Assessing Poverty Outreach of Microfinance Institutions in Cambodia - A Case Study of AMK

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Abstract The microfinance industry works to balance social and financial benefit, which is viewed as an effective way of helping the poor. The industry, however, faces the challenge to measure the social bottom line, especially the depth of poverty outreach which refers to serving the poorest clients. This paper aims to investigate poverty outreach and analyze the depth of outreach for AMK. It assesses the depth of outreach through two main measures: the Wellbeing Score and Daily Food Expenditure per capita. The analysis is based on both secondary data and primary data from a survey in 2009 with 810 samples [648 clients (504 group clients and 144 individual clients) and 162 non-clients] randomly selected in 18 provinces in Cambodia. The results of AMK's depth of poverty outreach for group clients based on the Wellbeing Score indicate that AMK reaches more poor and medium level households than in the control group of non-clients, but less better-off clients. For individual clients AMK reaches a larger share of medium households, less poor households and a slightly smaller share of the better-off households than what is found in the general population. The results based on the number of clients spending on food below Food Poverty Line (FPL) confirm that AMK clients are poor with 56% of group clients and 58% of individual clients below FPL. Therefore, we conclude that AMK achieves the social bottom line in term of poverty outreach.

Keywords: Assessment, poverty outreach, microfinance, AMK, Cambodia

INTRODUCTION

Microfinance is a crucial tool to help the poor access financial services. For poor households, having sources of reliable, convenient and reasonably-priced financial tools would improve their situation (Collins et al., 2009). Therefore, the Royal Government of Cambodia and its development partners are increasingly paying attention to the connections between poverty and microfinance.

In Cambodia, microfinance institutions (MFIs) started in the early 1990s with support from the international community. In recent past years the industry has made significant progress and has witnessed high growth from 2006 to 2008. During this period the number of clients has more than doubled and the loan portfolio almost tripled. Meanwhile the number of licensed MFIs has increased remarkably.

The obsession with growth of the industry has led to a situation where there is a concern that MFIs are turning to commercial principles of operation and neglecting the poor. In conjunction with the financial and economic crisis there is increasing concern about mission drift of MFIs - sliding away from the original idea of helping the poor. Therefore it is crucial to measure the poverty outreach and the depth of the outreach. Poverty outreach refers to how many poor people microfinance is reaching, and depth of outreach (or depth of poverty outreach) refers to the poverty

level of clients served. The purpose of this article is to determine the level of poverty outreach and then analyze AMK client data to assess the performance of AMK in terms of the depth of outreach.

Fig. 1 provides information about the trend in the microfinance industry from 2003 to 2009. It reveals that the microfinance situation in Cambodia was determined by rapid growth. This resulted in a tremendous increase of loan portfolio from $ 59 million in 2003 to $ 492 million in 2009. Over the same period, the number of loans borrowed increased from 351,055 to 1,102,246. (refer to a Figure in the text before presenting it)
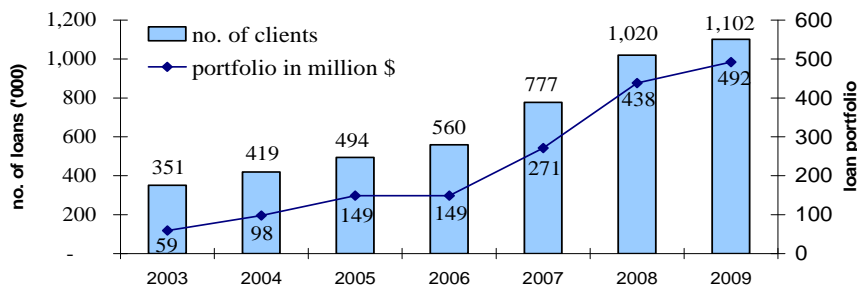

Fig. 1 Evolution of loan portfolio and no. of clients

METHODOLOGY

This research assesses AMK's depth of outreach through two main measures: Wellbeing Score and Daily Food Expenditure per capita. The Wellbeing Score, a relative measure, is the main tool as it is a multidimensional measure of poverty and provides a good picture of the wellbeing situation for client households. Client households are then classified into wellbeing groups according to their particular Wellbeing Scores and information is presented for these groups. To provide an absolute measure of poverty, AMK also compares the Daily Food Expenditure per capita with the Food Poverty Line (FPL) in rural areas. The AMK Wellbeing Score is based on Principal Component Analysis and was defined in 2006 (reference?). The 22 indicators that comprise the Wellbeing Score cover three poverty dimensions: expenditures, assets (physical, human and social), and vulnerability and food security. The specific indicators selected are the following:

