

# Ten Years of Statistical System Reengineering in Some Asian Transition Countries

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## 1. Introduction

The Asian Development Bank has among its 57 members the transition countries Cambodia, China, Laos, Mongolia, Vietnam and the Central Asian Republics of Kazakhstan, Kyrgyz, Tajikistan and Uzbekistan. The ADB formulates and provides technical assistance (TA) grants to its developing members for building or improving their statistical systems and services. The TAs for the transition countries support the changes required to transform a statistical system serving the needs of a centrally planned economy (CPE) into one serving the information requirements of a market-based economy (MBE). The TAs typically provide training, including English language training when needed, consultants, equipment, advice on reorganization and revision of laws, and support for data collection and analysis. The last of these involve the institutionalization of a system of household and establishment surveys and conversion of statistical series following UN classification systems.

The Central Asian Republics are the newest members of the ADB and statistical contacts with them are still at an early stage. The paper focuses on the experience with TAs in the other transition countries mentioned above.<sup>2</sup>

## 2. Main Factors Affecting CPE Statistical Reform

This writer's first exposure to CPE statistical systems was in Laos and Vietnam in 1988, followed by Mongolia in 1989. The realization from these early encounters -- that there existed another class of statistical systems that were in major respects the very opposite of those in the MBEs -- was a lesson that would be hard to forget. These differences are outlined in Table 1. The revelation must have been just as novel to the statisticians in these transition countries when, through the ADB TAs, they went on familiarization trips to some MBEs.

The two statistical systems are polarized because the politico-economic ideologies that bred them are equally polarized. Statistical system reengineering may be viewed as trying to move from the first column to the second column of Table 1. This move is by and large driven by the reform towards a MBE. How far and fast the reengineering can proceed is determined in turn by the extent and pace of the political reform. Thus, it is useful to distinguish between transition countries based on their governments. In this regard, it may be noted that, although economic reform started in the later part of the 1970s in China and in the second half of the 1980s in Laos and Vietnam, the governments in these three countries remain communist. It is not surprising, therefore, that changes in statistical organization and laws, data collection, convincing respondents that their responses are strictly for statistical purposes, and changes in data dissemination practice, will require a long time to take hold.

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<sup>1</sup> The views expressed in this paper are those of the author and not of the Asian Development Bank.

<sup>2</sup> Two TAs for China from 1988-1994 for US\$0.93mn; Regional TA for China, Laos and Vietnam from 1991-1994 for \$0.42mn; two TAs for Vietnam from 1994 - for \$1.2mn; three TAs for Cambodia from 1992- for \$3.5mn; and one TA for Mongolia from 1993 - 1997 for \$0.5mn.

**Table 1: Comparison of CPE and MBE Statistical Systems**

CPE	MBE
<u>a. Organization and Laws</u>	
<ul style="list-style-type: none"> <li>• Local statistics cadre under local governments</li> <li>• Data collection and political apparatuses are closely integrated</li> <li>• No such thing</li> </ul>	<ul style="list-style-type: none"> <li>• National statistics office has local offices under its full control</li> <li>• Laws formalize as much as possible the autonomy of statistical system from political system</li> <li>• Confidentiality of respondent information is protected by law</li> </ul>
<u>b. Data Collection</u>	
<ul style="list-style-type: none"> <li>• Almost complete reliance on administrative reporting system (theoretically, full enumeration)</li> </ul>	<ul style="list-style-type: none"> <li>• Very heavy reliance on sample surveys</li> </ul>
<u>c. Information Dissemination Policy</u>	
<ul style="list-style-type: none"> <li>• Statistics are state property, shared on a need to know basis only</li> </ul>	<ul style="list-style-type: none"> <li>• Statistics are public goods, transparency based on society's right to know</li> </ul>

The relationships between the national statistics office (NSO) and the ministries are more difficult to change in a communist government. The reorganization of the NSO itself has proved difficult. Also, in addition to the formal administrative structure, there usually is another less discernible power structure based on the party apparatus. Under these conditions, the demand to continue the old database remains, together with the statistics attuned to the requirements of a MBE. This has led to hybrids, such as national accounts that are partly based on the material product system and partly on the United Nations system. Thus, in these countries the question, How far can statistical system reengineering go? begs to be asked, but does not appear to have a clear answer.

Cambodia and Mongolia, that have switched to a multiparty system of government simultaneously with economic liberalization in the early part of this decade, were more successful in amending statistics decrees and restructuring statistical systems.

Another useful factor to distinguish between transition countries is the educational attainment of the statistics cadre. China, Mongolia and Vietnam have many highly trained statisticians. Vietnam's General Statistics Office had 10 doctorates at the beginning of economic reform and was a significant provider of statistical technical assistance to Cambodia and Laos from 1975 to 1989. However, these doctorates were all obtained from the former Soviet bloc countries. Therefore, the training assistance has been focused on leadership and technical retraining on the management and tools used in MBE statistical systems. One big challenge here is how to get senior personnel to accept that much of their accumulated knowledge from years of study and experience should now be cast aside, to be replaced by new knowledge that have yet to be learned. The psychological and material cost of the needed retraining cannot be exaggerated. It encompasses other sectors as well, such as reforming the educational system.

