

# Is Micro Too Small? Microcredit vs. SME Finance

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The Financial Access Initiative is a research center based at New York University, focused on finding answers to how financial sectors can better meet the needs of poor households.

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## Introduction

The original promise of microcredit was to reduce poverty by fostering self-employment in low-income communities, an idea first promoted at mass scale in Bangladesh (Yunus 1999). But critics of Muhammad Yunus and the Bangladesh microcredit model argue that supporting larger businesses (small and medium enterprises or SMEs) may instead create more and better jobs for poor individuals (e.g., Karnani 2007, Dichter 2006). That's only possible, however, if those larger enterprises employ poor workers in large numbers. We argue that that can't be assumed.

There is surprisingly little data on the profile of microcredit borrowers, and even less that might be matched to comparable surveys of SME employees.

Most studies of SMEs implicitly or explicitly compare them to large firms (e.g., Beck and Demirgüç-Kunt 2006). In this paper, we instead compare the employment and poverty outreach of SMEs to that of microenterprises. There is surprisingly little data on the profile of microcredit borrowers, and even less that might be matched to comparable surveys of SME employees. We draw on a series of surveys of both microcredit borrowers and SME employees, building from a 2008 survey of Bangladeshi SMEs which are customers of BRAC Bank, a for-profit arm of Bangladesh's largest NGO. The survey is particularly valuable in including questions that can be used to predict the likelihood that the employees' households are below global poverty lines. We then compare those household-level predictions to similarly-constructed likelihood scores taken from independent data on microcredit borrowers in Bangladesh. We relate those results to data from an additional microcredit survey with detailed consumption data. In focusing on customers of BRAC Bank, we narrow attention to SMEs that are most likely to align with BRAC's broader imperatives of development, social welfare improvement, and poverty reduction.

Together, the three data sets show that the average employee of a small enterprise in our sample is a 26 year old male with almost five years of formal education and who is semi-skilled, while Bangladeshi microcredit

borrowers are mostly women, about half have no formal education and most have few professional skills. On average, microcredit borrowers are far more likely to be female (91% versus 7% of SME employees). Analysis of the average likelihood that employees live in poor households shows a similar bifurcation.

The data show that SME employees work long weeks (on average 11 hours a day, six days a week), which creates employment barriers for women with primary child-raising responsibilities. As a result, SMEs in Bangladesh are not typically creating jobs that reach the kinds of workers supported by microcredit, nor are SMEs employing many family members of microcredit customers. The findings here thus align with the lack of a robust correlation between SME growth and poverty reduction found in cross-country data (Beck et al 2005a).

The argument that “micro is too small” rests on the assertion that supporting larger businesses might be a more efficient way to achieve similar ends to microcredit. We show that the proposition is only half right in Bangladesh. SME finance is more profitable and can create larger financial multipliers than investing in microcredit institutions, but we do not find that patterns of job creation (and, by implication, the distribution of social benefits) are likely to be similar.

## 1. SMEs in Development

The promise of microcredit rests with the potential to grow the “micro-enterprises” of poor entrepreneurs by providing loans for working capital. Muhammad Yunus, pioneer of the microcredit movement and founder of the Grameen Bank in Bangladesh, argues that microcredit creates new employment opportunities for the underserved (Yunus 1999). In a paper prepared for 1986’s World Food Day conference, Yunus hypothesized that “self-employment, supported by credit, has more potential of improving the asset base than wage employment has” (Yunus n.d.). Moreover, focusing microcredit toward women, Yunus has argued, will bring about larger increases in household welfare than when targeting men. At Grameen Bank, 97% of borrowers are women, and in Bangladesh 94% are women. Globally, the fraction of women in microfinance is 63% (Microfinance Information eXchange 2010).

Creating jobs, particularly in small and medium enterprises, can be another way to reduce poverty. As Karnani (2007) highlights, individuals who start a microenterprise and borrow from microfinance institutions may

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prefer to find employment at steady wages, but turn to self-employment when wage jobs are unavailable.<sup>1</sup> These individuals may lack the skills or motivation to be successful entrepreneurs, which could be part of the reason that recent microcredit evaluations show mixed results (e.g., Banerjee et al 2010, Crépon et al 2011). Karnani and others argue that “micro” is too small (e.g., Dichter 2006).

In creating BRAC Bank, Fazle Abed comments that “microfinance clients don’t create jobs for others; they create work for themselves, which is called self-employment... [BRAC Bank’s role] is important. So we are not only creating self-employment. We thought we need to create jobs in our economy so a large number of people can get jobs... If some people show signs of light in their lives and need bigger loans, they can go to BRAC Bank. We are providing them with a ladder to get out of poverty” (Devnath 2009). By 2005, the World Bank Group had spent more than \$10 billion to fund SME support programs (Beck et al 2005a), and the G-20 committed \$528 million in 2010 to support its SME Finance Challenge which aims to promote SME financing (G-20 2010).

Small and medium enterprises are defined in several ways, but most commonly as firms that have up to 250 employees. As a group, these enterprises already provide wide-scale employment: jobs in small and medium enterprises account for more than half of all formal employment worldwide, and 45% of formal employment in developing countries (Ayyagari et al 2007).<sup>2</sup> SMEs are seen by many national governments and international development organizations as important engines of innovation, economic growth, employment, and poverty reduction. The 2005 Bangladesh Industrial Policy, for example, specified that “SMEs will be established on a greater scale across the country in order to bring about poverty alleviation, unemployment reduction and creating more employment opportunity so that national economic growth can be attained” (Bangladeshi Ministry of Industries 2005, p. 21).

SMEs have alternative sources of financing even when formal-sector funds are limited. Vandenberg (2003), for example, shows that micro and small manufacturing enterprises in Kenya have limited access to the formal banking system and to general trade credit. But these firms make active use of other mechanisms to finance their operations and growth, such as pre-payments from customers on large orders, bank overdraft facilities, purchasing equipment by installments, and purchase orders to obtain trade credit from their suppliers. A policy or program increasing access to finance for SMEs would therefore only provide partial relief from financing constraints.

