Poverty reduction is about improving the well-being of disadvantaged families, sharing the benefits of growth across communities in villages and cities, and connecting remote regions within the country and with the rest of the world. This agenda has played a central role in Thailand’s development model. There is little doubt that commitment to poverty reduction by policy makers, businesses, and civil society has contributed to a remarkable record of poverty reduction over recent decades. Yet, questions and concerns have been raised about the effectiveness of economic policies in supporting growth in household income and providing communities with access to basic services. While poverty reduction policies may be a force for good, they also have to be implemented properly.

The motivation for the case study in this chapter is to look at one aspect of these issues: how small area estimation poverty maps might become an essential tool for poverty eradication in Thailand. The chapter is organized around four topics: Thailand’s impressive

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record in poverty reduction over the last 15 years, the need for poverty maps to direct public interventions to eradicate poverty during the second half of this decade, the constraints on the policy applications of poverty maps, and steps for promoting the use of poverty maps in policy making in the future.

**Rapid Poverty Reduction**

**Strong national record**

Thailand’s economic record is impressive by any standards. The economy expanded from US$56 billion in 1987 to over US$140 billion in 2004 (in constant 2000 prices). Gross national income per capita rose by over 125 percent over the same period, increasing from US$1,060 to US$2,400. Worldwide experience shows that the most powerful force for the reduction of income poverty is broadbased economic growth. Using the series of nationwide cross-sectional Thailand Household Socio-Economic Surveys, we have been able to trace poverty from 1988 to 2002 at the provincial, regional, and national levels. In spite of the Asian crisis and population growth, the national poverty headcount, defined as the share of people living in households with income below the poverty line, fell from 32.6 percent in 1988 to 11.4 percent in 1996, while the number of the poor dropped from 17.7 million to 6.8 million over the same period. In the aftermath of the Asian crisis, the poverty rate rose to 14.2 percent up to 2000, when 8.8 million people were poor, before it declined with the economic recovery and dropped for the first time below 10 percent, representing 6.2 million people, in 2002.1 Thailand has already reached its Millennium Development Goal poverty target of halving the poverty headcount between 1990 and 2015 (NESDB 2004). In addition, the target of the government’s Ninth National Economic and Social Development Plan (2002–06) of reducing poverty incidence to under 12 percent was also met ahead of time.

**Increasing regional poverty concentration**

Thailand’s poverty has stark regional features: poverty is highest in outlying regions and lowest in Bangkok and surrounding areas. Yet, poverty reduction has extended all across the country. Relative to the levels in 1988, the proportional reduction in poverty has been largest in Bangkok, followed by the Central, South, and North regions; the reduction was slowest in the Northeast. Because poverty is falling more rapidly in other regions, it has become more concentrated in the Northeast. One in two persons who were poor were living in the Northeast in 1988; the share of the poor in the total population was one in three at that time. The Northeast accounted for roughly one-third of the total population in 2002, but its share of the poor had increased to three in five. This translates into 3.8 million people living in the Northeast who are poor, compared to only 2.3 million in the rest of the country.
The provincial variations in living standards are even starker than the regional differences. Provinces (changwat) with low poverty rates exist alongside provinces with high poverty rates. While the Northeast and the South include the very poorest provinces, these regions also contain wealthy provinces where poverty incidence is less than 7.5 percent (see figure 13.1). Provinces with high poverty headcounts also tend to have large populations and, hence, a large number of poor people. While the Northeast includes provinces with little poverty, such as Chaiyaphum, Nong Khai, and Ubon Ratchathani, it also has the poorest provinces with the largest number of poor people, such as Buriram, Sisaket, and Surin. This is an important difference with the North, the second poorest region in Thailand. In the North, the provinces with the highest poverty incidence, such as Mae Hong Son, Tak, and Uthai Thani, tend to be remote and sparsely populated. Hence, they contribute only moderately to the national poverty rate because of low population density.

Unpacking Spatial Poverty

The small area estimation poverty map

The government is aspiring to eradicate poverty nationwide. As part of its ambitious Millennium Development Goal–Plus agenda, it is aiming at reducing the poverty headcount to below 4 percent by 2009 (NESDB 2004). Meeting this goal will be a significant challenge because maintaining progress is a different task from launching progress. The easy gains are being exploited, but improvement is becoming more difficult to achieve. As Thailand’s provincial, regional, and national poverty rates have fallen, the focus has shifted to the remaining pockets of poverty. Poverty maps are therefore an aid in reaching the poverty reduction objective. They help to make visible those poor who are otherwise hidden behind the averages of large regional aggregations. There are huge differences in the abilities of families to cover basic needs not merely across regions, say, the Northeast relative to the Center, and provinces, such as Mae Hong Son relative to Chonburi, but also within provinces and within districts ( amphoe).

