

Requirements for International Cooperation to Statistics Development: Practical Lessons from an Experience in Thailand

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Abstract

Providing reliable official statistics is an investment for the future that should be addressed by countries targeting economic prosperity under the globalization. However, some countries have yet to begin specific activities due to lack of know-how and resources. Therefore, importance of international cooperation to statistics development is expected to remarkably increase.

During an international cooperation to statistics development, six requirements -- appropriate sequencing of statistics development, organization and budget, international standards, dissemination routes, computer system, and assistance schemes -- should always be taken into account. If assisting countries and assistance-receiving countries can work in agreement in the above matters, the statistics development will be surely successful and a new field of “statistics” will facilitate further international cooperation.

Introduction

After collapse of the cold war structure, the free market principle has been spreading worldwide. The advancement of global market, “globalization” in other words, has been rapidly strengthening integration of the international economy. Certainly, a driving force behind the globalization is the IT revolution, but IT can only assist global economic activities. It is information on industries and financial markets that are daily exchanged by IT beyond national boundaries. In particular, the official statistics are vital as information.

As the integration of the international economy progresses, many countries are promoting export-oriented economic growth and attracting foreign capital such as direct investment. Countries hoping to attract foreign capital are required to provide a variety of statistics on their industrial structure, business conditions, labor force, wage, prices, and trade. Statistics provided by the governments of some countries, however, are insufficient in terms of reliability and convenience.

Providing reliable statistics is an essential prerequisite to realize prosperity in the global economy. The international community considers that commitment of governments to the statistics development is an expression of their decision toward economic prosperity. Today, the statistics development is no longer essential for those countries with mature economies, but an investment that countries striving for economic progress should address for the future. Therefore, as the globalization advances, the international cooperation to statistics development is expected to assume even greater importance.

This paper discusses the requirements for the international cooperation to “statistics development as an investment for the future” from six perspectives: (1) appropriate sequencing of statistics development; (2) organization and budget; (3) international standards; (4) dissemination routes; (5) computer system; and (6) assistance schemes. Details are based on the experience of “A Study on the Development of Industrial Statistics in the Kingdom of Thailand”, in which the authors participated as study team members, conducted by the Japan International Cooperation Agency (JICA)¹. However, the opinions expressed in this paper are the authors’ alone and in no way reflect those of Japanese or Thai government.

¹ A study team of the JICA, including the authors, developed the current production statistics jointly with the Office of Industrial Economics, Ministry of Industry (MOI) of Thailand, between July 1998 and June 2000 targeting the major manufacturing sectors in Thailand. Based on this achievement, in May 2000, the MOI began to release monthly industrial production indices consisting of production, shipment and inventory of finished products. This made it possible to examine the short-term trends in major manufacturing sectors from the three aspects of production, shipment, and inventory.

1. Appropriate Sequencing of Statistics Development

There are various types of statistics and therefore appropriate sequencing is essential for the statistics development. Sequencing should be determined taking into consideration the relation among statistics and the needs of statistics users. Deciding the priority of statistics is the most basic examination item in designing and planning the statistics development, and inappropriate sequencing can lead to less reliable statistics. Thus, transfer of sequencing know-how through the international cooperation is most strongly demanded.

1) *Relation among statistics*

The relation among statistics can be divided into two points. The first point is primary statistics and secondary statistics. When developing secondary statistics such as the national income statistics, which can be obtained by processing various statistics, primary statistics are prerequisite.

The second point consists of current statistics and structural statistics. The monthly industrial production indices that the JICA study team jointly developed with the Ministry of Industry (MOI) of Thailand are current statistics showing the short-term industrial trends. In order to create the weight for index integration and calculate the coverage by sector, however, the *Report of the Industrial Census* (National Statistical Office of Thailand) on the industrial structure in Thailand was indispensable. The required structural statistics must be available beforehand to create accurate current statistics.

2) *Needs of statistics users*

The needs of statistics users change depending on social and economic conditions. In Thailand, the need for the current production statistics that accurately reflect the short-term changes in the economy increased rapidly after the currency crisis in 1997, centered on the government. As a result, among the various statistics that should be prepared, Thailand has given priority to development of the current production statistics.

