate with other ADB units (regional departments and resident missions) and statistical partners in ADB regional members in undertaking the activities for this TA. The project will be implemented over 36 months, from 1 January 2016 to its targeted completion on 31 December 2018.

18.   *Key Indicators* is produced by a team of international, national, and administrative staff of the Development Economics and Indicators Division with support from international and national consultants. An estimated 18 person-months of international and 133 person-months of national consulting services will be needed for the 2017 edition and its supplements, i.e., the

special chapters, the statistical tables (country, MDG and SDG, and regional tables), special pilot indicators or datasets, the statistics portal and SDBS, and activities to improve data quality and promote effective dissemination of results and findings.

19.   For the special chapters, the international and national consultants will work on the analysis and write-up for a theme of interest (to be finalized), prepare background reports and original research related to the theme, and provide some manuscript and economics editing. The national consultants will assist in data gathering, data cleaning and update of indicators, further research on the indicators, layout of text and tables, and manuscript and copy editing. Surveys may be conducted in selected DMCs as deemed necessary to enhance the relevance of the analysis.

20.   For the statistical tables, the international consultants will review data issues pertaining to the statistical tables published in *Key Indicators*, and propose viable imputation procedures for selected important indicators compiled in the publication. The national consultants will assist in preparing the statistical tables and commentaries, layout of text and tables, and manuscript and copy editing. International and national consultants will also be utilized to develop a new set of indicators on a topic of importance to economic policymaking.

21.   For the upgrade of ADB's statistics portal and SDBS, national information technology and data specialists will conduct a comprehensive cleaning, review, and assessment of the existing data, databases, data sources, and the newly procured additional datasets; develop a system modernization plan; and produce additional functionalities and changes in the statistics portal as indicated in the plan. All datasets such as basic statistics, quarterly economic indicators, other external databases, household survey datasets, and tools that can be developed into the statistics portal resources will also be brought in.

22.   Resource persons will be engaged for the workshops and training events to be conducted, e.g., *Key Indicators* workshops for the special chapters, training on a theme of interest (to be finalized), and subregional workshops for the statistical tables. Travel of ADB staff participating in related workshops, conferences, or seminars as resource persons may also be supported, following the appropriate administrative guidelines.

23.   The outline terms of reference for the consultants are in Appendix 3 and the publication outline in Appendix 4. The consultants will be hired as individuals and will be engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Disbursements under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

24.   *Key Indicators* will be widely disseminated to the target audience in coordination with ADB's Department of External Relations. Dissemination will start with an international media launch followed by seminar presentations to key government officials, business people, academia, and other research groups. Concurrently, the edition will be uploaded to the ADB website. Background papers will be published separately in ADB's working paper series, the *Asian Development Review*, or other media at a later date.

IV.   THE PRESIDENT'S DECISION

25.   The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $935,000 on a grant basis for the Key Indicators for Asia and the Pacific 2017, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impact the TA is Aligned with
High-quality statistics and economic analysis to meet increasing demand for knowledge for development in the DMCs supported (defined by project).

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome: Sustained use of KI analysis, and its data and information support system by policymakers, economic researchers in and outside ADB, and the public	**By 2018:** a. KI is cited in 17 major newspapers and publications (baseline: 16 [median of 2012–2014]) b. KI is referred to in 43 regional media citations (baseline: 42 [median of 2012–2014]) c. KI content is used in two corporate materials (baseline: NA)	a. DER media monitoring reports b. DER media monitoring reports c. ADB reports, publications, management speech, etc.	Unforeseen changes in the global or regional political, economic, and technological environment may render KI's messages inopportune. Other institutions produce a similar type of report.
Outputs: 1. Final background research papers for KI prepared	**By 2018:** 1a. One or more preparation workshops conducted (baseline 2014: 1) 1b. At least five background papers written (baseline: NA)	1a. TA progress reports 1b. TA progress reports	Unforeseen circumstances and delays such as data access issues affect the production schedule.
2. Modernization of the ADB statistics portal and SDBS implemented	2a. ADB's statistics portal and SDBS upgraded (baseline: NA)	2a. TA completion report	
3. Edition and online links of KI 2017, including statistical tables and special chapters, produced	3a. Two reports for KI 2017 (main and supplement) are published (baseline 2014: 1) 3b. 500 printed copies each with accompanying CD-ROMs are distributed (baseline 2014: 500) 3c. At least 15,000 Web downloads of various publications related to KI work (baseline 2014: 16,300) 3d. At least five presentations on KI	3a. Published KI 2017 reports 3b. Number of copies distributed 3c. ADB website download statistics 3d. BTORs	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
	conducted (baseline 2014: 9)		
4. Workshops for knowledge sharing and dissemination conducted	4a. Three workshops conducted (baseline 2014: 1)	4a. BTORs	

