Who is poor in China? A comparison of alternative approaches to poverty assessment in Rural Yunnan

Lu Caizhen

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Despite widespread recognition of the multidimensionality of poverty among social scientists and policymakers, the monetary approach still dominates poverty assessment. However, it is possible that different poverty assessment methodologies identify dissimilar households as poor, leading to disparate policies for poverty reduction. This empirical research applies four approaches to poverty identification to the same population of rural households in Wuding County, Yunnan Province, PRC. These approaches include China's official poverty identification method, participatory poverty assessment (PPA), the monetary approach to poverty assessment, and use of multidimensional poverty indicators (MDI). This study discovered that these four approaches generate different aggregate poverty incidences, identifying different households with distinctly different characteristics as poor. Each approach evaluates different aspects and dimensions, highlighting some characteristics while concealing others. There is very little overlap among the poor households identified by each methodology. This has implications at the conceptual, methodological, and policy levels. The conceptual understanding of poverty should be broadened to include multidimensional and multidisciplinary socioeconomic indicators. Multiple approaches must be applied in order to avoid marginalising some aspects of poverty. Poverty reduction strategies should shift from promoting short-term income-generating activities to a broader combination of strategies that address the inter-linked structural causes of poverty.

Keywords: poverty assessment; poor; alternative approaches; China; Asia

Introduction

Poverty reduction has been recognised as a primary objective of development. The UN has set a goal to halve world poverty by 2015. The World Bank and other major donors to developing countries assess almost every proposed policy in relation to its impact on poverty (Laderchi *et al.* 2003). A fundamental consideration for policymakers is how poverty is measured, analysed, and represented in order to formulate effective poverty reduction strategies (Shimeles and Thoenen 2005).

Appropriate identification of the poor is crucial if poverty reduction is to be achieved. Yet the definitions and measurements invoked in poverty assessments remain contentious. The variety of approaches currently used to categorise the poor and the policies that are subsequently formulated are often contradictory. Despite widespread recognition of the multidimensional nature of poverty among social

scientists and policymakers, many of whom acknowledge the importance of incorporating the perspective of the poor in poverty studies, a single method – the monetary approach – continues to dominate poverty assessment.

Research indicates that different definitions of poverty often identify dissimilar households as poor, leading to disparate policies for poverty reduction in theory (Laderchi *et al.* 2003). An empirical question to ask is whether different approaches identify the same households as poor and lead to different policy implications. But there is very little precise empirical knowledge on this crucial question. Other research findings on alternative methods are almost always from research done on different populations and at different times and places in Peru, India, and Zimbabwe (Franco 2003, Laderchi *et al.* 2003, Scoones 1995) – and that makes direct comparisons impossible. However, other studies demonstrate that different methods identify the same populations as poor in Southern African countries. This indicates that different methodologies may provide similar overall pictures of poverty (Maltzahn and Durrheim 2008). Until now, no empirical research has compared several poverty assessment methodologies on the same populations in China to determine whether different approaches identify the same or different households as poor and, if not, which households each method identifies as poor and what policies are thus implied. There are four possibilities for overlap among households identified as poor by the four methods:

(1) There is high overlap, as depicted in Figure 1. If the four approaches identify the same or most households as poor, then the theoretical differences among approaches may be irrelevant in developing poverty reduction targets. In many respects, the theoretical differences among approaches might be unimportant if the same populations are classified as poor by different approaches as shown in Figure 1. Any of these methods could then be used as a proxy for others despite their potential theoretical deficiencies (Laderchi *et al.* 2003).
(2) There is no overlap, as depicted in Figure 2.
(3) There is total overlap, as in Figure 3.
(4) There is very little overlap, as depicted in Figure 4.

An understanding of poverty assessment methodologies is critical in China, which has been undergoing intensive structural reforms resulting in rapid economic growth and declining poverty levels within the past twenty years. However, the erosion of public health and education services over the same time period has resulted in deplorable levels of health, nutrition, and education in poor regions (World Bank
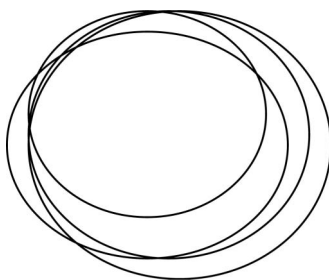

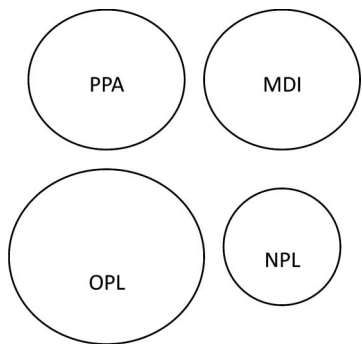Figure 1.   High overlap of households in the four approaches.

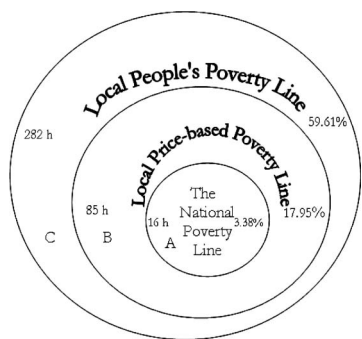Figure 2.   No overlap of poor households in the four approaches.

Figure 3.   Overlap of poor households using different poverty lines.
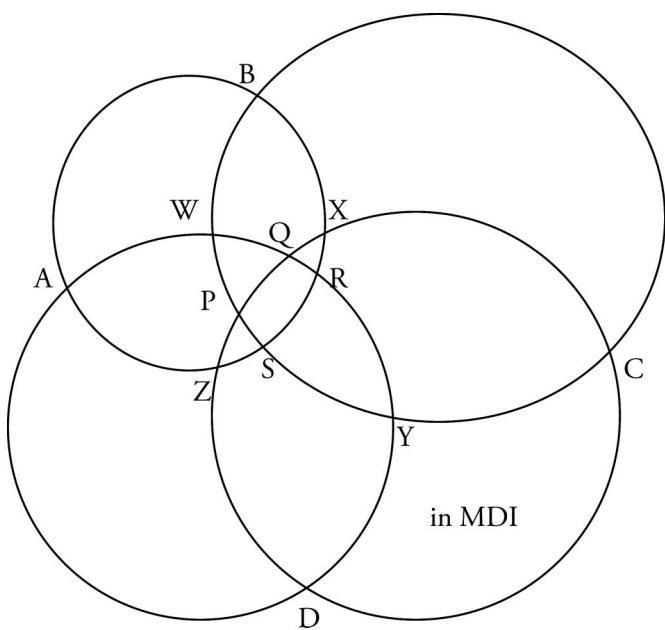

Figure 4.   Low overlap of poor households in the four approaches.