Small area estimation techniques allow the construction of poverty measures at the district and village levels that are comparable to the poverty measures at the provincial, regional, and national levels. The main motivation behind the use of such methods is to combine the advantages of population censuses (extensive coverage of the population) with the advantages of household surveys (reliable expenditure and income data). In response to a 2002 request by the National Economic and Social Development Board (Thailand’s national planning agency, the NESDB) and the National Statistical Office (NSO), the Thailand Development Research Institute drew on technical expertise from the World Bank to derive Thailand’s first small area poverty map, which was based on the 2000 population and housing census and the 2000 household socioeconomic survey. Since then, the institute and the NSO have completed the 2002 small area poverty map and have launched the 2004 map.
Figure 13.1 Poverty Headcount Ratio and Distribution by Province, Thailand 1988, 1994, and 2002

Head Count Ratio

Distribution

Versions of the 2000 and 2002 maps were constructed separately for income and consumption. To reflect geographical differences in the determinants of poverty, separate models were estimated for each province, including a division by rural and urban areas. In addition, Bangkok was divided into four areas. There were thus 154 model estimations (75 provinces, each divided into urban and rural areas, plus the four Bangkok areas), replicating the number of strata in the household socioeconomic survey. Judging from standard goodness of fit measures such as the adjusted R², the models performed well.

The following paragraphs briefly discuss three challenges encountered in the creation of the small area poverty maps in Thailand.

Software

A basic requirement for estimating small area poverty maps is access to appropriate software. Thailand’s 2000 population census collected information on each of the country’s 62 million inhabitants. Until now, SAS software was the first choice for constructing small area poverty maps because of its ability to handle large data sets and sophisticated file management tasks. However, the standard leasing arrangements for SAS software impose a high financial burden on government agencies. For example, the NSO had to delay the preparation of the 2004 poverty map because of a lack of funds. SAS representatives finally granted the NSO a substantial discount on the license fee for one year, but this arrangement may not always be renewed in coming years.

In addition to the expensive license fee, SAS poses another issue. While the software is superior in data handling, it is not well suited for computationally intense tasks. For example, for the 2000 poverty map, SAS required more than three hours to complete the Bangkok model and almost two full days to estimate all 154 models. Given the estimation of separate poverty maps for both consumption and income and the choice of up to five different distribution forms for the error terms, as well as possible mistakes in data preparation, these calculations quickly became a heavy burden on the agency in charge of maintaining and updating the poverty maps.

Fortunately, a team at the Development Research Group of the World Bank has created a feasible alternative to SAS. The Windows-based PovMap software calculates poverty and other welfare measures much more quickly than does the SAS software. However, the PovMap interface for data preparation tasks such as merging files and transforming variables is cumbersome. These initial tasks may be accomplished using SAS or more affordable software such as Stata or SPSS.

Locality matching

Another challenge is the work involved in matching the area identification codes in the data sources used in the construction of small area poverty maps. Clearly, the localities in one data set have to be matched to the identical locality in another data set. As the NSO is the producer of both the population census and the household socioeconomic survey, it uses the same location identifier for both data sets. Nonetheless, three difficulties remain. First, merging variables from other data sets into the exercise, such as the Ministry of
Interior village surveys, requires a lengthy and ultimately imperfect matching process based on, for example, village and district names. Second, the number of localities, especially of small units such as villages and subdistricts (tambons), tends to change frequently over time as administrative units are partitioned or combined. For example, the numbers of villages and subdistricts in the 2002 and 2004 socioeconomic surveys increased relative to the 2000 population census because communities were split into separate villages. The rise in the number brought about changes in the coding. Furthermore, numerous rural communities were upgraded to municipality status between 2000 and 2004. Because of such changes, it took more than two months to match accurately the rural and urban communities cited in 2000 and the new rural and urban communities cited in 2004. Third, geographical locations have not been systematically coded according to a standard geographic information system, which limits one’s ability to combine poverty measures and other data. For instance, of the 16,000 target villages identified by the NESDB and the Ministry of Interior, it was possible to match only 14,218 villages on the 2000 small area poverty map.