Cambodia is at the other extreme, where from 1975-1979 the Khmer Rouge tried its best to exterminate the educated class and burn everything in print. The rebuilding of the statistical system, which could be started only in 1993, had to begin from scratch and had to cover all fronts. Laos did not suffer from a Khmer Rouge type of tragedy, but the exodus of its people across the Mekong in 1975 likewise decimated its skilled work force. The 1985 Laotian population census may be considered the start of statistical system strengthening.

Language is a third factor affecting the speed and effectivity of statistical system reengineering particularly during the early years of the transition. In addition to their national languages, Russian is a working language of Mongolian and Vietnamese statisticians; French for the older Cambodians, Russian and Vietnamese for the younger generation; French and Russian in Laos; and Chinese of course in China. On the other hand, much of the information systems and technology that these countries want to adapt, as well as the training available in the Asia-Pacific region and in much of the West, is in English.

### **3. Problems of Institutionalizing Survey Systems**

It was Zarkovich (1990) who pointed out a communist dogma, that sampling is a capitalist tool used to hide the truth from the masses, or words to that effect. The offshoot was the total reliance on complete enumeration through administrative reports. No sampling meant no statistical inference which is what the science of statistics is about in the non-communist part of the world. That the enterprises, communes and production brigades reported accurately was another dogma. Hence, in addition to imparting sampling and inference theory and methods, it is also necessary to instill the rigors of data cleaning in the NSOs of transition countries.

One early major recommendation by expatriate experts was to transfer control of the local statistical offices from the local governments to the NSO. The reasons are meritorious: to ensure uniform timing, definitions, methods and standards particularly in the conduct of surveys; and the elimination of the approval process of estimates by the local officials before passing them to the next higher administrative level. The latter is important because the macro level estimates are products of progressive aggregation of the estimates from the lower administrative levels.

The restructuring, however, was not without drawbacks. Previously, the cost of data collection and processing was spread to the different administrative levels. There cannot be a more dramatic example than the 1996 agriculture census of China, which involved 214 million rural households, 740 thousand administrative villages, 43 thousand towns and townships and 1.4 million town and township enterprises (Zhu, 1998). An FAO-sponsored international consultative group (the writer was a member) that visited China in January 1997 was informed that the total cost of the census would be 15 to 20 billion yuan, of which 150 million, or one per cent, would come from the national budget. On the other hand, under the proposed restructuring the entire budget of a census or survey would have to be requested from the national government by the NSO. This had proved difficult during the transition years when the priorities were to reduce soaring budget deficits and reform the public sector, including trimming the public payroll. The State Statistics Office of Mongolia, for example, saw its staff decline from over 400 at the start of the transition to about 50 at present.

Replacing administrative reporting with sample surveys would mean discontinuing local level statistics. Moreover, many local officials, such as provincial governors and commune leaders, were leaders of the revolution, and would therefore be resistant to such change. These are powerful reasons to resist sample surveys, which would cause the two data collection methods to coexist for many more years to come. This poses a problem – that of competing and conflicting estimates at the national and provincial levels. Surveys will need to be convincingly accurate to

win the contest, especially since the discrepancies tend to be large and the economic reform may have shifted the parameters, so that the truth may have become more elusive to find. As an example, Vietnam's "doi moi" or the economic opening in 1988 was followed by a sudden 44 per cent drop in coal production, as shown below (ADB, 1998):

Year	1986	1987	1988	1989
Thousand metric tons	6392	6839	6860	3849

In response to the author's request for clarification, Vietnam's General Statistics Office mentioned the following possibilities: producers mined according to their quota until 1988 regardless of demand, then produced only what they could sell in 1989, i.e. (accurate, accurate); producers reported assigned quotas instead of actual production, then reported actual production in 1989 (inaccurate, accurate); producers reported actual production until 1988, then under-reported in 1989 so they could keep part of the revenues (accurate, inaccurate); or entire series was erroneous (inaccurate, inaccurate). Which of these was closer to the truth may never be known.

On the other hand, the situation also offers an opportunity – that of combining the two data collection methods, e.g. via ratio- or regression-type estimation, to arrive at acceptable compromises. This might just be a workable approach towards incrementally resolving an important question faced by all Asian transition countries: How good (bad) are the official macro estimates of land use and output by crops that are still based largely on administrative reports?

#### **4. Concluding Remarks**

There is no option for the Asian transition countries but to rely increasingly on sample surveys to monitor their emerging private sectors and the impact of the reforms. The early attempts had not or might not live up to expectations on account of formidable problems including those mentioned above. In order to be able to persevere and stay on course, it is important for all players to take a long-term view of statistical system development. The support of pseudoscientific methods to generate numbers quickly should be avoided, especially by aid agencies, for these convey the wrong lessons.

Our experience with the ADB TAs have shown that putting on the field a team of experts covering all the major steps in a survey is more effective than hiring individual consultants. Better still, sending the key transition country personnel for training/apprenticeship to a developing MBE statistical office, than recruiting a team of experts from the latter to help the former implement the needed surveys has proven to be very cost effective in transferring knowledge and institutionalizing surveys.

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