SMEs are seen by many national governments and international development organizations as important engines of innovation, economic growth, employment, and poverty reduction.

1. Emran et al (2007) argue that the success of microcredit may be due in part to missing or imperfect labor markets, particularly for women and in countries, like Bangladesh, where female employment is not the traditional norm. Our finding here is that SMEs are not presently providing a meaningful alternative for unskilled women.

2. The proportion of the total active population working in small and medium enterprises is lower than this figure since many workers in developing countries are self-employed. We could not find precise estimates.

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Previous research, however, has established that SMEs can face large financial constraints (Beck and Demirgüç-Kunt 2006 provide a review of the literature), and that these constraints impede their growth (Beck et al 2005b). For example, Beck et al (2006) conclude from a survey of 10,000 firms in 80 countries that the size of the firms is a major determinant of financing obstacles of firms, with smaller firms facing larger constraints. Banerjee and Duflo (2008) exploit two policy changes that included, then excluded, some mid-size Indian firms from a direct lending program. They found no evidence that firms substituted credit from the program for other credit. Instead, having access to the lending program allowed firms to expand production and increase sales and profit, showing that many of the firms were credit constrained.

The empirical evidence on the capacity of small and medium enterprises to generate employment and reduce poverty is mixed. Some studies argue that SMEs are responsible for a large part of job creation (Sleuwaegen and Goedhuys 1998, Mead 1994), while others highlight that SMEs are both creators and destructors of jobs, so that the net impact is minimal (Van Biesebroeck 2005, Davis et al 1994).

Few studies have focused on the wages paid by SMEs and the poverty level of their employees (Hughes 2000). Bigsten and Söderbom (2006), in a review of the literature developed from the World Bank's Research Program on Enterprise Development in the 1990's, concluded that wages were higher in larger SMEs than in smaller ones, although they are not able to explain the source of difference. The relationship between SME employment and poverty has been measured across countries by Beck et al (2005a). They find that the share of total manufacturing employment accounted for by SMEs in a country was not associated with a country's growth in GDP per capita of the lowest quintile, nor with a decrease in the Gini coefficient, headcount ratio, and poverty gap.

Unlike microcredit, SME finance is targeted to entrepreneurs with skills and management capacity, and SME borrowers need capital in larger amounts than is typical of microcredit. The average SME loan in our sample is about US\$7,000, whereas the average loan outstanding is US\$114 for BRAC's microcredit customers (Microfinance Information eXchange 2010).

The question is who do SME entrepreneurs hire to complement their capital and entrepreneurial talent? Will the SME entrepreneur tilt their hiring toward unskilled or skilled workers? The choice depends on the nature of the production process and labor market. Unskilled workers

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are at a disadvantage where high-ability workers are more productive when teamed with other high-ability workers (Kremer and Maskin 1996). Moreover, SMEs may have difficulty creating jobs that appeal to workers with substantial responsibilities at home. The evidence below shows that, unlike microcredit, SME employment in Bangladesh does not tilt toward unskilled workers. Unskilled women are particularly under-represented in SME employment.

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## 2. Definitions & Data

There is no single definition of “small and medium enterprises.” Commonly-used criteria include the amount of sales, number of employees, and/or amount of investment. While the most common criteria is employment, again there is no agreement on the cut-off points defining “small” and “medium” enterprises, as opposed to “micro” and “large” firms.

There is a movement to differentiate “small and growing businesses” (SGBs) from SMEs. The Aspen Network of Development Entrepreneurs defines small and growing businesses as “commercially viable businesses with 5 to 250 employees that have significant potential for growth and whose managers desire to grow them” (Aspen Network of Development Entrepreneurs 2009, p. 8). The approach arises from frustration with the broad net cast by the SME definition, but the SGB concept is vulnerable to the cherry-picking of success cases, and we do not attempt to analyze SGBs separately from the larger group of SMEs.

In Bangladesh, small and medium enterprises are defined differently in the manufacturing and non-manufacturing sectors (Bangladeshi Ministry of Industries 2005). Manufacturing SMEs are firms for which “the value/replacement cost of durable resources other than land and factory buildings” is 100 million taka (about US\$1.5 million, or about \$3.5 million on a purchasing-power parity basis) or less.<sup>3</sup> In the non-manufacturing sector, small enterprises are firms that employ fewer than 25 workers and medium enterprises are firms that employ between 25 and 100 workers.<sup>4</sup> We do not have data on firm assets to apply to manufacturing firms in our sample, so we classify all firms according to their number of employees: As detailed below, all but one firm in our sample qualify as small and medium businesses. That firm employs 114 workers, and we dropped it from our analysis. (The largest remaining firm has 51 employees.)

3. At the low end, the definition excludes “cottage” industries—what we call “microenterprises” in this paper—which are industries “in which members of a family are engaged part-time or full-time in production and service-oriented activities.”