**Capacity building**

One objective of the Thailand poverty mapping initiative has been to foster institutional development and capacity building in counterpart agencies so as to establish greater ownership and sustainability in the results. Emphasis has therefore been placed on process as a key input for impact, while balancing this objective with the need to deliver timely analytical work of high quality. The focus on capacity building has thus shifted in line with the progress on the project and the lessons from earlier phases in the training. The training initiatives selected for staff at the NESDB and the NSO during the pilot stage of the development of the poverty map of 2000 were replaced by systematic formal training over a three-month period for the poverty map in 2002. At the end of this training program, each trainee was able to operate the SAS-based programs to build the poverty map, but the capacity building remained limited in key regards. In particular, some participants lacked the basic statistical and software knowledge to understand key steps in the development of poverty maps, modify the programming codes with confidence, or ensure adequate matching of areas across data sets. Furthermore, the NSO and the NESDB did not have sufficient institutional capacity to train new staff when there was attrition among the poverty mapping experts. Based on these lessons, the ongoing training program for the poverty map in 2004 was substantially revised in four aspects: the training period was extended to five months; the number of trainees was increased from six to ten; the trainees formed three three-member teams, each with an adequate skill mix in terms of statistical and software knowledge; and the three teams were given assignments after each training session. These adjustments increased the satisfaction in the training program for both the instructor and the trainees.

**Dissemination**

The small area poverty maps have been distributed through two channels: at the national level and among the provinces. The NESDB and the NSO, which are the
agencies with core responsibility for policy planning and policy evaluation, have introduced line ministries to the poverty maps as an additional tool for poverty policy evaluation. Meanwhile, the NSO has established guidelines for provincial statistical offices so as to promote the use of the poverty maps in the context of local poverty reduction efforts, and it has placed background material on the maps on its Web site in Thai.

Findings

The small area poverty map of 2000 confirmed that there are large differences between poor and nonpoor communities within provinces. A relatively small number of subdistricts account for a large share of all the poor people. For example, the poorest third (34 percent) of all subdistricts and the poorest sixth (16 percent) of all villages and urban blocks accounted for more than two-thirds (70 percent) of all the consumption poor in Thailand (see figure 13.2). Over two-thirds (71 percent) of the subdistricts and over half of all villages and urban blocks (53 percent) in the Northeast showed a poverty incidence that was at least 50 percent in excess of the national average.

Figure 13.2 Poverty Headcount Ratio, Thailand 2000

Note: The maps reflect the consumption approach.
Roadblocks to Application

The case for small area poverty maps

The previous section discussed how household survey data may be combined with census data to derive poverty estimates at the district, subdistrict, and village levels across the whole of Thailand. While there are other data sources for regional information on living standards, the small area poverty map approach has one important advantage: it gives the same poverty measure for districts and subdistricts that is used at the provincial, regional, and national levels to monitor the progress in poverty reduction. This consistency should make this method appealing to policy makers. It provides confidence that one is talking about the same thing whether at the national level or the village level.

Three examples illustrate how a poverty map may contribute to reaching the goal of a country free of poverty. First, the knowledge of poverty incidence at a detailed spatial scale has the potential to enhance the geographical targeting of interventions to improve people’s lives. The impressive record of poverty reduction in Thailand has heightened the need to target the remaining pockets of poverty in the country. In the past, policies with broad coverage in sectors or areas where most poor persons were known to reside were effective in reducing poverty. For instance, the wide urban-rural divide implied that policies aimed at raising agricultural productivity would generally be successful in lifting many poor people out of poverty. Today, with the share of poor people below 10 percent, some rural areas are fairly prosperous, and broad policies alone have become unsuitable for poverty reduction. Policy makers may thus draw on small area poverty maps in planning public investments in education, health, sanitation, water, transportation, and other sectors. Such information may also help promote the decentralization process in Thailand, which will lead to a shift in expenditure responsibilities from the central government to local governmental or nongovernmental agents. In addition, it may assist in the design of fiscal transfer schemes from richer to poorer areas.

Second, poverty maps may be combined with other available geographically disaggregated data—such as geographical databases of transport infrastructure, the location of public service centers, access patterns to input and output markets, and information on natural resource quality and natural disasters—to yield a rich array of information relevant for poverty analysis and policy making. These data may also be used to evaluate the impact of government projects. By combining a detailed poverty map with a project spending map, one may infer whether it is the poor or the nonpoor who will benefit the most.

Finally, a poverty map may assist communities in the development of local poverty reduction strategies. It provides local stakeholders with the facts that are required for local decision making and for negotiation with government agencies. Poverty maps thus become an important instrument for local empowerment.

