UNITED NATIONS STATISTICAL INSTITUTE FOR ASIA AND THE PACIFIC

Workshop 'Forging Partnerships in Statistical Training in Asia and the Pacific'

25-26 November 2002
Bangkok

WORKING PAPER - SIAP
ANNEX 6

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC
STATISTICAL INSTITUTE FOR ASIA AND THE PACIFIC

Governing Board
Eighth session
29-30 October 2002
Chiba

Report on the Research-based Training Programme
(Item 7 of the provisional agenda)

1. Background

1.1. Objectives

The Research-based Training Programme (RbTP) was launched as a Tokyo Metropolitan Area based programme in April 2001. The programme provides an additional training modality for middle and senior government statisticians with the objective of raising their capability in—
- o undertaking independent research in official statistics and
- o preparing quality statistical reports.

1.2. Implementing Guidelines

For each Academic Year, up to five fellows will be trained under the RbTP. SIAP and the national statistical offices (NSOs) will collaborate closely as each have identified responsibilities in implementing the RbTP. These are reflected in the information bulletin of the programme and summarized below:

Responsibilities of SIAP
1. Select fellows from candidates duly nominated by national statistical offices
2. Provide suitable study and training environment for up to two months to selected fellows
3. Fund economy class return air travel, accommodation and daily subsistence allowance of each fellow from its institutional budget
4. Provide faculty adviser, computer and library facilities

Responsibilities of Recommending NSO
1. Ensures that the research proposal to be submitted for consideration—
    - o is well-defined in terms of objective and scope
    - o is on a topic that is relevant to official statistics
    - o involves the analysis of available primary data
    - o produces results that are beneficial to the organization
2. Recommends candidates who are—
    - o middle-level or senior statisticians, under 45 years of age, with at least 10 years of statistical work experience and have undergone tertiary education
    - o intimately involved in the chosen area of study, including its collection and analysis of data
    - o well-versed in English and have good command in the use of software for statistical analysis which are available preferably in their office or at SIAP
    - o able to work independently under guidance and supervision of a faculty member
3. Allow a selected candidate to spend up to two months at SIAP on an approved paid leave of absence from the office.

1.3.   Expected Outputs of Programme
<u>Trained staff</u>
Each fellow accepted into the RbTP is expected to carry out the research activities specified in the research proposal that was the basis for his/her acceptance. At the end of the period of fellowship, the trainee is expected to have completed a research paper under the guidance of a faculty supervisor. As part of the research process, the trainee presents the results of his/her research in a seminar organised for that purpose at the SIAP.

<u>Training resources</u>
The research papers produced under the programme are to be made available as training resources for the training programmes of SIAP. In addition, the Institute may include the research output under its *SIAP Occasional Paper Series* monographs. For this purpose, the research paper is subjected to a review by a referee who is a recognized authority in the subject of research. This review process and the written comments of the referees will also be made available as training resources, in printed or electronic (CD-ROM) format.

2.   Status Report

Five fellows were trained under the programme during the first programme year (Academic Year[1] 2001) of its implementation. Five fellows have been selected to be trained during the Academic Year 2002.

2.1.   Nomination and Selection Process
For the Academic Year 2001, the nomination process was initially set as open-ended; that is, nominations were to be accepted throughout the Academic Year, with no set deadline, until five fellows were selected. This procedure was later revised with countries being informed of a fixed deadline for submission of nominations. For the Academic Year 2002, all nominations had to be submitted within two months after the letter of invitations were sent out to national statistical offices. Each NSO was asked to limit nominations to a maximum of two.

The selection process that has since been adapted consists of a two-phase procedure. During the first phase, each research proposal is assigned to a faculty member who evaluates the technical merit of the proposal. The proposal is also assessed in terms of whether a fellowship at SIAP would be an important factor in completing the research. All proposals considered acceptable based on these two criteria as recommended by the faculty member are subjected to further review by all faculty members. During this second phase, the top five proposals are deliberated upon and selected based primarily on rankings of all faculty members on technical merit, direct relevance of topic to official statistics and proposed methodology. Secondary factors such as gender and geographical distribution may also be considered.

2.2.   Number of Nominations
A total of 28 nominations were received during the 2001 Academic Year; 30 nominations were received for 2002. Table 1 shows the distribution of nominations by country.

---

[1] SIAP Academic Year (AY) starts on 1 April and ends 31 March.