The relation among statistics and the needs of statistics users may not always be compatible, but it is wrong to emphasize the needs while ignoring the relation among statistics.

2. Securing of Organization and Budget

When the statistics targeted for development are decided, organization and budget have to be secured for development to proceed. The statistics development can be roughly divided into “design/planning phase” and “execution phase” including pilot testing. Both of organization and budget require adjustment according to the phase of statistics development, as mentioned below.

1) *Design/planning agency and executing agency*

While it is important to allocate a sufficient number of staff for the organization, it is firstly essential to ensure that there is no confusion as to design/planning agency and executing agency for statistics development.

At the design/planning phase, negotiations are conducted among relevant ministries and agencies to ensure conformity between new statistics and existing statistics, as well as to obtain a regular budget. In general, such coordination is conducted on a uniform basis by a government office that supervises whole statistics system of the country. Thus, to smoothly implement the statistics development as a national policy, the government coordination office should be responsible for the design/planning as well. In the following execution phase, the design/planning agency will designate the executing agency, and allocate the required number of staff and budget for the executing agency to compile and release statistics on a regular basis. If the executing agency feedbacks the lessons learned from daily statistics work to the original design/planning, the details of design/planning will be able to conform to the actual local conditions more accurately.

Based on the above, assisting countries should not consider the counterpart agency of assistance-receiving countries to be fixed. Selecting an optimal counterpart agency for each development phase and transferring necessary and sufficient technologies to each agency are the keys to successful international cooperation. Assistance-receiving countries should be required to systematically and flexibly arrange their counterpart agencies after conducting thorough discussions with assisting countries.

2) *Regular budget for execution phase*

It is essential to secure a regular budget at the execution phase of statistics development in order to continuously compile and release statistics. In Thailand, during the statistics development assisted by the JICA, allocation of a new regular budget to the MOI for the current production statistics was approved from FY2000, and this allowed the number of staff to be increased.

However, many countries are unable to secure adequate budgets due to tight financial conditions, despite their strong enthusiasm for statistics development. As a feasible countermeasure to resolve this problem, an absurdly large-scale design/planning should not be attempted when financially impossible to realize. Set backs or termination of statistics development due to overly ambitious design/planning must be avoided.

3. Application of International Standards

With increasing use of the Internet, it is commonly recognized that statistics provided by governments are not only for domestic users, but also the global public goods. Accordingly, value of statistics in the global economy is determined by whether or not it can be compared with those provided by other countries.

In order to ensure international comparability, it is important to apply international standards to the design/planning of statistics development. For example, in case of the current production statistics in Thailand, the “International Standard Industrial Classification (ISIC)”, Revision 3, is used to group the manufacturing sectors². This allows accurate sector-based comparisons with other countries that release the current production statistics based on the ISIC. In addition, Thailand uses a quantitative index based on the Laspeyres formula, which is adopted in many countries including Japan, to calculate the industrial production indices, and the weighted average method based on the weight by commodity and sector is used for index integration.

4. Arrangement of Dissemination Routes

Basically, the official statistics should be provided to users for free or at a very reasonable rate. At the same time, various routes to access statistics must be secured.

Recently, the Internet has enabled the official statistics to be disseminated globally at a lower cost than ever. Though, in this case, only those people with access to the Internet are able to obtain the statistics. This means that the dissemination of statistics through conventional media such as newsletters and pamphlets is still necessarily important.

The industrial production indices in Thailand are accessible over the Internet³, and at no cost through a monthly report issued by the MOI. However, offices that provide government publications are limited even in the capital, Bangkok, and a very wide range of users cannot always access these indices easily.

Possible countermeasures in this case include the regular publication of statistics, not only through government routes but also through newspapers, economic journals, and bulletins of economic associations. As subscribers to these media overlap with users of the industrial production indices, these media could prove effective as dissemination routes. In addition, companies actually using the indices to create production plans or for other purposes will understand the usefulness of the indices and become more cooperative with government’s statistics activities.

5. Introduction of Computer System

By introducing a computer system customized for statistics work, data processing efficiency will remarkably increase. IT has raised the potential for all countries to catch up with statistically advanced countries in a short period of time at a lower cost.