Despite the large potential for application, small area poverty maps have made little progress in becoming standard tools among civil servants, planners, and politicians. The
NESDB and the NSO have used poverty maps as a tool for monitoring poverty at the national level, and the NSO has held several national seminars and workshops to introduce poverty maps to provincial statistical officers, as well as potential external users. While these efforts have increased the awareness about poverty maps in provinces, institutional and political impediments prevent a more widespread use.

The institutional roadblock

There is no unique definition of poverty and no perfect indicator to measure changes in poverty over time. Poverty is a state of deprivation involving many dimensions, from limited income to vulnerability in the face of shocks. Small area poverty maps are based on objective measures of household income and the consumption basket. The advantage of this approach is comparability across space and time. But the approach also has important weaknesses. Perhaps the most important criticism is that it is tied to a material concept of poverty. It does not incorporate directly other dimensions of well-being, such as empowerment and happiness. These latter notions of poverty were central, for example, in Thailand’s Ninth National Economic and Social Development Plan, which embraced the principle of the sufficiency economy (see box 13.1). In addition, the approach pays no attention to the people’s own perception of poverty. While statistics may tell us that economic growth has made the population more well off, the people may actually feel less well off due to the many changes that have accompanied economic development. Finally, the poverty maps are aggregated from household-level indicators and do not make any direct reference to community-level indicators, such as village infrastructure or crime rates.

Box 13.1 The Sufficiency Economy

The philosophy of the sufficiency economy stresses the middle path as an overriding principle for appropriate conduct by the populace at all levels. This applies to the conduct of families and communities, as well as the nation in development and administration so as to modernize in line with the forces of globalization. Sufficiency means moderation, reasonableness, and the need for immunity through adequate protection from negative impacts arising from internal and external changes. To achieve this sort of sufficiency, an application of knowledge with due consideration and prudence is essential. In particular, great care is needed in the utilization of theories and methodologies in planning and implementation at every step. Meanwhile, sufficiency is also essential for strengthening the moral fiber of the nation so that everyone, particularly public officials, academics, and businesspeople at all levels, adheres first and foremost to the principle of honesty and integrity. In addition, a way of life based on patience, perseverance, diligence, wisdom, and prudence is indispensable in creating balance and developing the capacity to cope appropriately with critical challenges arising from extensive and rapid socioeconomic, environmental, and cultural changes in the world.3
Such views on poverty are reflected in two separate data sets. Since 1982, the Community Development Department of the Ministry of Interior has collected the basic minimum need (BMN) and the National Rural Development Committee Survey (NRD2C) data sets (see box 13.2). These two data sets form the foundation of the ministry’s community information system at the village, subdistrict, district, and provincial levels. They have three advantages. First, they provide extensive information on a locality’s demographic, physical, economic, and social conditions to local administrations for the design of programs and projects on housing, law and order, health, education, poverty, social protection, and culture. Second, the data are updated frequently: the BMN annually, and the NRD2C biannually. The indicators collected are adjusted every five years in line with the national development plans, thereby ensuring that the NESDB may draw on the BMN and the NRD2C as monitoring tools. For the Ninth National Economic and Social Development Plan, the NESDB and Community Development Department worked together to develop, in 2003, a list of poor target villages based on the NRD2C. These villages became the primary focus of poverty reduction efforts by the Ministry of Interior and the NESDB. Third, the data are collected through a bottom-up process involving local administrations from the village level up to the provincial level and covering every village in the country. This ensures the ownership of the information by local stakeholders.

The availability of alternative poverty measures begs the question: how do their rankings compare? Comparisons between the small area poverty maps and the BMN and NRD2C reveal stark differences in the levels and patterns of measured poverty. Figure 13.3 shows the classification of villages in rural areas according to the 2000

**BOX 13.2 Data Collection for the BMN and NRD2C Data Sets**

The BMN collects household information on life quality to assess the level of happiness in society. A village committee supervises the data collection through village volunteers who conduct household interviews using a structured questionnaire. The data are first processed by the local offices at the subdistrict, district, and provincial levels, then aggregated by the board of the Community Development Department at the national level, and finally approved by the Ministry of Interior’s Life Quality Development Facilitation Board. During the Ninth National Economic and Social Development Plan period, the BMN consisted of 37 indicators covering health, housing, education, the economy, ways of life, and participation.