2001). Many existing problems have been exacerbated through the process of rapid growth and transition (Griffin *et al.* 2000); new dimensions of poverty, such as increasing socioeconomic insecurity (Saith 2003), lack of insurance and pension, inequality, and vulnerability to market risks, have also arisen. Targeting of poverty alleviation efforts has ranged from regional targeting to county and village targeting. However, it was found that poor populations do not only concentrate in poor villages. Many poor households are found in non-poor villages (Li 2009). How is this paradox, this puzzle, to be resolved? In this paper I wanted to analyse how poverty is recognised and measured, and how people in poverty are identified, using alternative approaches. This will help in understanding poverty in rural China in a balanced and nuanced manner.

This is a vital issue in its own right, but also for several other reasons. First: China has boasted dramatic economic growth in recent years. Has it gone to the poor? Secondly: the Chinese Government has introduced many policies for poverty reduction. What are the outcomes? And thirdly: thinking globally, as in the Millennium Development Goals framework, how much poverty is there in Asia and in the world? Statistically, this really depends on the results for China because of the size of the Chinese population. Recently, poverty alleviation policy has been shifting from development-oriented poverty alleviation to both development-oriented and relief-oriented poverty alleviation (Wang 2009) to promote development and guarantee subsistence. The latter combines a minimum living standard scheme with poverty alleviation and development policy, with a goal of lifting the rural low income population out of poverty (Fan 2007). With the village targeting system failing to target the poor households in non-poor villages, using households as a targeting unit is more important than ever (Li 2009). This makes the identification of households poor in different dimensions very important.

Therefore, it is important to understand how poverty estimation is sensitive to the choice of approach and methodology. This is the central question that I explore in this paper. The research will support the new situation of poverty alleviation through both development-oriented poverty alleviation and relief-oriented poverty alleviation. It will contribute to a debate on one of the main issues of the Chinese poverty alleviation system under the State Council Leading Group Office of Poverty Alleviation and Development (LGOPAD) (*fupinban*). Of course, *fupinban* is not the sole system dealing with poverty and accounting for developments aimed at alleviating social problems. Other sectors are also involved in poverty alleviation, but they are not the focus here.

The monetary approach to poverty assessment used by the Chinese Government is based entirely on income and consumption data (Tong and Lin 2001). It fails to capture the multidimensional nature of poverty by ignoring many other aspects. This results in the application of a narrow policy agenda revolving around income generation, infrastructure development, and traditional employment (Hillman 2003). This research compares four approaches to poverty assessment in a set of rural households in Yunnan Province, PRC. These include China's official poverty identification method, a participatory poverty assessment (PPA), the monetary approach to poverty assessment, and the use of multidimensional poverty indicators (MDI).[1] This research took place in Jiankang Administrative Village, Wuding County, Yunnan Province, China, from May 2005 to March 2006. Wuding County

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[1]Extensive details on the approaches can be found in Lu (2009).

is considered to be a poor county according to both the national and provincial governments of China. Like many other poor villages, Jiankang is mountainous, and the village includes both Yi and Miao ethnic groups as well as Han Chinese. Jiankang administrative village is made up of nine natural villages with over fifty households in each, for a total population of 600 households. The village has maintained official lists of poor households for several years.

This comparative study asks three questions: How is poverty understood according to each identification method? Which dimensions of poverty does each approach reveal or mask? Does each approach identify a different population as poor, therefore leading to different policy implications? This research answers these questions by testing and demonstrating the use of the monetary approach, participatory poverty assessment (PPA), and multidimensional poverty indicators to identify poor households using the same population in rural China. It establishes different characteristics of the households identified as poor by the four approaches and studies the overlap of households placed in the poor category according to each approach. It attempts to understand and to integrate multiple methods of evaluating poverty. Lastly, it delves into the implications of poverty assessment methodologies at the conceptual and methodological levels and discusses how this research might be used to formulate policy that effectively targets poverty reduction.

The most novel and innovative feature of this research is that each of the different approaches has been carefully applied on the same, fixed population of 473 households. This allows one to make explicit valid comparisons and deductions about the impact of different approaches on poverty identification and measurement. Of course, it is important to bear in mind that it is just one case study. There is no intention to be representative or to generalise in such a huge country like China.

Methods

Four poverty assessment methodologies were investigated in this research:

China's official poverty identification method

Wuding County Leading Group Office of Poverty Alleviation and Development (LGOPAD) (*fupinban*) recently released a list of poor households in Jiankang Administrative Village. The lists are created using China's official poverty identification method. LGOPAD uses the official poverty identification method to identify who the poor are and where they are located. Villages and Village Groups are asked to submit a list of poor and low income households and individuals. The official poverty identification method follows this procedure:

Step 1   County-level officials calculate the number of poor and low income households using rural household surveys, the total village population, and the number of households identified as poor in the past year to determine a quota.

Step 2   A list of poor and low income households is produced by the village leader and accountant or at a public village meeting according to the quota allocated.

Step 3   The resulting list is made public at the villagers' group level and submitted to the villagers' committee.

Step 4   The household questionnaire forms for the poor and low income households are filled in depending on their category.

Step 5   The list is submitted to the township government.

Step 6   The list is approved by the government and submitted to the State Council LGOPAD.

This data is based on the poor rural household list (*pinkun hu nonghu huaming ce*) for Jiankang Villagers' Committee, Chadian Township, Wuding County (in 2004, completed in 2005).[2]

The monetary poverty approach

To obtain this data, the author conducted a household survey in nine villagers' groups in four natural villages in Jiankang. Forty-six of the 519 households were migrant households, so only 473 permanent residences with 1798 residents were evaluated. Data was collected from May 2005 to March 2006. Before designing the survey questionnaire, Participatory Poverty Assessment (PPA) exercises were done with the villagers. These exercises assessed local people's perspectives on poverty, village household stratification, wealth ranking in all households, and features of each household. The author integrated the villagers' perspectives into a questionnaire based on poverty assessment indicators presented by the villagers. The questionnaire was designed according to qualitative contextual research performed by the author. The content of the questionnaire included infrastructure; assets such as durable consumer goods, furniture, and land; income from agriculture, forest products, and animal husbandry; health care and education; and characteristics of the household. The data was analysed using STATA software.

Choice of poverty line

Several poverty lines were applied.