4. At the low end, the definition excludes “cottage” industries, in which only members of a family work.

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**Table 1: Summary Statistics: Small Enterprise Sample**

	N	MEAN	25 <sup>th</sup> PERCENTILE	MEDIAN	75 <sup>th</sup> PERCENTILE	MAX
NUMBER OF EMPLOYEES	1,041	6.9	2	4	10	51
Agriculture	39	3.1	2	3	4	6
Manufacturing	331	12.4	6	10	16	51
Service	153	7.8	3	5	11	34
Trading	518	3.4	2	3	4	37
Urban	573	7.2	2	4	10	48
Rural	468	6.6	2	4	9	51
Skilled	1,041	8.0	3	5	11	51
Semi-skilled	1,041	6.0	2	3	8	46
Unskilled	1,041	8.0	3	5	10	48
SECTOR OF BUSINESS						
Agriculture	39	3.8%				
Manufacturing	331	31.8%				
Service	153	14.7%				
Trading	518	49.8%				
% URBAN FIRMS	1,041	55.0				
% REGULAR EMPLOYEES	1,041	96.5				
% OF FIRM EMPLOYEES WHOSE POVERTY LIKELIHOOD > 50%	1,041	9.9	0	0	15	100
AGE OF FIRM (YEARS)	1,010	8.8	4	7	12	43
SALES (US\$)	1,001	113,836	34,365	64,286	113,379	9,257,143
LOAN AMOUNT (US\$)	970	7,017	4,688	6,240	7,770	92,577

Indicators in US\$ were converted at the exchange rate of US\$1= Tk70. The number of employees excludes the firm owner(s). The employee poverty likelihood is obtained from a poverty scorecard, which calculates the likelihood that the employee's household earns less than US\$1.08 per person and per day.



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In our comparisons of SMEs and microenterprises, we draw on two sources of data. First and most extensively, we exploit a 2008 cross-sectional survey of Bangladeshi small and medium enterprises borrowing from BRAC Bank. The data were collected by ShoreCap Exchange and BRAC Bank, with support from the Ford Foundation. Kellogg (2009) uses the same data to predict which SMEs are most likely to employ the poor. BRAC NGO is one of the country's three largest microlenders, and BRAC Bank is a private and regulated bank created in 2001 to offer financial services to corporate, retail, and small and medium enterprise clients. Small and medium enterprises are the bank's main focus, and represented 63% of the bank's total loans and advances in 2008 (BRAC Bank 2008, p.38) and 56% in 2009 (BRAC Bank 2009, p.26).

Firms included in the sample received one or more loans from 36 randomly-chosen branches of BRAC Bank, with an equal number of branches sampled in rural and urban areas. The sample includes all of the firms served by those branches if they are in the manufacturing, service and agriculture sectors, and a random sample of firms in the trading sector. Data were collected from loan applications and on-site surveys of enterprise owners and all their employees. Administrative data from loan applications include the loan amount, interest rate, and term, and the firm's sector of operation, age, sales, and profit. The employer survey provided data on each employee's skill requirements, salary, and relationship to the owner. The employee survey collected detailed information on wages (regular, overtime, bonus, in-kind compensation), skill level, education, tenure at the firm, and included questions on the employee's households needed to compute the likelihood that the household is poor.

Table 1 provides basic information on the 1,041 firms in the sample. About half are in the trading sector, a third in manufacturing, 15% in services, and 4% in agriculture. Firms were almost equally located in urban and rural areas (55 versus 45%). Almost all of the firms are small: none exceed 51 employees, 96% of the firms have fewer than 25 employees, and half have fewer than four employees. Due to data limitations, the analysis in Sections 3 and 4 focuses only on the firms' "regular" employees. "Regular" workers constitute 96.4% of the 7,210 workers in the sample. The remaining 3.6% are classified as "casual"; nearly all are unskilled (82%), and most are men (93%). Just 5% are unskilled women, which reinforces the broader findings in the paper.

The average loan amount received from BRAC Bank was about US\$7,000, for average annual sales of almost US\$114,000. The largest loan was

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**Table 2: Profile of SME Employees & Microcredit Borrowers**

	SME EMPLOYEES	MICROCREDIT BORROWERS	
		MSC	WB-BIDS
% FEMALE	7.2	97.4	-
AGE (YEARS)	25.6	-	-
% WITH ANY FORMAL EDUCATION	84.3	51.3	-
% COMPLETED PRIMARY EDUCATION	56.0	35.4	-
% SKILLED OR SEMI-SKILLED	62.8	-	-
% PRIMARY OR ONLY EMPLOYMENT	98.4	-	-
TENURE AT THE FIRM (% OF FIRM AGE)	33.2	-	-
NO. DAYS WORKED LAST WEEK <sup>a</sup>	6.3	-	-
NO. HOURS WORKED YESTERDAY <sup>b</sup>	11.4	-	-
HOURLY WAGE (PPP \$)	0.42	-	-
TOTAL DAILY WAGE (PPP \$)	4.44	-	-
% HH EARNING < PPP \$2/DAY/PERSON	16.8	-	-
% HH EARNING < PPP \$1.25/DAY/PERSON	9.6	-	-
TOTAL HH DAILY EXPENDITURES PER CAPITA (PPP \$)	-	-	1.2
% HH CONSUMING < PPP \$2/DAY/PERSON	-	-	91.8
% HH CONSUMING < PPP \$1.25/DAY/PERSON	-	-	70.7
% HH CONSUMING < PPP \$1.08/DAY/PERSON	-	-	60.7
HOUSEHOLD POVERTY LIKELIHOOD	20.7	57	-
% WITH HOUSEHOLD POVERTY LIKELIHOOD > 50%	14.0	-	-

All values are simple averages. The number of employees in the sample includes 6,954 regular and 256 casual employees, and excludes the firm owner(s). Education variables have 7 missing values for employees who received a religious education, because of a lack of direct equivalency to the formal education system. The hourly wage is based on the number of hours worked the day before the survey; it includes regular pay and overtime pay but not the yearly bonuses (if any). Total wage includes cash wage and all bonuses and benefits. Primary earners are employees who are the primary or only income earner in their household. The number of household income earners includes the respondents. The \$2/day and \$1.25/day thresholds are calculated using PPP exchange rates and take into account only the earnings of the small enterprise employee. The poverty likelihood is obtained from a poverty scorecard, which calculates the likelihood that the employee's household earns less than \$PPP 1.08 per person and per day for SME employees, and \$PPP 1.25 per person and per day for microfinance borrowers. Employees are considered semi-skilled or skilled if they have received at least 3 months of formal or on-the-job training. Data on microcredit borrowers referred to as "MSC" are from a nationally-representative survey of active rural microfinance borrowers conducted by Sajjad Zohir in 2008 as part of the Microcredit Summit Campaign's "Movement Above US\$1 a day Threshold Project." Data on microcredit borrowers referred to as "WB-BIDS" are from the World Bank—Bangladesh Institute of Development Studies' 1998/99 survey of Bangladeshi microcredit borrowers from BRAC, Grameen Bank, and BRDB.