Key Activities with Milestones

Output 1: Final background research papers for KI prepared
1.1 Consultants recruited and research commissioned (January–December 2016)
1.2 Preparation workshop(s) conducted (April 2016–April 2017)
1.3 Background papers drafted and storylines for KI 2017 supplement refined by December 2016
1.4 Background papers drafted and storylines for KI 2017 main report refined by April 2017
1.5 Background papers edited and published by December 2018

Output 2: Modernization of ADB statistics portal and SDBS implemented
2.1 Review of the existing statistics portal and SDBS conducted (March 2016–June 2016)
2.2 Identification and implementation of system upgrades completed (June 2016–June 2018)

Output 3: Edition and online links of KI 2017, including statistical tables and special chapter, produced
3.1 KI supplement report, including the basic statistics, finalized (April or May 2017)
3.2 KI questionnaires processed and uploaded to SDBS (March–May 2017)
3.3 Statistical tables—country, MDG, and regional tables—generated (April–July 2017)
3.4 Analysis, charts, highlights, and supplement drafted (June–July 2017)
3.5 KI contents reviewed and edited (June–August 2017)
3.6 KI main report and highlights finalized (July–October 2017)
3.7 Edition is published, launched, and disseminated (August–November 2017)

Output 4: Workshops for knowledge sharing and dissemination conducted
4.1 Three workshops for knowledge sharing and dissemination conducted (April 2017–November 2018)

Inputs

ADB: $935,000

Assumptions for Partner Financing
Not applicable.

ADB = Asian Development Bank, BTOR = back-to-office report, DER = Department of External Relations, DMC = developing member country, KI = *Key Indicators for Asia and the Pacific*, MDG = Millennium Development Goal, NA = not applicable, SDBS = statistical database system, TA = technical assistance.
Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
($'000)

Item	Amount
Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem	
i. National consultants	366.0
ii. International consultants	190.0
b. International travel	80.0
2. Workshops, seminars, and conferences[b]	105.0
3. Data, surveys, and studies[c]	114.0
4. Equipment[d]	8.0
5. Miscellaneous administration and support costs[e]	25.0
6. Contingencies	47.0
Total	**935.0**

[a] Financed by the Technical Assistance Special Fund (TASF-V) of the Asian Development Bank (ADB).
[b] Four or more workshops and seminars for preparation, knowledge sharing, and dissemination will be held with 100 or more total participants. The costs will cover travel and related expenses of resource persons, including ADB staff as resource persons, representation, and preparatory works, implementation and administrative support. Workshops, seminars, and conferences will occur only in eligible ADB member countries.
[c] This includes cost of data purchase, field surveys, and other data collection.
[d] Includes information-technology-related hardware. Procurement of the equipment will follow ADB's Procurement Guidelines (2013, as amended from time to time). Equipment purchased will comply with ADB guidelines on accountability of assets purchased under technical assistance, and disposal will follow the procedures as per relevant project administration instructions.
[e] Includes data support, subscription, software acquisition, representation, and printing costs.
Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1.   The preparation and publication of *Key Indicators for Asia and the Pacific 2017* requires an estimated 18 person-months of international and 133 person-months of national consulting services. The consultants will be engaged in accordance with the Guidelines on the Use of Consultants (2013, as amended from time to time) of the Asian Development Bank (ADB).