1. The National Poverty Line and Low Income Line in 2004

The national rural poverty line is determined using rural household surveys completed by the Rural Survey Department of the National Bureau of Statistics in China in 1985, 1990, 1994, and 1997. Poverty lines for other years are revised according to the rural household expenditure price index. The national rural poverty line for 2004 was 668 yuan per person per year. The rural low income line was determined based on the same food bundle as that used to determine the poverty line, but with non-food consumption set to 60 percent. Low income lines have been set since 2000. The rural low income line in 2004 was 924 yuan per person per year.[3]

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[2]In the summary table it states, 'This table is an important basis for poverty alleviation for the future. So please complete seriously and accurately. Filer and person in charge must sign themselves'.

[3]The Rural Survey Organization of the National Bureau of Statistics has set a low income line per person per year since 1998 based on the same food bundle as that used to determine the poverty line. The unique difference is that the non-expenditure poverty line is estimated according to 60 percent food share. It was 880 Yuan in 1998, which was quite near to US$1 a day according to the PPP exchange rate.

2. The Actual Price-Based National Poverty Line and Low Income Line

The national rural poverty line and low income line are adjusted and updated for subsequent years using the consumer price index multiplied by the poverty line of the previous year (ESCAP 1999). Yet this indexed income is not adjusted for inflation. The actual price-based national poverty line is obtained using the same consumption items in the food bundle issued by the Chinese Government, multiplied by the actual price of these items in a specific locality. The actual price-based food poverty line is 778 yuan per person per year in the study area. In calculating the poverty line, food consumption is assumed to comprise 60 percent of the poor's expenditures, while non-food consumption makes up 40 percent. The actual price-based national poverty line (APNPL) is approximately 1296 yuan per person per year (Lu 2009). The actual price-based national low income line is 1945 yuan per person per year, in which non-food consumption comprises 60 percent.

3. The Local People's Poverty Line and Low Income Line

Local people have their own poverty line. In order to understand local people's experience of poverty, the author facilitated three discussions with residents of the study villages. They defined poverty in terms of consumption. See Table 1 for a complete description of the typical food consumption bundle identified by villagers.

The food poverty-line expenditure per person per year comes to 1389.25 yuan (Table 1). A set of clothing and several pairs of shoes per year were also deemed necessary. Health care and primary school fees are also significant expenses. The author suggests that non-food expenditures including clothes, shoes, transportation, communication, health, education, housing, miscellaneous daily needs, entertainment, and services make up 40–60 percent of the poverty line expenditures. The local people's poverty line per person per year is placed at 2315 yuan; non-food consumption makes up 40 percent of the total. Households with expenditures per adult equivalent per year below the low-expenditure line (of which essential non-food items make up 60 percent of the total) were considered low-expenditure or expenditure-poor households. (Considering the high cost of

Table 1. Local people's poverty line consumption bundle.

Item	Unit k-calories (k-cal./kg)	Amount per day (kg)	Amount per year (kg)	Caloric intake (k-cal./day)	% of total calories	Price (yuan)	Cost (yuan)
Rice	3,150*	0.5	182.5	1,575	56.77	2.5	456.25
Pork	3,950*	0.2	72	779	28.08	10	720
Potatoes	1,040#	0.25	91.25	260	9.37	0.6	54.75
Vegetables	204*	0.5	182.5	102	3.67	0.5	91.25
Chicken	1,845*		2	10.1	0.36	15	30
Fish	1,090#		2	5.97	0.21	10	20
Beans	3,160#		4	34.6	1.24	2.5	10
Tofu	810#		3.5	7.77	0.28	2	7
Total	2774	100		1,389.25			

Notes: *These are the unit k-calories from Wang (2004, 4). #These unit k-calories are from sources including the internet and food packages.
Source: Discussions with men's group in Jiaguan Villagers' Group, and two discussions with men's groups in Jiankang Villagers' Committee.

education and health, non-food necessities probably make up close to 60 percent of the total.) In this case, the local low income line per person per year comes to 3475 yuan.

This study uses the adult equivalence scale according to which children 0–6 years of age are deemed equivalent to 0.2 of an adult, those 7–12 years old are equal to 0.3 of an adult, those 13–17 years of age are 0.5 of an adult, and those over 17 are adults. To normalise for economies of scale, this study assigns a value of 1 for the first adult household member and 0.7 for each additional adult. We take into account migrant family members by formulating a resident equivalence scale. This scale assigns a value of 1 to residents living in the village or at home and a value of X/12, where X is the number of months in which the migrant lives at home, to obtain a resident equivalence score for the migrant. Migrants residing away from home year-round are excluded from calculations, because their living expenses are already subtracted from the income earned from migrant labour. For example, migrants living at home for three months are considered to be 0.25 of a member (3/12), while those at home for 8 months of the year are counted as 0.67 of a member (8/12). The resident equivalence score is used to calculate the consumption expenditure and income per capita for permanent residence households with migrant members.

Participatory poverty assessment (PPA)

The methodology adopted in the PPA exercise includes five steps:

(1) Discussions with officials and village leaders at the national, provincial, county, township, villagers' committee, and villagers' group level, conducted to obtain data on the local economic and social situation.
(2) Non-participant observation.
(3) Oral history conveyed by elderly women and men exploring their experiences with poverty from childhood to the present.
(4) Unstructured and semi-structured interviews at the household and individual levels carried out with seventy-four respondents – women and men of different ethnicities and age groups – to ascertain their perspectives on poverty and village-level changes throughout their lifetimes.
(5) Focus group discussions conducted with men's groups, women's groups, elderly men's or women's groups, and ethnic groups in each of the nine villagers' groups. A total of twenty-one groups of men, women, and children were involved in the discussions. Four to twelve individuals participated in each focus group.

Discussions began with the history of the village and included topics such as the villagers' understandings of poverty, the causes of poverty, and potential solutions. A wealth ranking was performed by creating categories of households according to criteria presented by the villagers, such as size, number of labourers, dependents, children in school, livestock ownership, and special circumstances, like disability, disease, or a death in the family. Participants used a stack of cards to represent the number of households belonging in each category. We discussed which households might have fallen into or risen out of poverty, and how these movements may have been triggered.

Multidimensional poverty indicators (MDI)

The same set of household survey results were used here with the monetary approach. Multidimensional poverty indicators were constructed according to the following four steps:

Step 1 Determine how many and which indicators to select. Selection of indicators was based on priorities expressed by the villagers during the PPA exercise, household survey data, personal experience, and a thorough review of the literature on rural poverty. Suitable indicators were selected based on these criteria: data availability, reliability, applicability, comparability, accuracy, quantification, logic, and inclusion of households.