\$92,577 and the largest level of annual sales was over \$9 million, but 90% of all loans are under \$9,300 and 90% of firm annual sales are under \$228,000.

In addition to this survey, we report select data points from a nationally-representative survey of rural microcredit borrowers conducted in 2008 as part of the Microcredit Summit Campaign's "Movement Above US\$1 a day Threshold Project." The survey collected demographic and poverty information from 3,620 borrowers in non-metropolitan areas, including a scorecard-based measure of poverty likelihood that is comparable to the one developed for the BRAC SME survey. These data were provided by Sajjad Zohir, based on his unpublished work for the Microcredit Summit Campaign.<sup>5</sup>

Finally, we draw on a World Bank—Bangladesh Institute of Development Studies dataset designed to analyze microcredit customers. We use the 1998/99 wave of data which includes 1,638 households living in villages served by three microcredit organization: Grameen Bank, BRAC, and BRDB (Khandker 2005).

### 3. SME Employees vs. Microcredit Borrowers

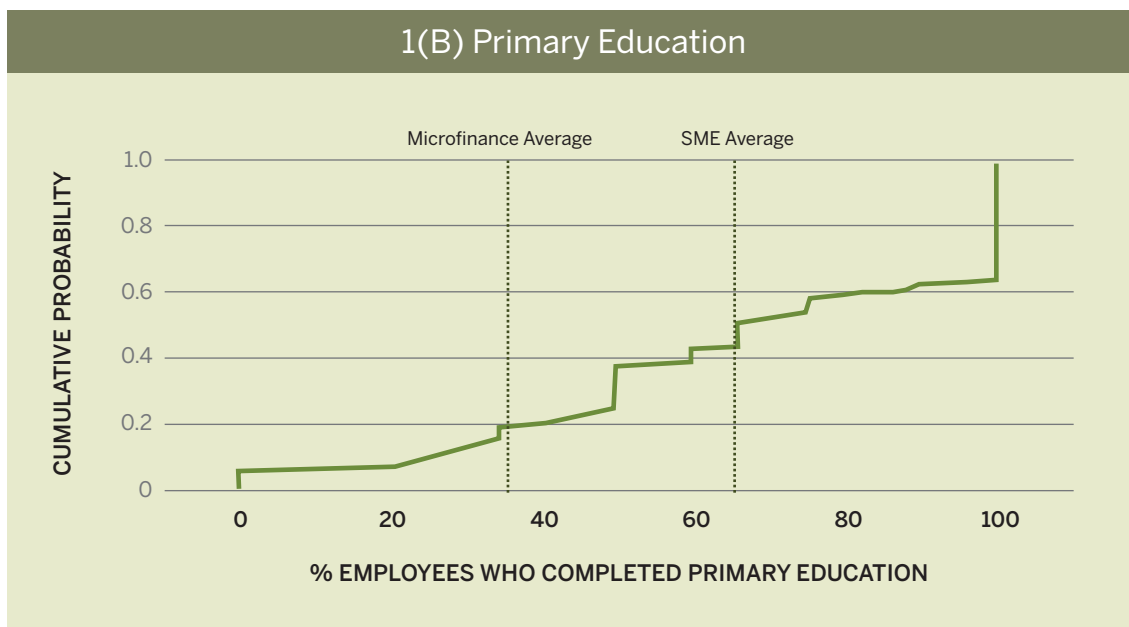
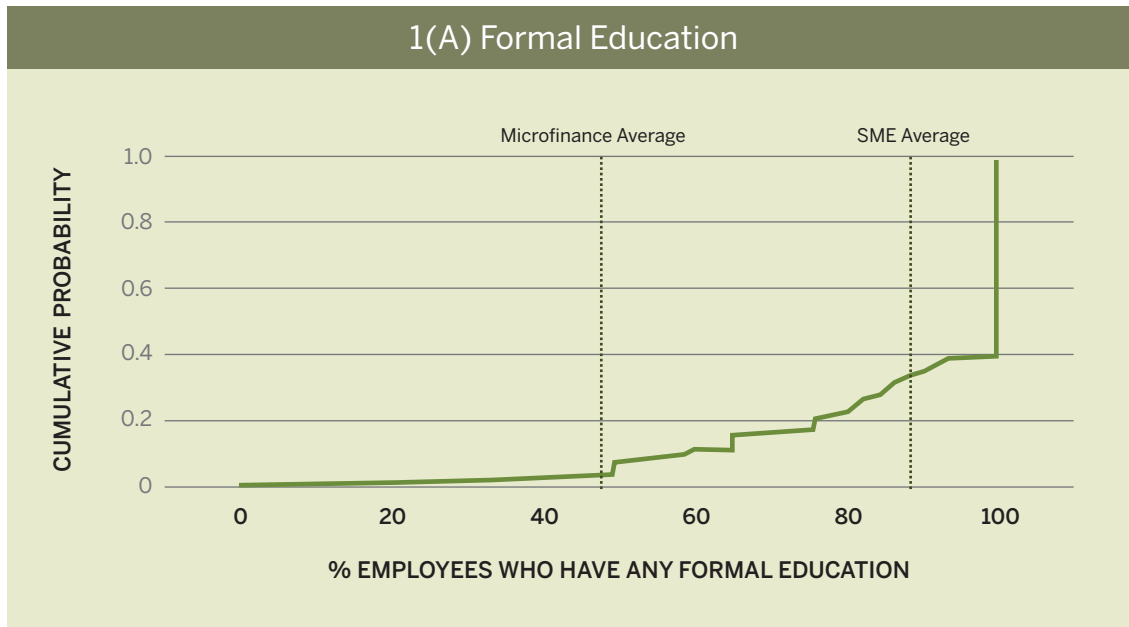
Table 2 shows that over 90% of small enterprise employees in the sample are men, aged 26 on average. Microcredit in Bangladesh, as noted, is famously focused on women. In contrast, just 7% of the sample of 7,210 SME employees were women.