1) Cost-performance

As a prerequisite to the introduction of computer system, high cost-performance to support statistics work is required. The “New Statistics Processing System” developed by the JICA study team for generating the current production statistics is not a centralized processing system controlled by a large host computer, which had been the mainstream in the past, but a distributed processing system consisting of relatively low-priced personal computers and servers. When linked with other systems inside or outside of the MOI, distributed installation of databases is possible and thus the system excels in expansibility and flexibility. In addition, the functions of data input and output are created by commonly used software, Access and Excel. Because of this, the computer system can be customized easily and used for other statistics such as the price index.

² Although the Thai government announces the “Thai Standard Industrial Classification (TSIC)” based on the ISIC (Rev. 2), it had been created in 1972 and rather outdated, the latest ISIC (Rev. 3) was adopted.

³ Thailand’s industrial production indices can be obtained at <http://www.oie.go.th/>.

2) Full functions for statistics work

In order to improve the efficiency of statistics work, the computer system has to support the entire processing procedure, from data entry, data examination, calculation, to dissemination. The “New Statistic Processing System” not only satisfies this requirement, but also features many other functions that accurately perform the operations requiring the utmost care in data processing.

Taking an example of production, shipment and inventory data collected from sample establishments, the system checks for deviations in the figures of the previous month and the same month in the previous year, and checks to see if the figures after adding the production of the reference month to the inventory at the end of the previous month and subtracting the shipment coincide with the inventory at the end of the reference month. If abnormal figures are discovered, the system emits a warning.

It must be noted, however, that the introduction of computer system does not guarantee automatic creation of reliable statistics, as it is basically a means to increase the operation efficiency. Leaving statistical operations up to the system will invite erosion of statistical accountability by the government. When introducing a computer system, assisting countries must transfer required technologies to allow relevant staff to make subjective judgments on matters that strongly affect the reliability of statistics, such as editing abnormal figures and estimating missing figures.

6. Adoption of Suitable Assistance Schemes

As mentioned in above 2, the statistics development can be divided into the design/planning phase and the execution phase. Main issues at the design/planning phase are understanding the latest situation of statistics development and user needs in assistance-receiving countries, specifying the types of statistics to be developed, examining the method and scale of field operation based on the local conditions, and securing the required organization and budget. In the following execution phase, the main issues include technical transfers of statistics work and lectures on statistical theory for staff members of counterpart agency, development and introduction of computer system, and execution of field operation to obtain basic data for statistics compilation.

The international cooperation to statistics development should be implemented based on suitable schemes depending on the content differences in each phase.

In the case of Thailand, the JICA assisted in the design/planning phase through a “development study” and organized a study team consisting of private consultants. At the phase, when the study team almost completed the design/planning including specifications of the computer system, the JICA dispatched two long-term experts on statistics (one with experience in the current production statistics at the Ministry of Economy, Trade and Industry of Japan) to the MOI. These long-term experts prepared the execution phase, including joint creation of various instruction manuals with the study team and the MOI, and transferred practical technologies related to statistics work to the counterpart. The development study was completed when the computer system development was finished and the industrial production indices began to be released, and the long-term experts have continued to provide technical support to the MOI. Through such adoption of scheme for each phase, the development of current production statistics in Thailand moved ahead successfully.

Closing Remark

Although many countries are currently enthusiastic about expanding the official statistics, some of them have yet to begin specific activities due to lack of know-how and resources. On the other hand, the globalization is requiring many countries to promptly and timely provide a wide range of more accurate statistics.

Countries demanding the know-how of statistics development should not hesitate to request assistance from statistically advanced countries. Statistically advanced countries should strive to actively meet these requests to increase the number of countries participating in the global economy.

The six requirements mentioned in this paper should always be kept in mind during the international cooperation to statistics development. If assisting countries and assistance-receiving countries can work in agreement with each other in these matters, the statistics development will surely be successful and the new field of “statistics” will open up in the international cooperation.

Reference: Mitsui Knowledge Industry Co., Ltd. and Unico International Corporation, *A Study on the Development of Industrial Statistics in the Kingdom of Thailand (Phase 2)*, Japan International Cooperation Agency, Tokyo, Japan, July 2000.

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