Step 2 The above indicators were correlated with the PPA results, average expenditure, and average income to determine relationships. Eight indicators which have negative or positive relationships with all of them in five dimensions were selected.

Step 3 After formalising the indicators, they were situated in appropriate dimensions. Dimensions were weighted equally regardless of how many indicators they included.
   (1) demography: household size (+), average age of family members (−);
   (2) human development: average education index (AEI) (+);
   (3) employment (migrant): average number of migrants and formally employed household members[4] per household (+);
   (4) assets: average pieces of durable assets (+), average number of cattle and horses (+);
   (5) expenditure: average transportation and communication cost (+), average electricity cost (+).

Step 4 Each indicator was transformed into a number ranging from 0 to 4. Each score is based on the approximate number of households in each category determined by the PPA discussions. A scale of 0 represents maximum deprivation; a 4 is minimum deprivation. The score for all of the eight indicators in the five dimensions for a household is between 0 and 20.
   Four data sets were used in this assessment:
   (1) the official poor population lists in 2004;
   (2) monetary poverty lists;
   (3) participatory wealth ranking results;
   (4) multidimensional poverty indicator lists.

Empirical findings

This research generated three findings. First, use of each approach leads to a different incidence of poverty. Secondly, different approaches identify dissimilar

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[4]Here formally employed members are added because the number of formally employed is so small, only 13 in all of the research villages.

households with disparate characteristics as poor. Thirdly, there is very little overlap among the poor households identified by each methodology.

Each approach leads to a different incidence of poverty

This study demonstrates that poverty rates differ significantly according to the approach adopted. Poverty incidences range from 3.38 percent with the monetary approach to 33.82 percent, according to PPA and MDI to 40.16 percent using the official poverty identification method.

Low income rates, including both poor and low income households, range from 8.02 percent according to the monetary poverty approach to 85.61 percent with the participatory approach, 86.67 percent according to the multidimensional poverty approach, and 100 percent when the official poverty identification method is employed (Table 2).

When compared with the other three approaches, the monetary approach, which uses the national poverty line to categorise households, appears too low to include all of the poor. Monetary poverty is less severe than the other types of poverty identified in this study.

Different approaches identify dissimilar households with disparate characteristics as poor

This research showed that different assessment methodologies identify households with different socioeconomic characteristics as poor. This corresponds to evidence from India, Peru, Chile, and Vietnam (Fusco 2003, Laderchi *et al.* 2003, Parker and Kozel 2007). Only household size and education indicators are negatively correlated throughout the approaches. Ethnicity is positively correlated with poverty in all four approaches. Smaller size households, Miao and Yi households, households with less education, and households with disabled and sick members are classified as poor by all of the approaches. Three approaches – the official method, the monetary approach, and MDI – consider households with no formally employed members to be poor. Other characteristics of poor households differ depending on the approach used.

The official poverty identification method identified households which were considered to be poor by those in power, though they tended to include themselves and their friends and relatives on the poor list. Households on the official poor list have younger household heads, younger household members, fewer migrants, and a higher dependency rate. The officially poor households are determined to be poor according to a government's set quota. They are also poor in political power.

The monetary poverty approach defines a poor household as one whose income or consumption expenditure is less than the national poverty line of 668 yuan. The monetarily poor households are those with older household heads and members, fewer migrants, fewer average labourers, fewer children in school, fewer sick members, and a lower gross dependency rate. The expenditure-poor households are the five-guarantee households,[5] the elderly households, female-headed households

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[5]Literally 'five-guarantee' is a category of household under the welfare system for the elderly provided by the government Civil Affairs Department. The household is guaranteed special assistance in five areas: food, clothing, housing, medical care, and burial services. Eligible households are the elderly living without children (see www.mountainvoices.org/ c_glossary.html).

Table 2. Poverty incidence, adjusted results of different approaches for comparison.

Approach (1)	Poor (HH) (2)	Average (HH) (3)	Non-poor (HH) (4)	Poverty % (5) = (2)/(2)+(3)+(4)	Poverty & average % (6) = (2)+(3)/(2)+(3)+(4)	Non-poor % (7) = (4)/(2)+(3)+(4)
National poverty line	16	22	435	3.38	8.02	91.96
Local price-based poverty line	85	115	273	17.97	42.28	57.71
Local people's poverty line	282	129	62	59.61	86.88	13.10
Official poverty list*	190	283	0	40.16	100	0
PPA*	160	245	68	33.82	85.61	14.37
MDI	160	250	63	33.82	86.67	13.31

Note: *The left out households by official poverty list and PPA are added to each column according to the ratio for comparison.

with no husband, single-member households, households with disabled members, and households with no formally employed members.

Participatory poverty assessment categorises poor households according to criteria defined by local people. Villagers view five-guarantee households, single-member households, elderly households, single parent households, households with more than two children in school, and households with few livestock as poor.

When multidimensional poverty indicators are used, poor households are identified as those with low education, older family members, fewer labourers, fewer migrants, small household size, young age, five-guarantee households, all single-member households, those with few children in school, and households with few durable assets, few cattle and horses, and minimal expenditure on transportation, communication, and electricity.

Little overlap in poor households identified by each method

This study explores the degree of overlap and differential coverage between poor households identified by the four approaches. Data analysis shows that the overlap of poor households in the four approaches is most like that depicted in Figure 4 – very low, as demonstrated by the data in Figure 5. Table 3 shows the number of households identified as poor by any one, only one, two, three or four approaches.

Only four households (less than one percent of the sample size) were identified as poor by all four approaches (the national poverty line is used here) as depicted in Figure 4 (see the area PQRS in Figure 4 and Table 3). The overlap of poor households identified is very low. Interestingly, of the four overlapping households, two are five-guarantee households, one is an elderly couple, and the other is a father-and-son household. This indicates that five-guarantee households, elderly couple
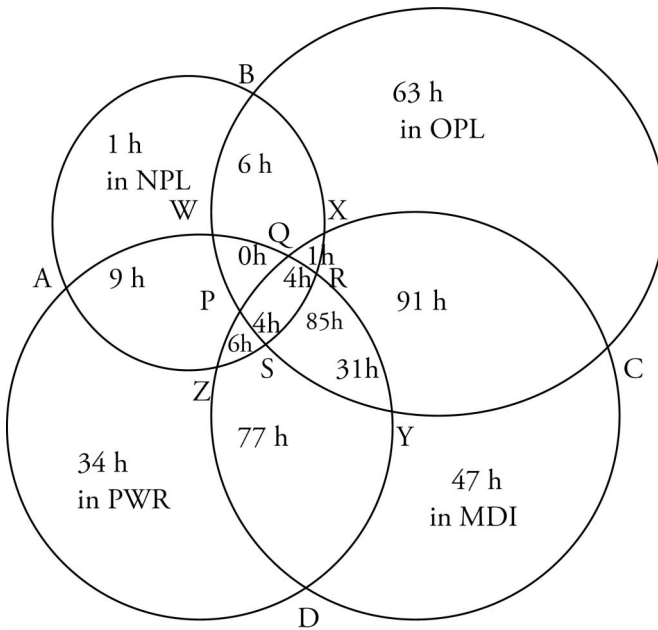

Figure 5.   Low overlap of poor households in the four approaches.
Note: The overlap of poor households is less than 1 percent in the centre of the four circles.