Most microcredit borrowers are also less educated and less skilled than SME employees: 65% of the former and 44% of the latter did not complete primary school. More sharply, 49% of microcredit borrowers report no formal education but just 16% of SME employees. Correspondingly, 63% of SME employees were skilled or semi-skilled (we have no comparable variable for microcredit borrowers). Panel (a) of Chart 1 gives the cumulative distribution function for the firm-level variable giving the percentage of employees with any formal education. The vertical line on the left gives the average for microcredit borrowers (which we can think of as single-person firms). The figure shows that most SME firms have a considerably more educated workforce than the microcredit average. A similar pattern is shown in the firm-level figure on primary school completion in panel (b) of Chart 1.

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5. Jonathan Morduch was on advisory committees for both the Microcredit Summit Campaign data collection and the BRAC SME data collection. He contributed to methodological discussions for both projects but was not involved in their implementation. This paper brings together results from both studies.

**Chart 1:** Cumulative Distribution Functions of Employee Education Indicators at the Firm Level



How poor are employees of small enterprises? The poverty reduction power of SME employment depends in large part on whether SMEs hire poor employees. We assess poverty in two ways: we measure the percentage of employees earning less than US\$1 and US\$2 per day, and we use a scorecard-based measure of household poverty. The wages paid in the small enterprises in our sample imply that 9.6% of the 7,210 employees earned less than the global poverty line of PPP\$1.25 per day, and 16.8% of employees earned less than PPP\$2 per day (Table 2).<sup>6</sup> In comparison, the United Nations' Millennium Development Goals Indicators show that 50.5% of all employees in Bangladesh, including self-employed individuals, lived below \$1 per day per person in 2005, the most recent year for which data are available (United Nations 2010). These measures need to be taken with caution. The international poverty lines of \$1.25 and \$2 per day per person are calculated using the household's total income, but the measure we use here is based on the wages of one household member only. Households in our sample have 2.2 income earners (75% of them have two or more income earners) and 5 household members on average, but we do not have data on the household's total income.<sup>7</sup>

To make more direct comparisons, we turn to a second measure of poverty. This measure is a household-level indicator: a scorecard quantifying the likelihood that the employees' household earns less than the global poverty line used at the time the survey was constructed, \$1.08 per day per person in 2005 purchasing-parity adjusted dollars. The scorecard uses ten indicators that can be easily and reliably asked, such as the type of latrine used by the household, the number of children who are in school, and whether the household owns a television set. These indicators are weighted using a logistic regression to determine whether the household earns less than PPP\$1.08 per day per person. The indicators and poverty likelihood scoring are reproduced in Appendix A. The main advantages of a scorecard-based measure of poverty are that data can be collected accurately, the indicator can be calculated simply, and the focus is on the household. The main disadvantage is that the scorecard only provides an estimate of poverty. The number of points on the scorecard indicates the likelihood that the employee lives in a household earning less than \$1.08 per day per person (in 2005 PPP), not a precise indication of whether or not the household earns less than a given amount or owns assets of a total value above or below a given cutoff point. As a consequence, we do not estimate the poverty rate in a given firm or industry, but rely on the average poverty likelihood.

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6. All purchasing power parity conversions were completed using 2005 PPP conversion factors. Comparisons of data from other years were adjusted for inflation relative to 2005 using the Bangladesh consumer price index.

7. We can restrict the sample to the 25% of households for which the small enterprise employee in our sample is the only income earner. These households are likely to be poorer than households in which several members earn an income, and our data indicate that 48% of these employees earn less than PPP\$1.25 per day per person, and 80% earn less than PPP\$2 per day per person.

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The indicators of poverty show relatively low levels of poverty. According to the scorecard, the average likelihood that all SME employees in our sample live in a poor household was 20.7%. The average percentage of SME employees that are likely to live in poor households (with a greater than 50% chance) is just 14%.

We create a series of comparisons. For the first, we use institution-level to calculate average poverty levels of customers, drawing on self-reports from the MixMarket and the Microcredit Summit Campaign databases. The calculations suggest that 48% to 67% of microcredit borrowers in Bangladesh live in households earning less than \$1 per day per person (calculations from MixMarket and Microcredit Summit Campaign data from Bauchet and Morduch 2010).

Next, we use household-level data from the World Bank–BIDS survey to calculate the fraction of households of microcredit customers that have daily per capita consumption below PPP\$1.08. The calculation in the final column of Table 2 shows that more than 60% of households fall below the threshold, a figure in line with the institution-level estimates.

The last two calculations drew on actual data, not a scorecard-based measure of poverty likelihood. To get a sense of the possible distortion in comparison with the SME poverty data, we turn to evidence from the Movement Above US\$1 a day Threshold Project, which focuses on microcredit borrowers in non-metropolitan areas. There, the average poverty likelihood is calculated, though using the updated World Bank threshold of PPP\$1.25 per day per person (instead of PPP\$1.08). So, here poverty levels will be somewhat higher among microcredit customers on that basis alone. The average poverty likelihood is 57%.