The NRD2C measures the living conditions of people in rural areas. A village-level data collection working group, consisting of the members of the village committee, the village head, and local government officials, fills out the relevant questionnaire by relying on up to 10 key informants. As in the BMN, the data are then sequentially aggregated and cross-checked at the various administrative levels. The latest NRD2C comprises 30 indicators covering infrastructure, employment, health, knowledge and education, community strength, and natural resources and the environment. Along each dimension, villages are classified into three groups (least developed, somewhat developed, and most developed). Villages identified as least developed in more than 10 dimensions are included in a list of poor villages.
poverty map on household income and the 1999 NRD2C list of target villages. If one restricts attention to villages identified in both the NRD2C and the poverty map, one counts 14,218 NRD2C target villages, equal to over one-fifth of all rural villages. To replicate the share of poor villages in the small area poverty map, we impose a cut-off in the poverty headcount of 30 percent so as to group villages into the poor and non-poor categories. Among the NRD2C target villages, no more than one-third are also classified as poor according to the poverty map. Among the NRD2C nontarget villages, almost one-quarter are labeled poor in the poverty map. Put differently, assuming that the classification of the small area poverty map reflects the true situation in Thailand, the NRD2C targeting exhibits a type 1 error (labeling a poor village as nonpoor) of 66 percent and a type 2 error (labeling a nonpoor village as poor) of 24 percent.

The sharp differences in village poverty assessments in the NRD2C and the small area poverty map naturally raise the issue: which of the two data sets is likely to be more accurate? One approach to investigating this issue is field validation. As part of the poverty mapping project, the Thailand Development Research Institute conducted two visits to selected villages on which the NRD2C and the small area poverty map evaluations diverged. Information was collected through interviews with local officials, entrepreneurs, and residents; observations on economic conditions, including in housing, commercial activity, geographical characteristics, and water; and reference to official documents such as tax records. The findings suggest that the poverty maps are more accurate than the NRD2C.

Two main factors have distorted the NRD2C classifications. First, the NRD2C ranking is affected by criteria not directly related to the economic well-being of a village. For example, one village was put on the NRD2C target list because of its weak agricultural endowments, but the village did not depend on agriculture for its well-being, and most villagers commuted to nearby urban communities for work. Second, some village committees appeared intentionally to underreport economic conditions

Figure 13.3 Rural Village Poverty Status, Thailand: Poverty Map of 2000 and NRD2C of 1999

in their villages to qualify as target villages. These included villages with vast agricultural lands of good quality, abundant water supplies, and adequate housing conditions. They were typically situated closer to district centers and were more well represented in subdistrict councils.

Field validations of the BMN data set arrived at similar conclusions. Figure 13.4 compares the 2002 poverty rankings of three subdistricts relative to other subdistricts in the Central District of Pitsanulok Province. The BMN suggests that Baan Grang and Pai Khodon are relatively poor subdistricts, similar to Baan Krong, while the small area poverty map indicates that the first two are relatively well off and much less poor than Baan Krong. The field validation supported the poverty map ranking. Interviews with villagers and key informants and observations of village infrastructure and economic activity established that Baan Grang and Pai Khodon were clearly more prosperous than their neighboring subdistricts, including Baan Krong. The land of Baan Grang and Pai Khodon is more suitable for rice growing; land plots are larger; and water is more abundant. Farmers grow rice almost year round. The major economic problem was the shortage of farm workers. By contrast, Baan Krong was less well off because rice growing was possible at most only twice a year in some selected areas, and farming was less mechanized.

While the field trips confirmed that small area poverty maps are likely to be more accurate than the BMN and the NRD2C, the maps are equally prone to errors whenever core determinants of a village’s livelihood are not captured in the model. For example, rubber tree growing has become an important source of income for villages in the South over the last decade because of a vast expansion in rubber tree plantations and the sharp rise in rubber prices on the world market. Yet, the 2000 poverty map was unable to incorporate information on rubber tree growing because this information was missing in the underlying data sets. Similarly, in some areas of the Northeast, older family members receive substantial remittances from younger family members who have migrated for work to Bangkok and other urban centers, but the poverty map did not reflect this income source adequately. The information on remittance income in the socioeconomic survey is inaccurate, and the asset variables included in the model failed to capture the wealth of these households sufficiently. This resulted in an overestimation of the poverty in such localities.4