Table 3. Number of households identified as poor by any one, only one, two, three or four approaches (in national poverty line).

	NPL	OPL	PPA	MDI	Overlap area
No. of households identified as poor by all four approaches (HH)	4				PQRS
No. of households identified as poor in three approaches (HH)	–	31			PQY
	√	–	4		QRZ
	1		–	√	PSX
	0			–	WRS
No. of households poor in two approaches (HH)	6		–	–	BS
	–	85		–	WY
	–	–	77		QD
	–	91	–	√	PC
	9	–	√	–	AR
	6	–	–	√	ZX
No. of households identified as poor in only one approach (HH)	1	–	–	–	AB
	–	63	–	–	BC
	–	–	34	–	DA
	–	–	–	47	CD
No. of households identified as poor in any one approach (HH)	303				ABCD
Total households (HH)	473				

Notes: HH means households. √ means the number of households is also poor under this approach. – means the poor households are not poor under this or these approaches.

households, and male-headed households with no wife are poor regardless of the approach used.

Table 3 shows that the maximum overlap of poor households among any three approaches is 31 households, or 6.55 percent of the total. When three sets of evaluation criteria are combined, fewer households are identified as poor. Whenever three approaches are used, one or more of the poor households identified by the other approaches will be left out. One argument for the very low overlap is that the national poverty line has been drawn too low. If we use high monetary poverty lines, will we get high overlaps? The national low income line, actual-price based national poverty line, and local poverty line are compared with the results of the official poverty identification method, PPA, and MDI to see the overlaps.

When the 924 yuan national low income line is used, only 6 households (1.20 percent of the total) are identified by all four approaches. These are households with elderly couples, five-guarantee households, single-parent households, elderly single women, households with sick and disabled members, households with low education, and households with fewer migrants.

When the national poverty line with local price of 1296 yuan is compared with the results of the official poverty identification method, PPA, and MDI, only 16 households (3.38 percent) are identified as poor by all the four approaches (Table 4).

Considering the local people's poverty line of 2315 yuan per person per year and comparing the results of the official poverty identification method, PPA, and MDI, we see that although every approach identified more than 30 percent of the households as poor, only 7.1 percent of households (34 households) are regarded as poor by all four of the approaches (Table 5). The maximum overlap between two different approaches is 21.35 percent. The maximum overlap of poor households

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Table 4.   Number of households identified as poor by any one, only one, two, three or four approaches (in actual price-based national poverty line).

	APNPL	OPL	PPA	MDI	Overlap area
No. of households identified as poor by all four approaches (HH)	16				PQRS
No. of households identified as poor in three approaches (HH)	–	26			PQY
	√	–	15		QRZ
	7		–	√	PSX
	6			–	WRS
No. of households poor in two approaches (HH)	8		–	–	BS
	–	37		–	WY
	–	–	20		QD
	–	25	–	√	PC
	8	–	√	–	AR
	15	–	–	√	ZX
No. of households identified as poor in only one approach (HH)	10	–	–	–	AB
	–	56	–	–	BC
	–	–	27	–	DA
	–	–	–	36	CD
No. of households identified as poor in any one approach (HH)	312				ABCD
Total households (HH)	473				

Notes: HH means households. √ means the number of households is also poor under this approach. – means the poor households are not poor under this or these approaches.

Table 5.   Number of households identified as poor by any one, only one, two, three or four approaches (in local poverty line).

	LPL	OPL	PPA	MDI	Overlap area
No. of households identified as poor by all four approaches (HH)	34				PQRS
No. of households identified as poor in three approaches (HH)	–	8			PQY
	√	–	27		QRZ
	23		–	√	PSX
	23			–	WRS
No. of households poor in two approaches (HH)	38		–	–	BS
	–	20		–	WY
	–	–	8		QD
	–	9	–	√	PC
	19	–	√	–	AR
	37	–	–	√	ZX
No. of households identified as poor in only one approach (HH)	81	–	–	–	AB
	–	26	–	–	BC
	–	–	16	–	DA
	–	–	–	14	CD
No. of households identified as poor in any one approach (HH)	383				ABCD
Total households (HH)	473				

Notes: HH means households. √ means the number of households is also poor under this approach. – means the poor households are not poor under this or these approaches.

between two approaches is 91 households, or 19.23 percent of the total households. Even between any two approaches, the maximum overlap of the poor households identified was only 56.25 percent (between the monetary approach and participatory approach). Although all approaches indicate that more than 74 percent of the households are poor or low income households, when the national low income line is used, only 64.48 percent (305 households) of the households are placed in poor or low income categories according to all four approaches. That means that regardless of the threshold used, overlaps between the approaches remain low.

To summarise, which households are poor depends on which approaches are used and where the thresholds are set. But even when we compare the results of different high poverty lines with the results of the official poverty identification method, PPA, and MDI, the number of households identified by all four approaches as 'poor' is still low (see Tables 4 and 5 for details). The overlaps of households identified by different approaches are still low. That means that even when we alter the thresholds, the overlap is still low. The lack of overlap between the four approaches means that targeting poverty according to one approach ignores other dimensions and aspects of poverty. For example, only half of the households identified by the national poverty line/monetary approach are also poor according to the participatory approach. However, at least 303 households (64.05 percent) are poor according to at least one set of criteria (see area ABCD in Figure 4 and Table 3). Most households (64 percent to 80 percent of the households) are poor in any one approach with different monetary poverty lines. That indicates that most households are poor and vulnerable as least in one dimension. In order to capture all dimensions of poverty, multiple methods must be used.

Strengths and weaknesses of different methods

Each of the four approaches has strengths and weaknesses as a method for poverty identification. Different approaches focus on different dimensions of poverty, highlighting some elements and concealing others. The official method of poverty classification is politicised, with quota limitations on the number of poor households. It allows for limited participation and is inaccurate when compared to the other approaches. This has implications for budgetary and poverty alleviation policies.