Table 1. Number of nominations to RbTP by country/area, Academic Years 2001 and 2002

Country/Area	TOTAL	2001	2002
TOTAL	**58**	**28**	**30**
Western Asia	*6*	*2*	*4*
Armenia	2	1	1
Azerbaijan	2		2
Georgia	2	1	1
Eastern Asia	*5*	*2*	*3*
China	2		2
Hong Kong, China	2	1	1
Republic of Korea	1	1	
South Central Asia	*28*	*13*	*15*
Bangladesh	2		2
India	2		2
Islamic Republic of Iran	8	5	3
Maldives	3	1	2
Nepal	3		3
Pakistan	5	5	
Sri Lanka	3	2	1
Uzbekistan	2		2
South-eastern Asia	*17*	*10*	*7*
Indonesia	9	7	2
Lao People's Democratic Republic	1	1	
Myanmar	1	1	
Philippines	3		3
Thailand	2	1	1
Vietnam	1		1
Pacific-Melanesia	*2*	*1*	*1*
Papua New Guinea	2	1	1

Research proposals have covered a wide range of topics, as shown in Table 2. More proposals have been primarily concerned with the analysis of data compared to methodological studies.

/…..

Table 2. Distribution of proposed research by topic, Academic Years 2001 and 2002

Topic	Total	2001	2002
TOTAL	**58**	**28**	**30**
Data analysis	*36*	*22*	*14*
Agriculture	2	1	1
Demography and population	3	3	
Education	1	1	
Environment	1	1	
Foreign trade	5	3	2
Gender analysis	5	2	3
Health and nutrition	7	4	3
Labour force	2		2
Poverty	4	2	2
Survey/census analysis	6	5	1
Methodology	*15*	*5*	*10*
Survey methods	4	3	1
Consumer Price Index	3	1	2
National accounts	3		3
Other methods	5	1	4
Others	*3*	*1*	*2*
Classifications and standards	4		4
Other topics	3	1	2

2.3.   Outputs

Academic Year 2001

Five fellows completed their research work under the RbTP at SIAP premises in Academic Year 2001. Table 3 shows key information on the duration, topic, researcher, adviser and referee for the completed researches.

All fellowships were for two months. Faculty advising time was at least 16 hours per fellow which is equivalent to 13 standard SIAP lecture sessions of 1.25 hoursper session. Research results were presented at a seminar prior to finalization. Each research report submitted under the programme was further reviewed by an external referee with the objective of improving the report for possible publication.

One paper completed under the programme was subsequently revised and presented by the fellow at a regional conference on population censuses (20th Population Census Conference, Mongolia, 2002 June).

A CD-ROM containing the completed research reports and the comments of the referees will be prepared for use in future training courses of SIAP.

Academic Year 2002

Following the two-phase selection process described earlier, five fellows out of 30 nominations have been selected to participate in the programme during the current Academic Year. Table 4 summarizes information on the expected duration, topic, researcher and adviser for these fellowships.

Table 3. Summary information on completed researches

Country	Position of Researcher	Title of Research Report	Main research techniques	Duration of Fellowship	Faculty Adviser	Credentials of referee
Lao People's Democratic Republic	Senior Statistician, National Statistical Center	Gender Differentials in Labour Force Participation and National Policy on Gender Equality in Lao People's Democratic Republic	Descriptive statistics; defining indicators	3 July - 31 August 2001	Mr. Bijoy Raychaudhuri	Ms. Atsuko Miwa (Japan) Lecturer, Ryukoku University MA in Gender and Development
Republic of Korea	Deputy Director, Population Census Division, National Statistical Office	Household Projections in the Republic of Korea	Household projection using the headship rate method	17 September - 16 November 2001	Mr. Seiichi Inagaki	Ms. Josefina Cabigon (Philippines) Professor, Population Insitute, University of the Philippines Ph. D. in Demography
Indonesia	Chief, Regional and Environment Statistics Sub Division, BPS-Statistics Indonesia	The Relationship between Environmental Health and Socio-Economic Factors in Coastal Villages in Indonesia	Descriptive statistics; logistic regression analysis	15 October - 14 December 2001	Mr. Bijoy Raychaudhuri	Ms. Karen R. Polenske (USA) Professor of Regional Political Economy and Planning, Massachusetts Institute of Technology Ph. D. Economics
Hong Kong, China	Senior Statistical Officer, Census and Statistics Department	Spatial Analysis of 1996 Population By-census Data	Cluster analysis; spatial analysis	15 January - 8 March 2002	Mr. Maarten Boon	
Pakistan	Assistant Agricultural Census Commissioner, Agricultural Census Organization	In Search of Important Policy Variables for Crop Production in Pakistan	Multiple regression using Cobb-Douglas production function	4 February - 29 March 2002	Mr. Xiaoning Gong	Mr. H.V.L. Bathla (India) Head, Division of Sample Survey Indian Agricultural Statistical Research Institute Ph. D. in Statistics

