Solid Economic Growth and Improved Accounting Methodology: A Review of the Cambodian National Accounts Estimates for 2005

OUCH Chandarany and Keith Carpenter describe some of the key outputs and issues arising from the release of the 2005 national accounts estimates by the National Institute of Statistics in July 2006.*

This article was prepared following the release of the 2005 national accounts estimates by the National Institute of Statistics in July 2006. It describes some of the key outputs of those estimates and comments on a number of issues arising from them. Among those other issues are the interaction of the structure of the economy and the prospects for poverty reduction; revisions to the national accounts; backdating of revisions to the accounts; and ensuring the capacity to maintain the current quality of the national accounts. Further analyses of these national accounts estimates will be forthcoming in other CDRI publications.

Cambodia uses a specific nomenclature for its three economic sectors: agriculture, industry and services, instead of the more usual terminology of primary, secondary and tertiary. This article follows the Cambodian nomenclature but uses the term "subdivision" to refer to the components of each sector to avoid confusion between the industrial sector and the individual industries that each sector comprises.

Overall Growth

The National Institute of Statistics (NIS) released the final preliminary national accounts estimates for 2005 and revised estimates for 2001–2004 in July 2006.[1] According to the NIS, the Cambodian economy grew significantly in 2005. Real GDP growth at 2000 constant prices was an estimated 13.4 percent in 2005, compared to a revised real growth rate of 10.0 percent in 2004.

Table 1: GDP Growth by Major Sectors (%) Constant 2000 prices

Sector	2004	2005
GDP	**10.0**	**13.4**
Agriculture	1.2	16.6
Industry	16.4	12.1
Services	11.7	12.1

The agricultural sector was the most significant contributor to the 2005 growth, increasing by 16.6 percent in 2005, up from revised growth of 1.2 percent in 2004. However, the growth in industry slowed in 2005, recording a 12.1 percent increase, compared to 16.4 percent in 2004. Services grew by 12.1 percent in 2005, up from revised growth of 11.7 percent in 2004.

The preliminary GDP estimates for 2005 are summarised in Table 2.

Table 2: GDP Estimates 2005

	KHR	KHR Growth	USD	USD Growth
Nominal GDP	25,350 bn	19.9%	6195 m	17.7%
Per capita nominal GDP	1.833 m	17.5%	448	15.3%
Real GDP	21,812 bn	13.4%	5,330 m	11.3%
Per capita real GDP	1.577 m	11.1%	385	9.0%

Growth in Agriculture

The most striking aspect of 2005, according to the NIS, was the substantial growth in agriculture, compared to 2004 (Table 3). Crops are the main contributor to the growth in that sector. Paddy, which accounted for 48.9 percent of gross value added for agricultural crops at 2000 constant prices, grew dramatically in 2005, by 43.5 percent, compared to a contraction of 12.2 percent in 2004. This acceleration was the result of a combination of better weather, improved irrigation, expansion of cultivated areas and other factors that included technology changes and agricultural extension, according to the NIS.[2]

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Table 3: GDP Growth in Agriculture Sector (%) Constant 2000 prices

Subdivision	2004	2005
Crops	1.7	28.0
Paddy	-12.2	43.5
Livestock and Poultry	4.5	5.8
Fisheries	-1.7	5.6
Forestry and Logging	2.2	5.4

Favourable climate in 2005 contributed strongly to the growth in wet season rice, which accounted for 79 percent of total paddy production and increased by 51 percent over the 2004 yield. Rainfall began at the right time during the cultivation period (early part of the wet season) in 2005, although there was drought during the mid-season in some areas.[3] Because of this, the NIS estimated that 31.1 percent of overall growth in paddy in 2005 came from weather conditions. Moreover, there has been a significant investment in the rehabilitation and construction of irrigation systems plus the introduction of better water control and management techniques during the past few years, according to the Ministry of Agriculture, Forestry and Fisheries (MAFF).

This improvement partly contributed to a rise of 21 percent in dry season rice output in 2005, according to the MAFF, and contributed 1.3 percent to overall growth in paddy production in 2005, according to the estimates of the NIS. In addition, the cultivated areas for paddy production expanded by 2.7 percent in 2005; overall the total area used for rice production increased because some land that had remained fallow in the previous year was brought back into production in 2005 and some cleared forest land was used for rice production.

Growth in Industry and Services Sectors

The growth rates of key subdivisions in the non-agricultural sectors are shown in Table 4.