Table A3: Breakdown of Consulting Expertise

International Position	Person-Months[a]	National Position	Person-Months[a]
Economist or subject matter specialist	14.5	Economist or statistician or data specialist	42.0
Economics editor	2.0	Economics and statistics specialist	70.0
Writer	1.5	Information technology specialist	3.0
		Information technology developer	3.0
		Data analysts	8.0
		Graphic designer	1.0
		Research associates	6.0
Total	**18.0**		**133.0**

[a] The engagement intermittent.
Source: Asian Development Bank estimates.

A.   Economists or Subject Matter Specialists (international, 14.5 person-months)

2.   The purpose of this assignment is to undertake research and analysis on the selected special chapter topics. The output will include background papers for the special chapters and/or other themes of interest.

3.   The consultants will evaluate data, conduct research, and prepare background papers on the selected special chapter topics. They will carry out the activities specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

4.   The consultants should have a strong background in development economics, economics and/or other related subjects. They should have at least a master's degree in their field of expertise (a doctorate degree is more desirable given equivalent work experience) and have more than 10 years of relevant work experience. The consultants should also have expertise and/or an interest in Asia and the Pacific economies. A good publication record on urbanization, economic geography, technology and development, firm research and development, structural transformation, labor and employment, or global value chain, among others, will be an advantage. Extensive experience working with international databases, and the application and/or development of models and frameworks, input–output, computable general equilibrium, and other multidimensional frameworks will be highly desirable.

B.   Economics Editor (international, 2 person-months)

5.   The purpose of this assignment is to edit the special chapter, highlights, and presentation materials.

6.   The consultant will be responsible for the manuscript editing of the *Key Indicators* special chapters and assist in preparing the highlights, including the tables and charts included in the publication. The consultant is expected to review and edit the special theme chapters,

statistical commentaries, sources for the graphs and tables of the *Key Indicators for Asia and the Pacific 2017* in compliance with acceptable ADB and international forms of editing, and with the ADB *Handbook of Style and Usage*. The work includes a number of editing rounds of the typeset version until a desired quality is achieved. The editor will also make suggestions regarding the layout of the publication. He or she will also be expected to assist in the preparation of the highlights and the presentation materials for the launch of *Key Indicators*. The consultant will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

7.   The consultant should have at least a master's degree in the related field (a doctorate degree is more desirable given equivalent work experience) and have more than 10 years of experience in writing and editing works.

C.   Writer (international, 1.5 person-months)

8.   The purpose of this assignment is to produce copyedited parts II, III, and IV of the *Key Indicators* edition*,* including the tables and charts in the publication, and write-ups for the *Key Indicators* special supplement.

9.   The consultant will be responsible for writing a high-quality thematic commentary based on sound statistical analysis, for the statistical component (parts II, III, and IV) of the publication, highlighting the recent trends and providing an overview of the developments in the region and across the countries. He or she will also make suggestions as to the layout. The copyeditor will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

10.   He or she should have at least a master's degree in the related field (a doctorate degree is more desirable given equivalent work experience) and have more than 10 years of experience in writing and editing works*.*

D.   Economists, Statisticians, or Data Specialists (national, 42 person-months)

11.   The purpose of this assignment is to undertake research and analysis on the selected special chapter topics. The output will include background papers for the special chapter and/or country-specific case studies for the special chapter.