Table 4. Summary information on selected proposals for Academic Year 2002 (as of 17 September 2002)

Country	Position of Researcher	Title of Research Report	Duration of Fellowship	Faculty Adviser
India	Deputy Director, National Accounts Division, Central Statistical Organization, Ministry of Statistics and Programme Implementation	Compilation of Sequence of Accounts for Non-Financial Corporate Sector of Indian Economy in the Framework of 1993 System of National Accounts	3 February - 28 March 2003	Mr. Xiaoning Gong
Iran	Head, Technical Designs and Statistical Methods Research Group, Statistical Center of Iran	Whether and How Women Work for Pay	Withdrew (participant could not be released by agency due to heavy workload)	
Nepal	Statistical Officer, Central Bureau of Statistics	Development of a Comprehensive Framework for the Compilation of Rural Consumer Price Index	13 January - 14 March 2003	Ms. Margarita Guerrero
Thailand	Chief of Population and Housing Census Section, National Statistical Office	Factors Influencing Employment Status of Elderly in Thailand		Ms. Ch. Davaasuren
Viet Nam	Deputy Director for Administration and Chief of Secretariat and International Cooperation, General Statistics Office	Developing Official ICT Statistics and Measuring ICT Impacts on Business in Vietnam	21 October - 20 December 2002	Mr. Maarten Boon

Table 5. Expenditures for RbTP, Academic Year 2001

Country	TOTAL	Accommodation	DSA/Terminal Expenses	Airfare	Referee*
TOTAL	38,601	8,927	22,567	5,807	1,300
Lao PDR	8,221	1,800	4,721	1,500	200
Indonesia	8,690	1,860	4,967	1,663	200
Republic of Korea	7,360	1,850	4,867	443	200
Hong Kong, China	6,837	1,717	4,068	852	200
Pakistan	7,493	1,700	3,944	1,349	500

* Figure for Hong Kong, China is estimated.

2.4.   Costs
Total direct costs of RbTP for the 2001 Academic Year was about US$39,000 or an average of US$7,700 per trainee per two-month period. (See Table 5 for expenditure item breakdown.)

Estimated direct costs for the five 2-month fellowships for the current Academic Year is US$43,000 or an average cost per trainee per two-month period of US$8,600.

3.   Recommendations
Based on the large number of applications to the programme, the outputs and experience during the first programme year of implementation, and evaluation of const-efficiency, the Institute recommends:
   o   continuation of funding support to the RbTP; and
   o   change in the format of the programme from its current format to a subregional training format under the outreach programme, starting next Academic Year.

3.1.   Continue funding support for this training programme
The concept of the RbTP responds to a training gap for most statistical systems in the developing countries of Asia and the Pacific. Traditional training courses of official statisticians are focused on data collection, data processing and basic analysis of data.

Trainings in data analysis are still mainly in the production of basic descriptive statistics from tabulations for standard statistical reports. Official statisticians especially in NSOs are less involved in in-depth analysis of survey and census results and administrative-based data for objectives such as improving data quality and guiding policy. The statistician's role in analysis for guiding policy is typically one of the passive data provider rather than one as part of a team actively involved in the interdisciplinary approach to analysis. While this situation may have been acceptable through the years, data analysis for the purpose of improving data quality and statistical processes should still clearly have to be done by NSOs.

Statistical offices also need capability in doing research on methodologies to improve statistical processes—addressing problems in survey design, index computations, developing measurement frameworks for new areas in statistics, confidentiality issues, etc. Historically, many of the statistical offices in the region have dealt with these methodological issues with the help of external consultants who may or may not have provided training to the staff.