Finally, to obtain a sense of the possible the distortion created by comparing poverty measured at a threshold of PPP\$1.08 versus PPP\$1.25 per person per day, we again turn to the World Bank-BIDS data. There, we find that more than 70% of households of microcredit borrowers are below the PPP\$1.25 threshold. The spread between the PPP\$1.08 and PPP\$1.25 poverty thresholds in the World Bank–BIDS data is only 10 percentage points, providing comfort that the difference in poverty likelihood for SME employees versus microcredit borrowers as measured by the Microcredit Summit Campaign is unlikely to be driven mainly by the difference in thresholds used in the scorecard calculations.

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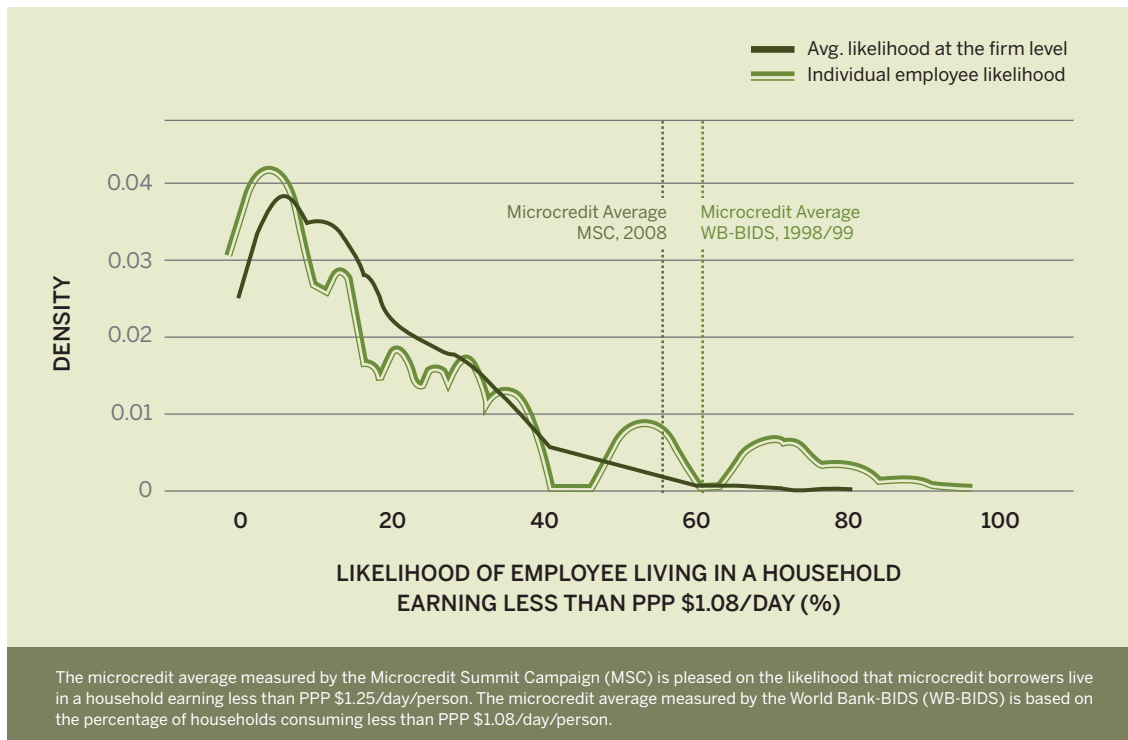
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Chart 2 combines the data. It shows the non-parametric density of the likelihood that SME employees live in households earning less than \$1.08 per day per person. Both when measured as a firm average or as an individual likelihood, the distributions are skewed towards a low likelihood of being poor. The microcredit averages in the Microcredit Summit Campaign and in the World Bank–BIDS data are added for reference, and are again in the right-hand tail of the SME distribution. SMEs are not hiring the women that make up the core of microcredit borrowers, nor do they appear to hire many of their husbands or other family members.

Are some firms more likely to hire workers whose profile is similar to that of microcredit borrowers? The regressions in Table 3 show the relationship between several firm characteristics and SMEs' outreach to women and poor individuals. On average, larger SMEs (as measured by the number of employees) employ a higher proportion of women workers, except in the service sector where the relationship is opposite but not meaningfully large in economic terms. Larger and rural firms are also

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**Chart 2:** Distribution of the Likelihood that Employees Live in a Poor Household



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**Table 3: Correlates of Firms' Poverty Outreach**

DEPENDENT VARIABLE	% FEMALE EMPLOYEES	% UNSKILLED EMPLOYEES	FIRM-AVERAGE POVERTY LIKELIHOOD
LOG(NUMBER OF EMPLOYEES)	0.025*** (0.006)	0.100*** (0.022)	0.017** (0.008)
LOG(NUMBER OF EMPLOYEES) * AGRICULTURE	-0.012 (0.014)	0.029 (0.114)	0.084** (0.041)
LOG(NUMBER OF EMPLOYEES) * MANUFACTURING	0.002 (0.018)	-0.136*** (0.035)	0.009 (0.015)
LOG(NUMBER OF EMPLOYEES) * SERVICE	-0.046** (0.018)	0.046 (0.035)	0.044*** (0.013)
1 IF BUSINESS IS IN AGRICULTURE	0.025** (0.011)	0.469*** (0.143)	0.027 (0.048)
1 IF BUSINESS IS IN MANUFACTURING	0.039 (0.039)	0.277*** (0.072)	0.028 (0.031)
1 IF BUSINESS IS IN SERVICE	0.132*** (0.043)	-0.051 (0.064)	-0.049** (0.022)
1 IF METROPOLITAN AREA	-0.008 (0.009)	-0.097*** (0.020)	-0.032*** (0.008)
AGE OF FIRM (IN YEARS)	-0.002*** (0.001)	0.001 (0.002)	-0.001* (0.001)
AVG EMPLOYEE TENURE (IN % OF FIRM AGE)	-0.027 (0.019)	-0.100** (0.045)	-0.068*** (0.018)
CONSTANT	0.019 (0.012)	0.252*** (0.042)	0.175*** (0.016)
NUMBER OF OBSERVATIONS	1,010	1,010	1,010
R-SQUARED	0.091	0.173	0.156
MEAN OF DEPENDENT VARIABLE	.046	.328	.170