12.   The consultants will evaluate data, conduct research, and prepare background papers on the selected special chapter topics and are expected to carry out the activities specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

13.   The national consultants should have at least a master's degree in their field of expertise (a doctorate degree is more desirable given equivalent work experience) and have more than 10 years of relevant work experience. [1] They should have well-rounded knowledge of urbanization, economic geography, technology and development, firm research and development, structural transformation, labor and employment, or global value chains, among others, in their country assignment. They should also be knowledgeable about the sources of good data, have the ability to access or collect them through survey techniques, and perform the necessary data evaluation. They should also have the ability to analyze the data using

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[1] The work will be carried out in countries where high-quality data is available, which will be assessed during project implementation. Country of assignment will be determined upon initiating their recruitment as national consultants.

statistical and econometric techniques. An ability to identify research topics and prepare background papers on themes of interests using new methodologies and rigorous empirical approaches will be desirable.

E.   Economics and Statistics Specialists (national, 70 person-months)

14.   The purpose of this assignment is to ensure the production of *Key Indicators* questionnaires, country tables, Millennium Development Goal tables, regional tables, and charts and figures in the write-ups, highlights, and presentation materials. The consultants will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

15.   The national consultants should have a background in economics or statistics, and relevant working experience in the area of statistics or research analysis. They should have at least 3 years of relevant work experience; the technical and analytical skills required for the project; a good understanding of official statistics and national statistical systems; advanced knowledge and proficiency in using Microsoft Excel, Microsoft Word, and other relevant software; experience in performing automated business processes, and due diligence in data compilation and validation; good writing skills; and creativity in generating statistical graphs.

F.   Information Technology Specialist (national, 3 person-months)

16.   The purpose of this assignment is to conduct the necessary activities for the upgrade of the statistics portal and statistical database system (SDBS). The consultant will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

17.   The consultant should have a degree in statistics, computer science, information technology, or a comparable discipline with at least 5 years of solid experience in relational database architecture, management, and administration. The consultant is also expected to have an intermediate know-how of the system or software that will be used in the upgrade of the statistics portal.

G.   Information Technology Developer (national, 3 person-months)

18.   The purpose of this assignment is to conduct the necessary activities for the upgrade of the statistics portal and SDBS. The consultant will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

19.   The consultant should have a degree in statistics, computer science, information technology, software program development or a comparable discipline with at least 5 years of experience in system upgrade and development. The consultant is also expected to have an advanced know-how of the system or software chosen for this project, which will be used in the upgrade of the statistics portal.

H.   Data Analysts (national, 8 person-months)

20.   The purpose of this assignment is to conduct the necessary activities for the upgrade of the statistics portal and SDBS. The consultants will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

I.   Graphics Designer (national, 1 person-month)

21.   The purpose of this assignment is to produce the text layout, encoded corrections, re-layout, and formatted graphic elements of *Key Indicators*, including the Web version. The consultant will carry out the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

22.   The consultant will be responsible for text layout, encoding of corrections, re-layout, and formatting of graphic elements of the publication, including refining its Web version. He or she must be skilled in working with Creative Suite 4 (or 5), Microsoft Word, and Microsoft Excel. He or she will prepare InDesign, Illustrator, and PDF files of the interiors and covers using original manuscripts submitted in Microsoft Word and Microsoft Excel.

J.   Research Associates (national, 6 person-months)

23.   The purpose of this assignment is to support research on the assigned topics and other development-related issues as well as provide administrative support for data procurement and the publication process.

24.   The consultants are expected to work closely with Development Economics and Indicators Division staff, and international and national consultants, and perform the tasks specified in the detailed terms of reference for the consultants found in the Supplementary Appendix A.

25.   The consultants must have a degree in economics, statistics or related fields, preferably with master's degree, and should have at least 2 years of relevant experience. They should be knowledgeable in using Stata and have a good understanding of economic theory and econometric analysis (or statistical methods).

OUTLINE OF THE FINAL REPORT

KEY INDICATORS FOR ASIA AND THE PACIFIC 2017

A.   Special Chapter

B.   Sustainable Development Goal Indicators

C.   Regional Tables
1.   People
2.   Economy and Output
3.   Money, Finance, and Prices
4.   Globalization
5.   Transport and Communications
6.   Energy and Electricity
7.   Environment
8.   Government and Governance

D.   Global Value Chains Indicators

E.   Definitions