PHYSICAL ASSETS	EXPENDITURES
- Total land area owned by household (HH) - Floor, wall and roof materials for the house/dwelling - HH owns a television, a motorcycle and assets of modest, mid or high value	- Expenses in clothing and footwear pc - Total HH expense in food - HH outflows include: inputs for income activities, buying HH materials and durable assets - Main HH expenditures include food

HUMAN ASSETS	SOCIAL CAPITAL
- Number of adults (income earners) - Health: strategies to pay for healthcare - Education: literacy of head of household	- Number of good friends / neighbors in community

VULNERABILITY & FOOD SECURITY
- Food Security - Household diet in the last year - Self-reported level of difficulty in affording large expenses - Ordinal - Incidence of reducing nutritious quality of foods - Main income activities: casual labor or temporary migration (domestic or international) - Savings and reinvestment behavior - Coping strategies: less food consumption, less non-food expenses, selling personal property

The AMK-PCA model was based on the IFRI/CGAP Poverty Assessment Tool but was adapted to the rural Cambodian context and applied to food security as the main poverty benchmark. The AMK-PCA model achieved relatively good results. Note that the Kaiser-Meyer-Olkin (KMO) index was 0.818 when applied to non-clients and 0.848 to the total 450 HH. In general, index scores > 0.60 are acceptable, > 0.70 are good, > 0.80 are commendable, and > 0.90 are exceptional.

The analysis for this article is based on data collected from both AMK new clients and non-clients from 54 villages in 18 provinces over the period from March to May 2009. Eight hundred and ten samples (648 clients and 162 non-clients) were interviewed. Among the 648 clients, 504 were group or Village Bank (VB) clients and 144 Individual (ID) clients. In order to assess how AMK is reaching the poor, clients referred to in this study were those who joined AMK within a year prior to the field survey.

The client sample selection was conducted in two steps: first, 54 villages with at least 18 new clients were randomly selected; and second, 12 clients per village were randomly selected plus 6 clients as potential replacements. One reason of choosing 12 clients is efficiency which is based on past experience of AMK research team. For relative poverty study, 3 non-clients per village were selected for interviews. This means that the ratio between client and non-client samples is 4:1. The non-client samples had to be non-client households who were next to the selected client households. Therefore, the total number of interviewed clients and non clients was 810.

RESULTS AND DISCUSSION

Currently, there are one million clients with 492 million US$ loan outstanding covered by 20 licensed MFIs, one commercial bank (ACLEDA small loan) and one licensed NGO, accordingly to Cambodia Microfinance Association (CMA). Table 1 shows that the top three institutions which include AMK account for 60% of the market share in term of client outreach.

Table 2 shows that more than half of AMK loans were used for productive purposes either for farm or non-farm activities. Meanwhile AMK clients also used loans for different purposes: 10% for food, 8% for health, 14% for buying assets (vehicles, land and gold), and 9% for other consumption.

Table 1 Market share by MFIs

MFIs	No. of clients	Share (%)
AMRET	224,708	20
ACLEDA	223,687	20
AMK	217,818	20
VFC	98,777	9
TPC	91,170	8
PRASAC	87,945	8
Others	158,141	14

Values were calculated on the basis of the data from CMA

Table 2 Loan uses by AMK clients

Loan uses by AMK clients		Share (%)
Productive purposes	Farm	40
	Non-farm	19
Savings	Assets	11
	Land and gold	3
Consumption	Food	10
	Health	8
	Others	9

Source: AMK field research, 2009

According to Gulli (1998), there is a positive correlation between reaching many poor people and financial sustainability. Therefore AMK, as a social MFI, has worked hard to include the poor from both rural and urban locations. So far, its performance in reaching large number of poor has been higher than the national average of the industry. Also AMK has achieved financial sustainability since 2004.