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Robust standard errors in parentheses. US\$1 ≈ Tk70. The omitted sector of business is trading. The number of employees excludes the firm owner(s). The measure of poverty likelihood captures poverty at the household level.



more likely to employ unskilled workers—a proxy for workers' wage. The notable exception is that larger manufacturing firms in our sample employ a lower percentage of unskilled workers. Finally, the firm-level average likelihood that employees live in poor households is the most direct measure of poverty outreach. Here again, larger firms are more likely to employ poorer workers, particularly in the agriculture and service sectors. The regression shows that the difference between agriculture and service sectors on one hand, and manufacturing and trading sectors on the other hand, is statistically significant. Still, the economic contributions for all outcome variables are very small. In the agriculture sector, for example, where the relationship between firm size and average poverty likelihood is the strongest, a 1% increase in the number of employees is associated with an increase in the firm-level poverty measure (i.e., the average likelihood that an employee lives in a household earning less than PPP\$1.08 per day per person) of only about 0.1 percentage points, holding all else constant. Given these results and holding other variables in the model at their mean, household poverty levels similar to those of microcredit borrowers would be reached by a 100-employee rural firm in the agricultural sector—a hypothetical firm with 17 times more employees than the largest rural agricultural enterprise in our sample.

The regression also shows that the firm-level poverty measure falls as average tenure at the firm increases: firms that hold onto their workers for longer tend to employ workers from better-off households. Poorer workers, by implication, are in less stable positions.

## 4. The Quality of SME Jobs

In June 2010, the pilot testing began; however, it had to be terminated after The BRAC Bank SME survey includes two indicators of job quality: length of the work week and wages. These two indicators do not provide a comprehensive measure of quality, but allow us to focus on poverty-related measures. The data indicate that SME jobs pay more per day on average than the Bangladeshi minimum wage, but SME jobs require longer hours than the legal work week.

Average total wages—including regular wage and all bonuses and benefits—reached US\$4.44 per day on a purchasing power parity basis (Table 2). This average daily wage is higher than the minimum wage in Bangladesh (1,800 Taka per month, about US\$3.25 per day on a purchasing power parity basis), but hides disparities by gender and job location. (Employees

The long hours required in typical SME work are not conducive to mixing child-raising with wage work—in contrast to the relative flexibility provided by microcredit self-employment.

in rural areas earn about 20% less than employees in urban areas, and women earn 45% less than men).

These average wages, however, require long working hours. Data in Table 2 show that employees in small enterprises in all sectors work over 11 hours per day on average, six days a week. The 2006 Bangladesh Labour Law sets the full-time work load at eight hours per day, six days per week, and the average reported actual number of hours worked per week across all firms in all industries was 52 in 2006. The long hours mean that the jobs provided by the small enterprises in our sample are the primary or only job for more than 98% of employees in our sample, in all sectors and areas. The length of the work week also implies low hourly wages: PPP\$0.42 on average for the entire sample, including cash wage and overtime pay but not yearly bonuses, if any. (In rural areas, the hourly wage drops to an average of PPP\$0.39. For women in all areas, the average hourly wage is PPP\$0.29.)

The long hours required in typical SME work are not conducive to mixing child-raising with wage work—in contrast to the relative flexibility provided by microcredit self-employment. In our sample, just 5% of regular SME employees work 40 hours a week or fewer, 3.6% work 30 hours or fewer, and 2% work 20 hours or fewer.<sup>8</sup> Even outside of the conservative cultural context of Bangladesh, married women with primary responsibility for raising children (a core population for microcredit loans) face barriers to SME employment that most men and unmarried women do not.<sup>9</sup>

## 5. The Cost-benefit Proposition for SME Finance

As described above, the poverty scorecard-based data indicate that employees of the SMEs in our sample are less poor, on average, than microcredit borrowers. The fundamental question is that of the causal impact of an increase in SMEs' access to credit on employment and, through employment, on poverty reduction. The ideal evaluation of the marginal impact of lending to SMEs would rest on a careful counterfactual: What would have happened to the SME firms if they had not borrowed?

The cost-effectiveness of lending to SMEs to reduce poverty through employment also depends on how well SME lenders can take advantage of investments or subsidies. Subsidies allocated to a bank or financial

The ideal evaluation of the marginal impact of lending to SMEs would rest on a careful counterfactual: What would have happened to the SME firms if they had not borrowed?

8. As noted earlier, 3.6% of the sample is classified as "casual" workers. In peak times of the year, three-quarters of casual workers work more than 20 hours a week. In slow times, the median days worked for casual labor is 3 days a week.

9. It is difficult to disentangle cause and effect here. One reason for the ubiquity of long hours and long weeks in SME jobs is that married women are not interested in working outside of the home. SME bosses then optimize work conditions for their employee pool of male and unmarried women. It's possible that greater interest by women in SME employment might generate changes in the quality of jobs offered. All the same, the larger point still holds: for the most part, the SMEs we study are not generating jobs that support the kinds of households that are involved in microcredit.

institution lending to SMEs can help lever additional capital, which multiplies the impact of the subsidy (Conning and Morduch 2011). BRAC Bank, for example, is more profitable than the average financial institution in Bangladesh, including microcredit institutions. The interest rates on the 10 loan products that BRAC Bank offers to SMEs vary slightly around the 17% per year mark. Table 4 shows that the return on equity and the return on assets for BRAC Bank in 2009 were on par with the average of Bangladeshi commercial banks. Return on equity was 108%, higher than the average of microcredit institutions in Bangladesh in 2009. Return on assets was lower than that of microcredit institutions, due in part to the large network or branches that BRAC Bank maintains, but on par with that of private banks. Because organizations under the BRAC umbrella tend to be efficiently run, we also compare the profitability of BRAC Bank to that of BRAC's own microcredit program. While BRAC Bank never posted returns on assets as high as those of BRAC's microcredit program, it was able to maintain returns on equity around 23% and returns on assets of 1.6% throughout a period of rapid expansion (Table 4), while BRAC's microcredit program's profitability ratios fluctuated widely.