The monetary poverty identification methodology uses a single dimension like income or expenditures to identify the poor. Use of adult equivalence and economies of scale adjustments, resident equivalence, local food basket and various threshold settings prove arbitrary. The results of this method are both absolute and relative, with the advantage of being generalisable.

Participatory poverty assessment proves more effective in revealing poverty processes and dealing with social concepts like status, power, and stigma. It also helps to clarify the reasons why people act as they do (Place *et al.* 2007). Nonetheless, the relative nature of poverty indicators causes comparison problems across different villages and groups. The results of participatory poverty assessment are difficult to standardise and generalise to the macro or regional level. Thus the approach cannot be used for poverty identification on a large scale, due to comparability, reliability, and generalisation issues.

Multidimensional methods, involving both local people's perceptions and a quantitative approach, can be used to identify the poor households. These offer an operational instrument for poverty reduction targeting, not only at the community

level, but also for national-level comparison and generalisation. However, issues remain, such as how to define a dimension, how many indicators to use, how much weight to give, how to scale an indicator or domain, and where to draw the poverty line.

The demography of poor households is dependent on the approach to poverty assessment. Although all four methods describe smaller households as poorer than large households, and households with less education are considered poor no matter which approach is used, PPA and MDI were more effective in identifying female-headed households, single elderly women, and elderly couples as poorer, more vulnerable, and facing greater social and economic constraints. While the experiences, views, and ideas of female-headed households and women in general are overlooked by the official identification method and the monetary approach, PPA and MDI findings shed light on the gender-specific experiences of poverty.

Some methods present a contradiction in findings. For example, households with fewer children in school are poorer according to the monetary approach, because they spend less on education. PPA regards households with high health care and education expenditures as poor. According to the expenditure poverty line, however, these households are rich, because they spend a lot on health and education. The average number of children in school does not correlate with poverty in the official poverty list, the participatory approach, and the multidimensional approach. Likewise, the official poverty identification method, PPA, and MDI show households with disabled and sick members to be poorer, but the monetary approach ignores these indicators.

While the monetary poverty line and multidimensional poverty indicators reveal inequality and absolute poverty, the official poverty identification method and PPA only divide households into poor, low income (average), and non-poor. They do not reveal inequality and relational dimensions, within one village or across villages.

The poverty assessment data from the official poverty identification method and PPA are not generalisable, while the monetary method and the multidimensional approach are well equipped to investigate trends and changes in poverty and to make general inferences (Place *et al.* 2007). They also provide a breadth of data that paints a statistically representative picture of all socioeconomic strata.

With regard to participation, each approach is quite different. The monetary approach is not participatory. The Chinese Government is trying to promote participation in poverty identification, however, participation is as yet limited in identifying the poor households in most villages. Multidimensional poverty indicators consider the perspective of those involved when developing the indicators; however, they do not participate in identifying the poor. PPA involves maximum participation of villagers in determining what poverty is, what the causes of poverty are, and which households are poor. However, the bottom-up approach required by participatory approaches conflicts with China's top-down bureaucracy. To properly use it will require institutional, structural, and transformative changes in government and village leaders' ideology, philosophy, attitude, and behaviour. Concurrently, improvement of villagers' skills, knowledge, and training is required to enable them to understand participation and government processes, in effect building citizenship by facilitating participation. PPA is therefore valuable for its ability to contribute to building a proactive citizenry. Hickey and Mohan (2004) contend that for the participatory approach to be transformative, critical engagement must be ideologically explicit and must promote representation and citizenship-building at the institutional, local and individual levels.

All approaches differ in terms of what type of resources they measure. The monetary approach, for example, overlooks social resources, such as goods and services provided publicly like schools, health clinics, and the environment (Laderchi *et al.* 2003). Assets, social services such as health care and education, and public infrastructure are always among the key aspects mentioned by villagers during a PPA assessment. PPA can also capture aspects such as culture, leisure time, quality of life, bureaucracy, corruption, and formalism. But these are difficult to ascertain using the official poverty identification method, the monetary approach, or even the multidimensional approach. Broad social, economic, and even cultural and political aspects cannot be recorded and measured by quantitative approaches; they can only be captured by an intensive qualitative approach such as PPA.

Thus, different identification methods and approaches work well to highlight different aspects of poverty, and the results of the various identifications and approaches reveal its many dimensions.

Does the choice of methodology matter?

This study has shown that the choice of approach does matter in poverty identification. Different approaches generate different poverty incidences and identify dissimilar households with disparate socioeconomic characteristics as poor. Moreover, there is very little overlap between households identified according to each approach. The discrepancies found in those households classified as poor suggest that the choice of approach does indeed matter. Choosing one approach for poverty identification will lead to certain households being identified, generate a specific poverty incidence, and underline a particular dimension of poverty.

The complex reality of poverty makes it difficult to capture its nature via any one-dimensional or even multidimensional definition or measure. Poverty is a multifaceted object of research that can be defined in many ways. Each definition and measure takes into account a peculiar facet of poverty. No single approach is true for all dimensions of poverty.

As a result, many approaches are required to provide a complete, multi-dimensional picture of poverty (Franco 2003). Households identified as poor by any method should be targeted for poverty reduction. Use of only one approach for identification or targeting may leave out households considered poor or vulnerable according to a different method. The identification of poor households using multiple approaches provides insight into the dimensions of poverty which can assist the government in formulating better policies and programmes for poverty reduction. The theoretical and empirical differences between the different identifica-tions and approaches point to important policy implications. This finding is echoed in the poverty literature (Laderchi *et al.* 2003).

Policy implications

This comparison of four approaches to poverty assessment contains important policy implications. The foregoing analysis points to some key conclusions at the research and policy levels.

The evolution of poverty and the recognition of poverty as multidimensional and multidisciplinary have gained acceptance in international discourse. In China, however, poverty is still measured narrowly, according to the monetary approach.

This tool is too simplistic to capture the multiple and complex aspects of poverty. Poverty analyses must address the multidimensional nature of poverty including a conceptual understanding, broad measurement, and constructive policy implications. This comparison of four poverty assessment methodologies has implications at three levels: the conceptual level, the methodological level and the policy level.

The conceptual dimension

First, the conceptual understanding of poverty should be broadened from a purely economic one to a multidimensional and multidisciplinary socioeconomic one. This calls for a definitional shift that includes both the economic and sociological dimensions of poverty (Ahmed 2004).