Assessment by Wellbeing Score

The average Wellbeing Score for VB clients was -0.020 and for non-clients was 0.080 (Fig. 2). This indicates that clients were poorer than non-clients (the t-test for equality of means is not

significant while the independent t-test is: N=630, F=0.04, p-value=0.315). Regarding ID client status, Fig. 2 shows that the average wellbeing score for AMK ID clients was 0.076 and the average wellbeing score for non-clients was -0.019, indicating that ID clients are wealthier than non-clients (the t-test for equality of means is not significant while the independent t-test is: N=180, F=3.15, p-value=0.609). It is important to realize that VB non-client scores and ID non-client scores are different groups because they are from different locations.
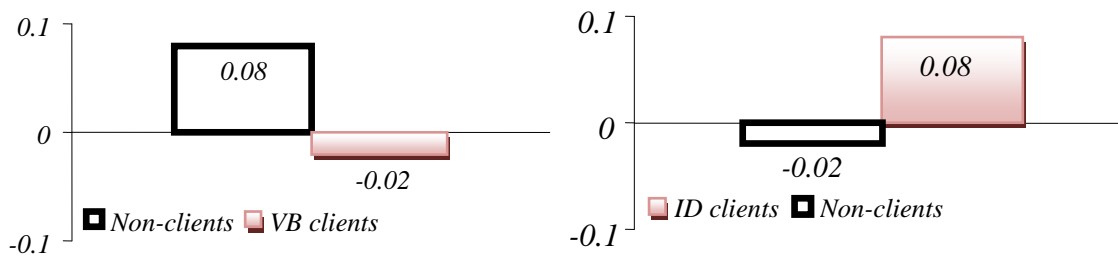

Fig. 2 Average household wellbeing score

Fig. 3 shows the cumulative frequency for non-clients and VB clients; there is a small difference in poverty levels between the two groups only in the upper 40% and lower 40% of households on the cumulative frequency. Fig. 3 also shows the cumulative frequency for non-clients and clients, showing a margin of difference in poverty levels between the two groups situated in the lower 50% part of the cumulative frequency.
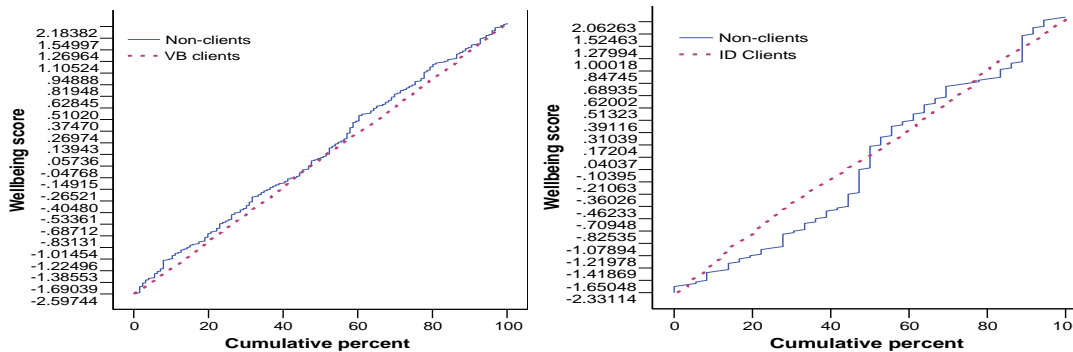

Fig. 3 Accumulative Frequencies for Non-Clients and Clients

Assessment by tercile analysis

The Wellbeing Score is a relative poverty score and measures whether a household is worse off or better off compared to other households in the general population. Each household sampled has been assigned a Wellbeing Score: the lower the score, the poorer the household relative to all other households with higher scores. The following steps were followed to develop the tercile results.

First the 126 non-client households from VB villages were sorted in ascending order according to their Wellbeing Scores. Second these 126 samples were divided into terciles based on Wellbeing Scores: the bottom third of the non-client households are grouped into the "poor" group, followed by the "middle" and the "better-off" group. Since there are 126 non-clients, each group contains 42. The cutoff scores for each tercile define the limits of each poverty group and they were -0.3428 and 0.5309. Third, the 504 client households were then categorized into the same three groups based on their scores using the cutoff scores defined above for the AMK-PCA case (i.e. -0.3428 and 0.5309).