Manufacturing growth fell from 17.6 percent in 2004 to 9.7 percent in 2005, a decline largely driven by the garment industry, where the growth rate declined from 24.9 per cent to 10.3 percent in real terms. Construction output grew by 20.1 per cent in 2005, compared to 13.2 percent in 2004. This increase was largely due to increased construction activity in Phnom Penh, no doubt fuelled by the high growth in the overall economy.

Table 4: Growth in Industry and Services (%) Constant 2000 prices

Sector/Subdivision	2004	2005
Industry		
Manufacturing	17.6	9.7
Garments	24.9	10.3
Construction	13.2	20.1
Services		
Hotels & restaurants	23.4	17.3
Transport & communications	7.5	13.1
Real estate & business services	12.6	6.9
Indirect taxes	**21.4**	**11.4**
Total GDP growth	**10.0**	**13.4**

Distribution of Economic Activity

The distribution of economic activity is shown in Table 5.

Table 5: Distribution of Economic Activity by Sector (%) Constant 2000 prices

Sector	2004	2005
Agriculture	30.6	31.4
Industry	27.3	27.0
Services	36.7	36.2
Indirect taxes	6.5	6.3
Financial services adjustment	-1.0	-1.0
Total	**100**	**100**

Services remain the dominant sector but declined marginally due to the resurgence of agriculture in 2005, as shown by the growth figures above. Table 6 shows the more important subdivisions in each sector.

Table 6: Key Industry Shares in each Sector (%) Constant 2000 prices

Sector/subdivision	2004	2005
Agriculture	**30.6**	**31.4**
Crops	15.9	16.9
Fisheries	8.4	7.8
Industry	**27.3**	**27.0**
Garments	15.3	14.9
Services	**36.7**	**36.2**
Trade	8.8	8.4
Real estate & business services	7.0	6.6
Other services	8.0	8.3

Table 6 does not include "tourism" because tourism is not a recognised subdivision in national accounting terms. Common usage understands "tourism" to refer to foreign tourists visiting Cambodia. Such visitors typically use transport services, patronise hotels and restaurants, buy goods at retail outlets and use other personal services. Such spending is included in the national accounts; however, the national accounts do not separate spending by foreign visitors from spending by Cambodian resident travellers, which has been increasing according to the NIS, nor from spending by Cambodian residents travelling on business-related trips within Cambodia.

The individual subdivisions listed in Table 6 account for about 63 percent of total economic activity; this proportion has remained substantially unchanged over the last two years. This table shows that the economy is dominated by three subdivisions: crops, fisheries and garments, which currently account for almost 40 percent of total economic activity. Crops account for around 50 percent of the gross value added in the broadly defined agricultural sector, and paddy accounts for about half of that value added (i.e., about one-quarter of agricultural value added).

Nearly three-quarters of the value added in the industrial sector comes from manufacturing, and slightly more than half of industrial value added comes from garments. The services sector includes the contribution from tourism, predominantly foreign tourists, but the bulk of this sector's output is accounted for by activity in the informal sector, (i.e., activity outside the mainstream of the economy). This sector is not a dynamic powerhouse offering the sophisticated services typical of a modern post-industrial society; rather, it is largely comprised of petty traders living on the fringes of the economy.

It could be said, abstracting from the services sector, that the Cambodian economy is dominated by subdivisions that depend either on the weather for productivity or on both favourable access to markets in developed countries and an ability to undercut production costs of other developing countries. This is not a solid base from which to build an economy capable of lifting the large mass of the rural population out of poverty. What such an appropriate base might be is a question that continues to exercise development economists and many others concerned for the future growth and prosperity of Cambodia, among them CDRI. For example, see the issues canvassed by the World Bank in Cambodia: Halving poverty by 2015?[4]

Revisions to the National Accounts

The revisions of national accounts in 2005 have strongly impacted on key measures of economic activity. The revisions are of two main types: improved coverage and improvements to compilation methodology. The coverage has been expanded by the inclusion of commercial agribusiness, gold mining, petroleum exploration, gas supply, insurance, micro-finance and foreign exchange dealers. Coverage has been improved for gem mining, freight transport, private health care and private health care providers. The NIS now believes that, with the exception of the (illegal) production of and trade in narcotics, the national accounts cover the full range of economic activity in Cambodia. This is in itself is a major advance, and the NIS is to be congratulated on reaching this milestone.