Middle-level statisticians, who have gained experience in data collection and compilation through the years and may even have undertaken higher education, are in the best position to undertake these types of research and analysis. For many statistical offices, however, statisticians need to be trained to do so or at least go through the various stages of a research project under a structured and guided atmosphere in order to produce results. To be able to do this, statisticians would need to spend some amount of time focused on the research. Based on informal discussions with some of them, this is generally not possible within the regular workload and schedule of their units. The RbTP addresses this training need, to which postive feedbacks have been received. Thus, the Institute recommends that funding support for the programme be continued.

3.2.   *Reformat the RbTP from a TMA-based course to a subregional training course under the Outreach Programme starting in AY 2003*

Considering that the demand in the region for the RbTP exceeds 5 every Academic Year and given a funding ceiling, the Institute further recommends that it be reformatted under the Outreach Programme in collaboration with partner research and training institutions.

Proposed reformat

The alternative proposed format would be of a shorter period (of 6 weeks), with a well-prepared research proposal rather than a full well-prepared research paper as the expected output. Two weeks of training will be on basics on research principles and methods and 4 weeks will be focused on preparation of the complete research proposal. The proposal would include a completed literature review, detailed discussion of theoretical and analytical frameworks, and a well-developed methodology. Candidate partner institutions should preferably be national statistical training organizations which:

- accept trainees from other countries;
- use English as its medium of instruction;
- provide the use of a personal computer and appropriate software to each participant;
- assign at most two participants to a research supervisor who has a tertiary level university degree in the social sciences, economics and/or statistics and who will collaborate with a counterpart SIAP lecturer during the training; and
- have established ties and access to a library with significant collections in social sciences and statistics.

Cost comparisons

As discussed in section 2.4 above, direct costs for training one fellow under the current format of the RbTP in the Tokyo Metropolitan Area is estimated to be between US$7,700 to $8,600 for a two month period. Imputed costs for faculty time and for use of training facilities add another $3,600 to this. Thus, including imputed costs, a 2-month training in Chiba under the current format would cost about US$55,500.

Table 6 allows for a comparison of estimated costs of the current format and the proposed subregional training format. In this table, imputed expert costs for the TMA-based course include faculty time and referee services. In the current format, these costs are charged on a *per person basis* since the TMA-based course involves a one-to-one assignment of faculty and trainee. For the subregional training centers, on the other hand, the imputed costs for facilities are fixed overhead costs roughly estimated for 15-20 trainees based on actual costs of other outreach programmes conducted at these sites. Imputed expert costs are estimates based on local rates assuming an equivalent government counterpart.

As shown in the column "Number of fellows for US$55,500", where US$55,500 is the estimated cost for training five fellows under the current format, the subregional training format would be able to train an additional 5 to 8 more trainees with this amount. Note too that the geographical distribution of fellowships will be improved considerably under this format.

Thus, the Institute recommends the continuation of the funding support for the RbTP and the change in format as it leads to more trained statisticians and optimises the use of resources.

Table 6. Estimated costs for proposed subregional training format for RbTP for 3 sample training sites

Training Center	Number of fellows for US$55,500* (1)	Number of fellows for US$40,300** (2)	TOTAL for 5 fellows for 6-week course (3)=5[col.(5)+ col.(4)/5]	TOTAL Imputed Costs (4)=col.(9) +col.(10)	TOTAL per person (Direct) (5)=col.(6) +col.(7)+ col.(8)	Accommodation per person (6)	DSA/Terminal Expenses per person (7)	Airfare per person (8)	Imputed Experts Cost*** (9)	Imputed Facilities Cost (10)
TMA-based	**5**	**5**	**40,300**	**10,300**	**6,000**	**1,400**	**3,400**	**1,200**	**8,500**	**1,800**
Pacific *Fiji (Suva)*	10	7	28,200	3,200	5,000	1,500	2,000	1,500	950	2,250
West & South Central Asia *India (New Delhi)*	13	10	22,700	3,200	3,900	850	2,050	1,000	950	2,250
East & Southeast Asia *Thailand (Bangkok)*	11	8	26,700	3,200	4,700	1,000	2,700	1,000	950	2,250

Note: Direct costs are accommodation, DSA and airfare. Imputed costs are expert/faculty/referee costs and facilities cost.

* US$55,500 is the estimated cost of training 5 fellows for two-months at SIAP under the current format.

** US$40,300 is the estimated cost of training 5 fellows for 6 weeks at SIAP assuming the proposed revised format.

*** Figures corresponding to subregional training centers do not include cost of SIAP faculty supervision. Under proposed format, such supervision is expected to be mainly through electronic means.