If the pattern of poverty among client households matches exactly that of non-client households, the client households will divide equally among the three wellbeing groupings in the same way as non-client households, with 33 percent falling into each group. Any deviation from this equal proportion would signal a difference between the client and non-client populations. The results shown in Fig. 4 are that VB clients are slightly over-represented within the poorer tercile, remain the same in the medium and are under-represented in the higher tercile. Therefore AMK is reaching a larger share of the poor households, an equal share of medium classified households and a slightly smaller share of the better-off households than in the general population.
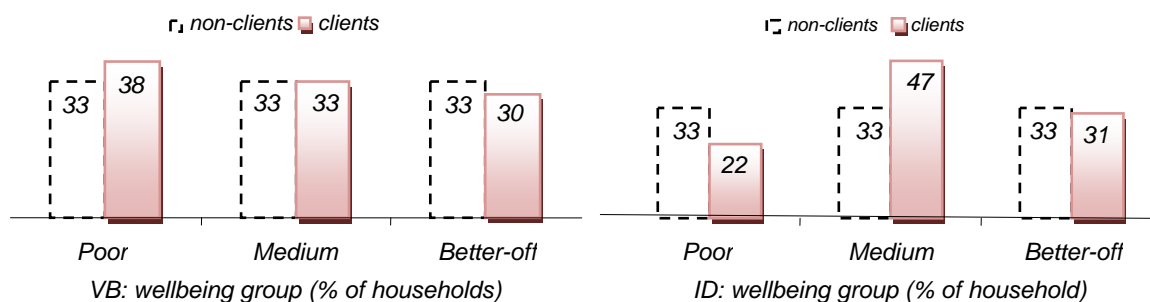

Fig. 4 Tercile analysis by wellbeing group

For the ID case, the same steps were followed. First the 36 non-client households were sorted in ascending order according to their Wellbeing Scores. Second this 36 household sample was divided into terciles based on Wellbeing Scores: the bottom third of the non-client households are grouped into the "poorer" group, followed by the "middle"-ranked group, and finally, the "better-off" group. Since there are 36 non-clients, each group contained 12 households. The cutoff scores for each tercile define the limits of each poverty group and they were -0.755 and 0.568. Third, the 144 client households were then categorized into the same three groups based on their scores using the cutoff scores defined above for the AMK-PCA case (i.e. -0.755 and 0.568).

The results indicate that ID clients are under-represented within the poorer tercile, highly over-represented in the medium and are slightly underrepresented in the higher tercile (Fig. 4). Therefore, AMK is reaching a larger share of the medium households, less poor households and a slightly smaller share of the better-off households than found in the general population.

Assessment by absolute poverty benchmark

The Wellbeing Score calibrates relative poverty but does not provide information on the absolute level of poverty, i.e. it measures the extent to which a household is worse off or better off compared to other households, but does not assess the actual level of deprivation of the poorer category of households or the level of affluence of the better-off households. To provide an estimate of absolute levels of poverty, AMK compared the Daily Food Expenditure per capita with FPL in rural areas. AMK Daily Food Expenditure figures include not only the cash expenses in food items but also quantify consumption from the household's own production (including rice and other crops, vegetables or animals) and from other food items gathered, collected or fished.

The overall Cambodian Poverty Line for rural areas was set at Riel (R) 1,753 per person per day and the FPL for rural areas at R 1,389 per person per day in 2004. The Cambodian FPL allows a person to consume a food basket that provides at least 2,100 calories of energy per day. Therefore, a person who consumes less than this FPL is not receiving the minimum amount of calories necessary to maintain their health. Since there are no rural inflation figures in Cambodia, in order to update the 2004 FPL to the prices at the time of the fieldwork, AMK uses a proxy: the rural FPL is updated with the Phnom Penh Consumer Price Index (CPI) for food and beverages. Details of the proxy update are shown in Table 3.

Table 3 Proxy update of poverty line (1 US dollar = 4,118 Riel)

	Total Poverty Line 2004	Food Poverty Line (FPL) 2004	AMK Proxy FPL 2009	
			Riel / day	US$ / day
Phnom Penh	2,351	1,782	2,855	0.69
Other Urban	1,952	1,568	2,512	0.61
Rural	1,753	1,389	2,225	0.54