These levels of profitability are reflected in the debt-to-equity ratios of various institutions. A high debt-to-equity ratio indicates that a financial institution was able to finance its growth through larger amounts of debt for a given amount of equity. Table 4 shows that the debt-to-equity ratio of BRAC Bank was 30% higher than the average of microcredit institutions in Bangladesh in 2009 and four times higher than that of BRAC's microcredit program that year. From the point of view of a policymaker or donor interested in the cost-effectiveness of its spending, an equity-increasing investment or subsidy into BRAC Bank could therefore allow for a larger increase in scale than a comparable investment or subsidy in a microcredit institution. An advantage of supporting SME finance is thus in achieving scale, not in achieving targeted job creation for poor households.

## 6. Conclusion

SME finance is gaining attention as a possible alternative to microcredit investment in the fight for poverty reduction, notably because SMEs provide employment on a much larger scale than microenterprises supported by microcredit. Our evidence suggests that in Bangladesh the two forms of support are complements, not substitutes.

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**Table 4: Profitability & Leverage of Financial Institutions in Bangladesh**

	YEAR	RETURN ON EQUITY (%)	RETURN ON ASSETS (%)	ASSETS (MILLION US\$)	DEBT-TO-EQUITY RATIO
BRAC BANK (SME LENDING)	2010	19.0	1.6	1,554	12.0
	2009	19.2	1.6	1,351	10.6
	2008	22.8	1.6	1,035	12.3
	2007	23.8	1.6	648	14.1
	2006	23.1	1.4	429	13.2
BRAC MICROFINANCE PROGRAM	2010	12.5	3.8	1,005	2.0
	2009	14.6	3.7	976	2.5
	2008	-0.2	-0.1	962	3.4
	2007	6.1	1.5	604	3.8
	2006	23.5	7.0	388	2.4
MicroBanking Bulletin:					
ALL MFIS	2009	7.1	1.5	8	2.9
Target market: Low end	2009	8.6	1.8	5	2.4
Target market: Broad	2009	5.8	1.3	10	3.3
Target market: High end	2009	5.8	0.9	31	4.0
Target market: Small business	2009	6.0	1.1	16	3.8
BANGLADESH MICROCREDIT INSTITUTIONS	2010	14.6	3.5	-	3.2
	2009	9.2	2.2	-	8.2
BANGLADESH PRIVATE COMMERCIAL BANKS	2009	21.0	1.6	-	-

Sources: BRAC Bank Annual Reports and Financial Statements; MixMarket; MicroBanking Bulletin Trend Lines 2006–2008 MFI Benchmark Tables; Bangladesh Bank's 2009-2010 Annual Report, Chapter 5, p. 45. We could not find information about aggregate debt-to-equity ratio in Bangladesh. Data for Bangladesh microcredit institutions are weighted averages. Data for Bangladesh private commercial banks are unweighted averages.

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A survey of employees of Bangladeshi SMEs shows that the typical employee is a young, educated male, whose household tends to be better off than the typical households of microcredit borrowers. Working in a small enterprise is hard: employees work 70 hours per week on average, for very low hourly wages. Men and women work similar hours, but women receive hourly wages one-third lower than men on average. The long hours are not particularly friendly for workers with substantial family responsibilities.

Bangladesh is particularly important as a birthplace of microcredit (and a site for much of the microcredit literature), and the finding supports the key assumption of theoretical work by Emran et al. (2007) that explains the success of microcredit incentive mechanisms under the assumption that women have limited alternative employment options. Generalizing further will require asking the questions here in other cultural and economic contexts.

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### Appendix A: Poverty Scorecard for BRAC Bank Clients

Indicator	Attributes				Points
1. What type of latrine does the household use?	Open field	Kacha (temporary or permanent) or out Pacca	Sanitary or water-seal Pacca		
	0	6	11		
2. How many household members are 11 years old or younger?	4 or more	3	2	1	0
	0	5	9	15	22
3. Does any household member work for a daily wage?	Yes		No		
	0		7		
4. How many rooms does the house have (excluding ones used for business)?	1	2 or 3	4 or more		
	0	3	10		
5. Do all children ages 6 to 17 attend school?	No	No children age 6 to 17		Yes	
	0	3	3		
6. Does the household own a television set?	No		Yes		
	0		9		
7. How many decimals of cultivable land does the household own?	Less than 34	34-99	100-199	200 or more	
	0	1	3	5	
8. What is the main construction material of the walls of the house?	Hemp/hay/bamboo or mud		C.I. sheet/wood	Brick/cement	
	0		4	5	
9. Does the household own any cattle?	No		Yes		
	0		2		
10. Does the house have a separate kitchen?	No		Yes		
	0		4		
11. What is the main source of drinking water?	Other		Supply Water		
	0		6		
12. What is the highest grade completed by male head/spouse?	None	Class 1-6	Class 7 to SSC	HSC or higher	
	0	2	3	17	
<b>TOTAL</b>					

Score	Poverty likelihood for people with score in range (%)
0-4	100.0
5-9	92.1
10-14	97.4
15-19	85.4
20-24	77.2
25-29	68.7
30-34	53.7
35-39	34.1
40-44	25.1
45-49	16.3
50-54	9.0
55-59	7.1
60-64	1.7
65-69	1.7
70-74	1.7
75-79	1.7
80-84	1.7
85-89	1.7
90-94	1.7
95-100	1.7