Poverty is understood differently according to each approach to poverty assessment. The philosophical assumptions of a government therefore 'matter' in practice (Kanbur and Shaffer 2007, 192). Poverty under the monetary approach is purely economic, measuring a single dimension – income or expenditures. The definition of poverty used in participatory poverty assessment and the multi-dimensional approach is much broader, including non-economic dimensions such as assets, state-provided commodities, vulnerability, and dignity. These theoretical differences have implications for interpersonal comparison of well-being. Reconciling these viewpoints is therefore of practical importance.

Poverty should be defined according to a broad framework that combines different approaches (Fusco 2003). A more comprehensive conceptualisation of poverty can provide better support for multifaceted and integrated strategies for poverty reduction at the policy level.

The methodological dimension

More importantly, the methodologies used to identify and measure poverty should be multiple and multidisciplinary, as opposed to just having the monetary poverty approach dominate poverty assessment. To capture the multidimensionality of poverty and the advantages of each approach, different approaches should be sequentially phased and integrated, combining quantitative and qualitative methodologies in order to 'examine, explain, confirm, refute and enrich' the overall assessment (Carvalho and White 1997, 16). Findings from each approach should then be integrated into one set of policy recommendations. The approaches should improve, complement, and supplement one another (Fusco 2003).

Each approach should be employed according to its strengths for different purposes. The monetary approach can be used to help develop strategies for households facing short-term economic difficulties. The participatory approach is more effective in revealing poverty processes and dealing with social concepts like status, power, and stigma, and for understanding the reasons why people act as they do at the micro or community level. At the same time, participatory methods can be used to identify the real poor for community development project purposes, as they are based on the perceptions and aspirations of the people experiencing poverty themselves. Multi-dimensional poverty indicators can serve special project purposes, for instance targeting education, health, or assets. All of these methodologies inform and enhance the others.

For example, PPA can be used prior to a household survey to become acquainted with the poverty situation in a locality. After the household survey, a participatory

approach can be applied to discover the causes of poverty. A combination of methods can overcome most of the biases in the research process that are encountered when one approach is used for poverty identification (Hayati *et al.* 2006).

The combination of methodologies used may differ depending on the desired results. For example, both the monetary approach and multidimensional approach reveal absolute poverty, inequality, and relational dimensions, as well uncovering trends and changes and allowing researchers to make generalisable inferences. These methods also provide a breadth of data that paint a statistically representative picture of all socioeconomic strata.

When selecting a method to identify poor populations, policymakers should be aware of the risk of excluding individuals who might have been considered poor by another approach. For instance, programmes designed to reduce monetary poverty will be ineffective in reaching those who are poor in ways that cannot be quantified economically. Therefore, programmes aimed at reducing multidimensional poverty should focus less on monetary transfers and income generation and more on public services, like education and health programmes (Franco 2003).

We recommend using multidimensional poverty indicators as a simple and effective means of identifying the poor at the community level for general poverty assessment in China. Unlike PPA, it produces results that are generalisable. However, qualification of the multidimensional approach is necessary. An innovative integrated measurement tool uses multidimensional poverty indicators in participatory focus group discussions. The challenge is to determine which dimensions to look at and how many indicators to include. In general, human development, assets, employment, and consumption indicators should be assessment criteria under any methodology. More research is needed to determine how multidimensional poverty indicators can interact with the participatory approach. Ongoing research in India has demonstrated that careful application is required. Of course, any effort to determine which approach is better or more important in poverty assessment would be misleading.

The policy dimension

If poverty is defined as multidimensional and multidisciplinary, methodologies, strategies, policies, and programme interventions for the different dimensions should also be defined as such. The particular approach adopted has important implications for addressing the problem of poverty from a policy perspective. Different approaches highlight different aspects of poverty and therefore point to different solutions.

When developing poverty reduction policies, the Chinese Government mainly targets economic development, infrastructure construction, disseminating science and technology and social goods, and improving living conditions. According to the official poverty identification method, almost all households are identified as poor or low income. This may result in leakage of poverty reduction resources to non-poor households. Although poverty rates are decreasing according to the monetary approach, the complex and multidimensional nature of poverty makes poverty definition, poverty identification, poverty targeting, and poverty alleviation increasingly difficult.

Even though education is mentioned among social goods, there is as yet no programme to reduce poverty by expanding education (PGCDT 2004, 2005a, 2005b, WDCPADO 2005). Households that fall behind on health and education become trapped in a vicious cycle, passing their poverty on to the next generation. The

Chinese Government must look beyond income generation and infrastructure development to broader poverty reduction strategies and policies including education, health care improvement, pension schemes, and allowances for the disabled. Although the Leading Group for Poverty Reduction has embraced 'participation' as a guiding principle in its work, participatory approaches are not yet considered a citizen's right, but rather a technical instrument for better targeting, to reduce leakage of poverty alleviation funds (Young 2003).

Capacity building is also recommended as an instrumental means of increasing productivity and monetary incomes among the poor. One important policy response to poverty has been to raise the 'level of the sea so that all boats may rise' (Dollar and Hraay 2001 cited in Laderchi *et al.* 2003, 27). These growth-based policies are useful. They often do help to alleviate poverty, but only in the short term. There is no guarantee that economic development will allow wealth to trickle down enough for poor people to rise definitively out of poverty (Fusco 2003).

Participatory poverty assessment includes poor people in the conceptualisation of poverty, identification of the poor, and implementation, monitoring, and evaluation of poverty reduction programmes. Participatory involvement empowers poor communities and improves the chances of success for poverty reduction programmes. The poor prioritise the dimensions that affect them most and contribute solutions to tackle the problems: income generation, social support, infrastructure improvement, education, and relief for those who cannot work, among others.

Multidimensional poverty indicators can take into account the causes and consequences of poverty and provide information on how to implement a structural policy response. They demonstrate that poverty dimensions are interlinked and mutually reinforcing (Hayati *et al.* 2006); some dimensions must be tackled in tandem to affect multifaceted positive change.

Multidimensional measures and the use of different approaches allow us to recommend structural socioeconomic policies that can break the intergenerational reproduction mechanism of poverty in the long term. The distinction between short-term and long-term allows us to consider consolidating different approaches into the same wider framework that can combine all the information at our disposal – income-based and multidimensional – to derive more effective poverty reduction strategies.