The BMN and the NRD2C are clearly valuable tools for local policy making. At the same time, they have major shortcomings. First, the traditional focus of the BMN and
the NRD2C is rural areas, although the BMN has also been covering urban areas since 2006. While poverty was, indeed, an almost exclusively rural phenomenon in the past, large-scale rural-to-urban migration, especially in and around Bangkok, has made urban poverty an important concern in today’s Thailand. Second, an inconsistency is introduced if one monitors poverty at the national level through income or consumption measures relative to a monetary poverty line, while monitoring it at the local level through the BMN and NRD2C indicators. Third, there are concerns about the accuracy of the information in the BMN and the NRD2C because of uneven interpretations in the questionnaires. For example, household income is evaluated in a single question, and questions on ways of living involve subjective assessments. Furthermore, village committees have an incentive to underreport living standards to qualify for public funds. Field verifications have generally confirmed that the small area poverty map rankings are more reliable, although missing information on local economic activity also poses a problem in those rankings.

The political roadblock

The government has embraced the objective of eradicating mass poverty by the end of this decade. To reach this goal, the government adopted a number of grassroots policies in 2001, including the Village Fund, the People’s Bank, asset capitalization, and the B 30 health care scheme. The extent of the government’s poverty effort may be gauged by the volume of resources spent on all antipoverty programs. Total expenditure on all antipoverty programs was approximately B 35 billion in fiscal year 1998/99, which constituted 4.2 percent of total public expenditure and 0.74 percent of gross domestic product. It increased substantially, to 10.4 percent of public expenditure and 2.3 percent of gross domestic product, in fiscal year 2001/02. However, many of the programs have limited coverage or significant benefit leakage to the nonpoor because they cover large populations. Improved targeting through better criteria for the allocation of resources is essential if the number of the poor is to be reduced. For example, the Village Fund was launched in 2001 as a revolving fund of B 1 million (about US$23,000) that was to be distributed to about 70,000 villages nationwide over a three-year period. A key characteristic of the program is that it covers every single village in the country, regardless of whether the village is poor or nonpoor. In fact, the bulk of the beneficiaries of the program are nonpoor households. The poverty impact of the Village Fund would be increased if the same resources were allocated in a more targeted fashion toward poor villages or if loans were provided at more favorable terms to low-income households.

One way to illustrate the implications of the lack of targeting is to investigate the reduction in the poverty gap under an assumption of perfect targeting. The poverty gap is the average shortfall in the consumption of the poor relative to the poverty line, multiplied by the poverty headcount ratio. Considering the rural population only, this gap equaled 3.1 percent in 2002. Assuming that the transfer is both perfectly targeted...
and fully consumed, the sum of all poverty gaps across rural individuals is the minimum amount of the income transfers needed to bring all the rural poor up to the poverty line. Under this scenario, an income transfer of B 25.2 (or B 0.031, times the rural poverty line of B 813) per person per month would be required to eliminate poverty. The total annual volume of income transfers for rural poverty eradication would then be B 13.1 billion (or B 25.2, times 12 months, times 43,300,000 persons). This is equivalent to no more than 1.3 percent of central government spending in fiscal year 2001/02, or just one-sixth of the estimated budget spent on the Village Fund. By contrast, maintaining perfect targeting within regions, but assuming that the transfer amount is allocated according to current public expenditure patterns, the Northeast would receive only 30 percent rather than over 60 percent (its share in national rural poverty), and poverty in the Northeast would fall by only half. If the sum were evenly spread across the rural population (as in the Village Fund), the Northeast would obtain 40 percent, and poverty in the Northeast, rather than being eliminated, would fall by less than two-thirds.

In addition to the Village Fund and other grassroots policies, another recent government poverty reduction initiative is the Poverty and Social Registration Program (POREP), which was launched and run nationwide in 2004 (see box 13.3). Through the program, all poor persons were invited to register at their district branch of the Ministry of Interior and fill out a form stating the major reasons for their poverty. After verification of the information provided, local governments were supposed to design tailored assistance for each registered person. A number of problems hampered this initiative, including the initiative’s links to Thailand’s established social welfare system, the time lag between registration and reduction measures, and the shortcomings in the implementation of the assistance programs. In addition, there were issues in terms of the initiative’s reliability as a poverty database. An immediate concern is that such a program may involve substantial leakage to the nonpoor because of the overreporting of poverty problems. At the end of the registration period, about eight million persons had registered, which was about the same as the number of poor people living below the revised national poverty line in 2004. However, the POREP database refers to individuals rather than households, so the sum of the poverty gaps for all rural persons, and the transfers that would be required to eliminate poverty, is not easily determined.