Several years ago almost all AMK clients were below the conventional definitions of the poverty line (Chetan, 2007). This study indicates that the number of clients below the poverty line has decreased but average food expenditure remains lower among ID clients than VB clients. Fig. 5 shows the Daily Food Expense per capita for both VB and ID AMK clients and compares it with the updated rural FPL (AMK proxy for May 2009). This confirms that most clients are consuming less than the minimum calorie intake per day and thus can be classified as poor, which partially confirms AMK's commitment to provide services to the poor.
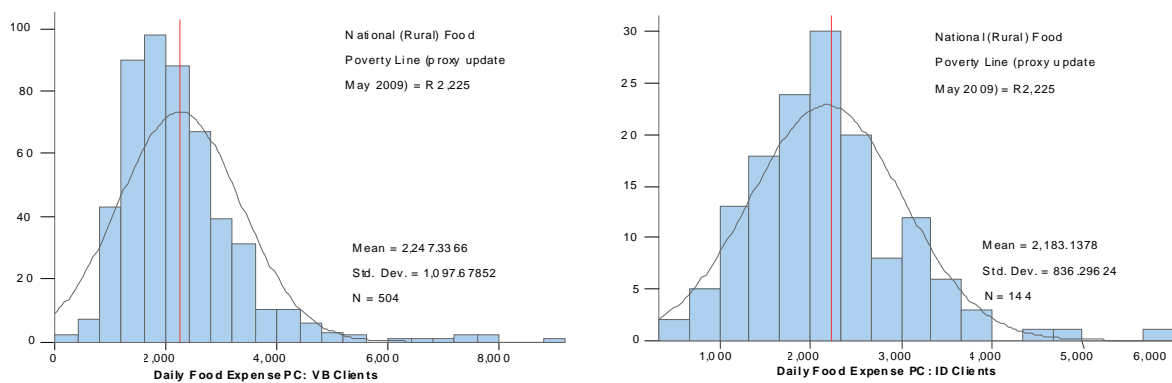
Fig. 5 Daily food expenditure per capita

As a national benchmark the overall Cambodian poverty headcount is estimated at 30.1%, but with wide variations: it was 35% in rural areas, 22% in other urban areas and only 1% in Phnom Penh as of 2007. As for national food poverty, 22% of the population in the rural, 11% in the urban and 1% in Phnom Penh are considered to consume less than FPL. Note that the percentage of non-client households who consumed less than this benchmark was lower (49%) but the significant test cannot confirm that the differences are statistically significant (Chi Square (N = 180) = 0.051, p = 0.821). Also note that the reasons for these large discrepancies in the poverty figures have not been completely assessed and that this issue is yet to be resolved.

However, new AMK clients below FPL were 71% in 2006, 75% in 2007 and 63% in 2008 (AMK, 2008). In 2009, food poverty analysis has shown that 56% of VB client households consumed less than FPL of R 2,225 (Table 4). Clients falling into the Poor tercile group had the highest percentage of household below FPL at 68%, followed by the medium and the better-off at 54% and 44%, respectively.

The study also indicates that 58% of ID client households consumed less than FPL of R 2,225. Meanwhile, the percentage of non-client households who consumed less than this benchmark was slightly lower at 56%. Poor group has the highest percentage of household below FPL at 78%, followed by the medium at 60% and the better-off at 39%.

Table 4 Clients below the Cambodian FPL

Description		Non-clients	Clients			
			Overall	Poor	Medium	Better-off
VB Clients	No. of HH below the FPL	62	283	128	90	65
	% of HH below the FPL	49	56	68	54	44
ID Clients	No. of HH below the FPL	20	83	25	41	17
	% of HH below the FPL	56	58	78	60	39

CONCLUSION

The results of the two measures of depth of poverty outreach (the AMK Wellbeing Score and the rates of absolute poverty compared with Cambodian FPL for rural areas) allow the conclusion that based on the Wellbeing Score AMK is reaching less better-off clients than what is found in the control group of non-clients, but more medium and poor level households. The results of AMK's depth of poverty outreach for VB clients in 2009 based on the number of clients who fell below the Cambodian Food Poverty Line, confirm that indeed AMK clients are poor with 56% of clients below the line.

The results of AMK's depth of poverty outreach for ID clients in 2009 based on the Wellbeing score indicate that these clients are on average relatively better-off than VB clients. However, this is somewhat skewed upward due to a high proportion of very well off ID clients. With a Wellbeing Score assessment only among the ID samples, AMK is reaching more medium clients than what is found in the control group of non-clients but less in better-off and poor-level households. The results of AMK's depth of poverty outreach for ID clients in 2009 is based on the number of clients spending less on food than the Cambodian Food Poverty Line, and this confirms that indeed AMK clients are poor with 58% of clients falling below the Cambodian Food Poverty Line.

ACKNOWLEDGEMENTS

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