The improved compilation methodology included more accurate and appropriate sources for commodity prices, improved price deflators for a number of subdivisions, better estimates for household final consumption expenditure (HFCE) and a revised methodology for including durable equipment expenditures. Some of these improvements are a result of including changes to expenditure and production patterns revealed by the 2004 Cambodian Socio-Economic Survey (CSES). Now that the CSES is to become a continuous survey from 2007 onwards, rather than at approximately five-year intervals, it is to be expected that the compilation methodology will keep pace with the changes in the structure of the economy much more readily than it has to date. The outputs of the CSES 2004 particularly affected the estimation of HFCE and the uses of durable equipment. Previous national accounts estimates have assumed that imports of durable goods were being used in industrial production of various types. The 2004 CSES showed that urban consumers were purchasing far more durable goods for household use than had been previously thought. The latest estimates of HFCE take these findings from the 2004 CSES into account, and they will continue to influence national accounts estimates in the future.

In addition to the revisions due to changes to coverage and compilation, the NIS also introduced changes related to data sources. These included the results of the CSES 2004, noted above. The results from the second special population projection were also included in the estimates. The population projections particularly affect how the results from the CSES sample are translated into estimates for output and expenditure for all Cambodia. Revised data were also obtained from a number of ministries and the National Bank of Cambodia to incorporate into the national accounts. Revised data also included a number of special studies on specific subdivisions, including aquaculture, marine fisheries, abattoirs and casinos. The NIS also conducted surveys to gather data for the national accounts from wholesalers, retailers, guesthouses and transport operators in the informal sector.

A Comment on the Changed Approach to Publishing National Accounts Revisions

In the past, the NIS has incorporated changes in coverage and compilation into revisions of the national accounts estimates back to 1993. Adverse comments from data users, particularly those making use of time series analysis, have led to a change of practice by the NIS. Starting from the current national accounts estimates, the data series will be revised to incorporate revisions only back to 2001.

While the revised approach of the NIS is understandable, the fact that it had to be made at all is rather puzzling. The aim of national accounts reporting should always be accuracy in estimation and truth in reporting; if advances have been made in better understanding the way the economy works, then these advances should be widely disseminated, so that the best available data are always being used. It is hardly valid to suppress or ignore improvements in coverage and methodology because a particular economic model may have to be re-estimated and perhaps even rethought or reconstructed.

National accounts are estimates and will always be estimates, but data users should be able to expect that they are the best estimates available, prepared by professionals who understand the techniques required. National accounts estimates are the "first line" estimates, the first estimates after the collection and compilation of the raw economic data. Models are also estimates, and they depend on data generated by the national accounts estimates; thus they are a further step removed from the original data. By their nature, they are "second line" estimates.

To suggest that model builders, as second line estimators, should have "veto" power over the output of the national accountants, the first line estimators, may indicate that some may have forgotten the purpose of national accounts: to understand better the structure and operation of the economy. In the extreme, it is possible to envisage a situation in which improvements to the national accounts are not published because of possible impacts on previous time series estimates; this situation could then lead to the generation of subsequent model estimations that are misleading. These model outputs could then form the basis of inappropriate policy advice, with serious consequences for ordinary Cambodians.

Looking Forward

The 2005 national accounts estimates for Cambodia have continued the improvements in estimation techniques that have been evident in recent years. Part of this improvement is due to capacity development in the NIS, the present team having worked together on the estimates for the past five years. This team has been able to improve the quality of its estimates each year by building on the lessons of previous years.

Progress is often an incremental process, building on solid foundations laid by previous work, rather that a process of great leaps. The ongoing improvements to the Cambodian national accounts are a good example of an incremental improvement, one that has benefited Cambodia.

The present team comprises an IMF multisector statistical adviser and Cambodian counterparts. The period of time the national accounts team has been together augurs well for a smooth transition when the IMF adviser eventually leaves, as would be expected. A longer term concern is what might happen when the Cambodian members of the team move on to other roles. It is to be hoped that the NIS has suitable succession and transition plans in place so that the skill and experience built up by the present team are passed on to their successors. The human capital that has been carefully built up in the national accounts team must be transmitted to a new generation of national accounts professionals when necessary.

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Endnotes

1. The comments in this article are based on mimeographed data provided by NIS at the time the data was released plus comments made by NIS at that time. The national accounts are published by NIS each year and the 2005 issue is presently in the process of being published.
2. Comments made by NIS at a briefing for data users when the 2005 estimates were released.
3. Annual Report of the Ministry of Agriculture, Forestry and Fisheries (March 2006).
4. Phnom Penh (World Bank) February 2006.