These policies must target not only short-term activities such as monetary improvements or income generation, but also long-term strategies like improving social conditions and services. Programmes designed to reduce monetary poverty are likely to be ineffective in reaching all the households identified as poor under the PPA and MDI approaches. Multiple approaches must be combined to effectively evaluate the experience of poverty and create innovative solutions that address its root causes.[6]

References

Ahmed, A.I.M.U. 2004. Socio-demographic correlates of rural poverty in Bangladesh: a case study of Gaibandha Sadar and Tanore Upazilas. *Bangladesh e-Journal of Sociology*, 1(2), 17.

Carvalho, S. and H. White. 1997. *Combining the quantitative and qualitative approaches to poverty measurement and analysis: the practice and the potential*. Washington, DC: World Bank.

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[6]In this paper names have been changed to meet ethical approval and maintain confidentiality.

ESCAP 1999. Poverty statistics in China. *Seminar on poverty statistics*. Bangkok: United Nations Economic and Social Commissions for Asia and the Pacific (ESCAP).

Fan, X. 2007. *shenke linghui shiqida jingshen, nuli zuohao fupin kaifa gongzuo–zai fupin kaifa xingshi yu zhengce yantaohui shang de zhuzhi fayan* [To understand the spirit of The 17th National People's Congress of Chinese Communist Party – Keynote Speech on Poverty Alleviation Situation and Policy Workshop], ed. The State Council Leading Group Office of Poverty Alleviation and Development, 4 Dec.

Franco, S. 2003. Different concepts of poverty: an empirical investigation and policy implications. *WIDER conference on inequality, poverty and human well-being*, 30–31 May 2003. Helsinki: World Institute for Development Economics Research, United Nations University.

Fusco, A. 2003. On the definition and measurement of poverty: the contribution of multidimensional analysis. *The 3rd conference on the capability approach: from sustainable development to sustainable freedom*. Lombardy, University of Pavia, 7–9 September.

Griffin, K., *et al*. 2000. *Policies for poverty reduction in China* (Supplement to the Joint Government/World Bank/UNDP Report: China – Overcoming Rural Poverty). New York and Geneva: United Nations Development Programme and International Labour Organization.

Hayati, D., E. Karami and B. Slee. 2006. Combining qualitative and quantitative methods in the measurement of rural poverty: the case of Iran. *Social Indicators Research*, 75(3), 361–94.

Hickey, S. and G. Mohan. 2004. Towards participation as transformation: critical themes and challenges. *In:* S. Hickey and G. Mohan, eds. *Participation: from tyranny to transformation? Exploring new approaches to participation in development*. London: ZED Books; New York: Palgrave Macmillan.

Hillman, B. 2003. 'Opening up': the politics of poverty and development in rural China. *Development Bulletin*, 61, 47–50.

Kanbur, R. and Shaffer, P. 2007. Epistemology, normative theory and poverty analysis: implications for Q-Squared in practice. *World Development*, 35(2), 183–96.

Laderchi, C.R., R. Saith and F. Stewart. 2003. Does it matter that we don't agree on the definition of poverty? A comparison of four approaches. Oxford: Queen Elizabeth House, the University of Oxford. Available from: http://www2.qeh.ox.ac.uk/RePEc/qeh/qehwps/qehwps107.pdf [Accessed 11 July 2004].

Li, X. 2009. *tiaozheng zhongguo weilai shinian de fupin zhanlue* [To adjust the poverty alleviation strategies for the next ten years]. 25 June 2009 edition. Beijing: The State Council Leading Group Office of Poverty Alleviation and Development.

Lu, C. 2009. *Who is poor in China? Comparison of alternative approaches to poverty assessment in rural Yunnan*. PhD Thesis, Institute of Social Studies, The Hague.

Maltzahn, R.V. and K. Durrheim 2008. Is poverty multidimensional? A comparison of income and asset based measures in five southern African countries. *Social Indicators Research*, 86, 149–62.

Parker, B. and V. Kozel. 2007. Understanding poverty and vulnerability in India's Uttar Pradesh and Bihar: a Q-squared approach. *World Development*, 35(2), 296–311.

PGCDT 2004. *wuding xian chadian xiang zengyi cunweihui zhongdian fuchi xiangfu bianbao shuoming* [Explanation of the submission of key supporting poverty alleviation project of Zengyi Villager's Committee in Chadian Township, Wuding County]. Wuding: People's Government of Chadian Township (PGCDT).

PGCDT 2005a. *chadian xiang renmin zhengfu guanyu bangzhu jiejue 2006 niandu xiaoer xindai xiangmu ijin de baogao* [Report concerning helping to solve microfinance project fundings in 2006 by People's Government of Chadian Township]. Wuding: People's Government of Chadian Township (PGCDT).

PGCDT 2005b. *chadian xiang zhengcun tuijin xiangmu shishi yijian* [Implementation opinion on The Whole Village Improvement Project in Chadian Township]. Wuding: People's Government of Chadian Township (PGDCT).

Place, F., M. Adato and P. Hebinck. 2007. Understanding rural poverty and investment in agriculture: an assessment of integrated quantitative and qualitative research in western Kenya. *World Development*, 35(2), 312–25.

Saith, A. 2003. *Social protection as social investment: reflections on the micro-macro interface in Chinese policy options*. Unpublished manuscript. The Hague, London.

Scoones, I. 1995. Investigating difference: applications of wealth ranking and household survey approaches among farming households in southern Zimbabwe. *Development and Change*, 26(1), 67–88.

Shimeles, A. and R. Thoenen. 2005. Poverty profiles: a methodological note on measuring poverty. Addis Ababa: United Nations Economic Commission for Africa.

Tong, X. and M. Lin. 2001. Research on China's rural poverty line. *In: Omnibus of Best Poverty Papers*. Beijing: China Economics Press, pp. 186–201.

Wang, S. 2004. Poverty targeting in the People's Republic of China. *ADB Institute Discussion Paper No. 4*. Manila: Asian Development Bank.

Wang, D. 2009. *hui liangyu fuzongli zai quanguo chunji nongye shengchan huiyi shang lun fupin kaifa* [Discussion on poverty alleviation by Vice-Premier Hui Liangyu on the National Conference of Spring Agriculture Production Work], 2 April 2009 edition. Beijing: The State Council Leading Group Office of Poverty Alleviation and Development.

WDCPADO. 2005. *wuding xian 2005 niandu fupin zhongdian fuchi cun xiangmu jihua biao* [Project plan for key poverty alleviation and supporting villages in Wuding County in 2005]. Wuding: Wuding County Poverty Alleviation and Development Office.

World Bank. 2001. *China: overcoming rural poverty*. Washington, DC: World Bank.

Young, N. 2003. International exchange and participatory discourse in Chinese poverty alleviation. *Development Bulletin*, 61, 13–6.

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