**BOX 13.3 The POREP Initiative**

The government launched POREP, a nationwide poverty registration program that lasted from January 5 to March 31, 2004. Under the scheme, more than eight million people throughout the country registered as poor persons at district branch offices of the Ministry of Interior and reported on their economic and social problems. The registration distinguished seven categories among the poor: landless people, the homeless, workers in illegal occupations, destitute schoolchildren, victims of fraud or other deception, indebted persons, and persons with housing problems. The district offices passed the roster of the poor on to the village committees for assessments of their validity. The assessments were conducted publicly and case by case in each community.
than households. Curiously, there are no statistics available on the number of households with members who are on POREP lists. Given that the average household size in Thailand is about five members, it is evident that the group of households with members who are registered as poor is much larger than the number of households considered as poor according to the household socioeconomic survey since individuals are counted in one, and households in the other. The 2004 household socioeconomic survey found that only one in ten persons on POREP lists is poor according to the poverty line criteria (see figure 13.5). In addition to the leakage to nonpoor households, POREP also failed to cover most poor households. Almost three out of four people among the poor had not registered.

The inconsistency in the number of the POREP-registered poor and the number of the income-poor according to the national poverty line is also evident in comparisons across provinces. Figure 13.6 shows the provincial estimates of the poverty headcount ratio in the Northeast region, based on POREP registrations and the 2002 household socioeconomic survey. These two measures differ greatly at the provincial level. In particular, the POREP estimates tend to be too high in provinces with low poverty headcounts, such as Ubon Ratchathani. In general, the POREP estimates vary from one province to another much less than the survey data: the respective standard deviations are 3.3 and 11.2.

Beyond the problems of the inclusion of nonpoor persons and the exclusion of poor persons, it is too early to tell whether POREP has been successful in improving the living standards of those people whom the program has assisted. The government is still in the process of providing help to the registered poor. Most importantly, it is not known whether the families that have been supported have escaped poverty at least in the short term if not the long term. While direct and practical assistance is clearly useful, families are often poor because of a multitude of related factors. In many cases, there is no silver bullet for solving poverty, and one-off assistance will not lift households permanently out of poverty. This suggests that incorporating geographical targeting into the design of a range of antipoverty programs might greatly aid program effectiveness.

**The Way Forward**

The government has embraced the objective of eradicating mass poverty by the end of this decade. Geographical targeting may become a powerful tool in reaching this goal.
The close overlap between poor areas and areas with large populations is an exceptional feature of poverty in Thailand and contrasts with the more common pattern in other countries where high poverty occurs in sparsely populated areas. The targeting of public resources on a small number of provinces, subdistricts, and villages would allow Thailand to achieve significant progress in meeting the goal of eradicating poverty. By adopting such a targeted approach, the government would be able to use its limited resources to help the neediest people. The design of efficient programs that are tailored to
Thailand’s specific conditions presents a challenge that government agencies must confront. In too many projects and programs, the careful design of the general project structure and a meticulous evaluation of total costs and benefits are still followed by much less scrupulous attention to decisions about where—in which specific province, district, or village—to implement the project.

Political economy considerations influence the design, implementation, and outcome of social programs. Although the need for targeting on poor villages and poor households is clear enough, it also entails an important difficulty. By reducing the number of recipients, such targeting reduces the political support for using taxes to fund redistribution. Instead, the government’s grassroots initiatives support rural areas, but they do not differentiate between poor and nonpoor villages. While this makes these programs politically more sustainable, it dilutes the effect on poverty.

Another roadblock to the application of targeting is linked to the prominent role of the Ministry of Interior in the government’s poverty eradication programs. To implement these policies, the Ministry of Interior relies crucially on its own data collections, the BMN and the NRD2C. These data sets have important advantages: they have a track record of more than two decades, are well understood by civil servants around the country, rely on complete coverage instead of sampling techniques, are collected every two years, and integrate a broad range of economic, social, and cultural information at the household and community levels. However, the data are difficult to access, are considered unreliable because of inaccurate reporting by respondents, are a curious hybrid of objective and subjective indicators, and draw summary assessments based on arbitrary simple averaging across the underlying indicators.

Given these shortcomings, it is important to reconcile the evidence offered in poverty maps with the findings in the BMN and the NRD2C. The ambitious approach would be a statistical reconciliation of these data sources so as to derive a single poverty map. The less ambitious approach would be to use the poverty maps as a verification tool for the BMN and the NRD2C. For example, areas identified as nonpoor in the BMN and the NRD2C, but as poor in the poverty maps might also qualify for government assistance.

Such reconciliation will be possible only when poverty maps have become a recognized alternative to the BMN and the NRD2C. This will require a number of technical and institutional advances: (1) a routine procedure must be agreed upon to update poverty maps at least biannually; (2) the technology for updating poverty maps must become financially affordable; (3) the government agency charged with updating and distributing the poverty map must acquire the expertise to do so; (4) there must be full cooperation among producers of all alternative poverty maps and databases and among current and potential users; and (5) the accuracy of the poverty maps must be enhanced through steady improvements in estimation by the producers and through regular feedback from users.

To fulfill these requirements, the followings steps would need to be taken. First, the NSO executive board should endorse the routine updating of small area poverty maps as new household socioeconomic survey data become available. Such a commitment will require assurances about the financial sustainability of the poverty mapping project,
which will entail finding cost-effective alternatives to the SAS software and a wider acceptance of poverty maps among potential users. It will also require advances in the methodology because updating small area maps on the basis of an old census and a new survey is still in the experimental stage. (Much of the initial work on this extension to the methodology has been done in Thailand.)

Second, while the NSO staff has made great strides in building its capacity to generate poverty maps, the NSO has not systematically developed the area identifications that allow easy merging across data sets and time periods. Third, government agencies should collaborate in the application of poverty maps. This would involve greater cooperation between the NSO (the main producer of data and the generator of the poverty maps), the NESDB (the government’s planning agency, which has an important role in formulating and evaluating poverty reduction policies), the Ministry of Interior (the producer of the BMN and NRD2C data sets and the main employer of the relevant local administrative staff), and line ministries such as the Ministry of Health, the Ministry of Labor, the Ministry of Education, and the Ministry of Social Development and Human Security.

Three and a half years of experience with small area poverty maps in Thailand suggest the following process lessons:

- Creating ownership goes hand in hand with capacity building. Creating ownership enhances the likelihood that small area poverty maps will be put to use in policy contexts. Yet, ownership hinges on making sure that institutional learning occurs. This requires building up sufficient statistical, technical, human, and financial capacity within local institutions to generate the maps. While this approach increases the transaction costs and prolongs the process, it ultimately pays off in terms of mutual learning and policy impact.

- Developing a common understanding among government partners on objectives and a common framework right from the outset is essential in maintaining focus and having an impact in the longer run. Ultimately, the policy impact of better monitoring and evaluation through small area poverty maps depends on the commitment of policy makers to the poverty reduction agenda.

Notes

1. Reductions in poverty continued up to 2004, but a change in the definition of the poverty line has rendered the new 2004 numbers incompatible with the previous numbers. Based on the new poverty line, the poverty headcount fell from 21 percent in 2000 to 11 percent in 2004, and the number of the poor declined from 9.5 million to 7.1 million over the same period (World Bank 2005).

2. The provincial poverty maps shown in figure 13.1 draw exclusively on the household socioeconomic survey, without any reference to population census data. This approach is justified because the socioeconomic survey is representative at the provincial level. However, even at the provincial level, the small area estimation methodology leads to greater precision in the poverty estimates.
This is an unofficial translation of a working definition of sufficiency compiled from remarks made on various occasions by King Bhumibol Adulyadej, approved by him and transmitted through his principal private secretary to the NESDB on November 29, 1999. See NESDB (2004).

Because of a recent revision in the household socioeconomic survey questionnaire (Jitsuchon, Chandoevwit, and Kakwani 2006), future surveys will provide more details on remittance income and wealth, such as the value of houses, land, and financial assets. It is also important to remember that the econometric approach of the small area poverty maps in deriving poverty estimates provides some protection against omitted variable bias to the extent that the other explanatory variables capture the impact of the missing indicator.

Perfect targeting implies that all individuals living below the poverty line and only such individuals will receive transfers equal to the shortfall of the consumption of these individuals below the poverty line. If one assumes that these income transfers are entirely consumed in all cases, then one may conclude that, after the transfers, all previously poor individuals will have a consumption level equal to the poverty line and that no individual who had been living above the poverty line would have received any transfer. The numbers that follow in the text are hypothetical; few developing countries would choose to continue making income transfers to the poor in perpetuity. Perfect targeting is impossible in practice: besides the lack of complete information that would be needed to implement perfect targeting, not all transfer income is consumed, and transfers to the poor based on a shortfall in consumption (or income) relative to a poverty line have significant disincentive effects.

References


