Aspects of Outreach: A Framework for Discussion of the Social Benefits of Microfinance

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Abstract

Wide agreement about the goal of microfinance—to improve the welfare of the poor—has not led to wide agreement about how best to achieve that goal. To aid discussion, I propose a framework for *outreach*—the social benefits of microfinance—in terms of six aspects: worth, cost, depth, breadth, length, and scope. The framework encompasses both the poverty approach to microfinance and the self-sustainability approach. The poverty approach assumes that great depth of outreach can compensate for narrow breadth, short length, and limited scope. The self-sustainability approach assumes that wide breadth, long length, and ample scope can compensate for shallow depth. I show how to use the framework for BancoSol of Bolivia.

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1. Introduction

Microfinance is the supply of loans and savings services to the poor. Although almost all microfinance practitioners agree that their goal is to improve the welfare of the poor, they do not agree about how best to achieve this goal. Most approaches to microfinance lie between the two extremes used as benchmarks here—the poverty approach and the self-sustainability approach.

The *poverty approach* targets very poor clients who are very costly to serve. Like relief efforts, it measures success by how well it fulfills the needs of the poorest in the short term. In the poverty approach, donations cover the shortfall between revenue from clients and the cost of supply.

The *self-sustainability* approach targets less-poor clients on the fringes of the formal financial system. Like development efforts, it measures success by how well it expands the frontier of the mainstream economy in the long term (Von Pischke, 1991). In the self-sustainability approach, donations cover start-up costs and fund experiments meant to find innovations that reduce the cost of supply so much that revenue from clients can cover costs in the long term.

As with most persistent debates, both approaches, given their assumptions, make some sense (Morduch, 1998a; Rhyne, 1998; Woller, Dunford, and Woodworth, 1999). The feeling that one approach is obtuse or hides ulterior motives stems at least in part from ignorance of the differences in assumptions that drive the differences in approaches. To aid discussion, I propose a framework for *outreach*—the social benefits of microfinance for poor clients—in terms of six aspects: worth to clients, cost to clients, depth, breadth, length, and scope. The poverty approach assumes that great depth can compensate for narrow breadth, short length, and limited scope. The self-sustainability approach assumes that wide breadth, long length, and ample scope can compensate for shallow depth.

The new framework not only pinpoints the assumptions behind the two approaches but also synthesizes the jargon of microfinance with that of standard welfare theory. The social costs and benefits of microfinance will never be measured perfectly, so most public-policy choices will turn on judgements that, because they cannot be proven, must be argued. These arguments, subjective though they must be, should rest as much as possible on empirical measurements and explicit assumptions. The framework highlights the measurements to be made and the assumptions to be made explicit. I show how to use the framework to estimate the net social benefits of the best-known microfinance organization in Latin America, BancoSol of Bolivia.

2. The six aspects of outreach

2.1 Worth to clients

Worth of outreach to clients is defined as their willingness to pay. Worth hinges on the terms of the financial contract and on the tastes, constraints, and opportunities of clients. For example, a miser has no use for loans but greatly values savings services. Likewise, a loan of $100 is worth little to a farmer who wants $1,000 to drill a well.

For loans, worth increases as the terms of the contract are more closely matched to borrower demand. Example dimensions of a loan include the amount disbursed, the term to maturity, and the size of the installment. For deposits, worth increases with the interest rate and as the contract is less restrictive, for example when minimum balances are low and when withdrawals are convenient and unlimited.

Most economic models assume that worth to clients is the increase in business profits with-versus-without access to microfinance. In fact, microfinance may improve the welfare of the poor even if it does not increase profits, so the increase in profits is just a lower bound on total worth. For example, savings services may buffer shocks, and loans may fund life-cycle events such as weddings or funerals. Often the most important effect of microfinance is to help households to diversify their sources of income (Morduch, 1998b; Mosley and Hulme, 1998).

The worth of microfinance to clients is only part of the worth of microfinance to society. For example, if microfinance strengthens small enterprises, then it may also help non-clients through new hires or through backward and forward linkages.

It is difficult to measure worth to clients, in part because worth depends on the subjective gain that a client gets from a financial contract and in part because it is difficult to know what would have happened in the absence of microfinance. As stated above, a lower bound on worth is the increase in business profits. For example, Hulme and Mosley (1996) found that the change in net income in a year for 16 experienced borrowers in BancoSol was about twice that of 16 borrowers who had just got their first loan. The lower bound on worth was about $300 per year.

2.2 Cost to clients

Cost of outreach to clients is the sum of price costs and transaction costs. *Price costs* are direct cash payments for interest and fees. Price costs are revenue for the microfinance organization. *Transaction costs* are non-price costs for both *non-cash opportunity costs*—such as the time to apply for a loan—and *indirect cash expenses* for such things as transport, documents, food, and taxes needed to use a financial contract. Transaction costs borne by clients are not revenue for the microfinance organization.

The best measure of price costs is the *internal rate of return*, defined as the interest rate that, for the client, would make the present value of the cash flows of a

financial contract zero. Transaction costs can be estimated from survey data on the miles, minutes, and money required to use a financial service.

For BancoSol, the Inter-American Investment Corporation (1991, cited in Hulme and Mosley, 1996) estimates that, for a two-month loan of $200 in the first half of 1993, price costs were $25 and non-cash opportunity costs were $33. Indirect cash expenses were assumed zero. If a client repays $100 of principal each month, then the cost to a client of a dollar-year of borrowed purchasing power is $12 \cdot \$58/(\$200+\$100) = \$2.32$.

Cost to clients is distinct from *cost of supply* and from *cost to society*. The *cost of supply* is the opportunity cost of the resources used by a microfinance organization. The *cost to society* includes the cost to clients, the cost of supply, and any other costs borne by non-clients. For example, non-clients bear displacement costs when clients with loans squeeze them out of markets.

All else constant, progress in microfinance stems from reductions in the cost of supply. This increases *access*, defined as the ability and willingness to use financial contracts at a price that covers the long-run cost of efficient supply. More access is progress because it makes the use of financial services depend more on demand and less on the constraints of supply. For example, the innovation of joint-liability contracts allowed deeper outreach at a lower cost of supply than when all loans required physical collateral. The key is not to take risks that banks shun but rather to find new, low-cost ways to judge and to curb risk.

Net gain to clients is defined as worth minus cost, the increase in welfare due to microfinance. Net gain is willingness to pay—the highest cost that a client would agree to bear for a financial contract—minus the cost borne. The concept of net gain is like that of consumer surplus in welfare theory.

If clients have no alternative source of loans, then one measure of the size of the net gain is simply willingness to pay (worth). A second measure is the difference in the cost of a dollar-year of debt from a microfinance lender versus from another source. The Inter-American Investment Corporation (1991, cited in Hulme and Mosley, 1996) estimated the cost for clients of Bolivian moneylenders for a dollar-year of debt from a \$200, two-month loan as $12 \cdot \$77/(\$200+\$100) = \$3.08$. The use of BancoSol would thus produce a net gain of $\$3.08 - \$2.23 = \$0.85$ per dollar-year of debt. The average loan from BancoSol in 1992 had a term of 4.6 months and a size of 91 dollar-years. Clients who get new loans as soon as they pay their old ones would thus use $91 \cdot (12/4.6) \doteq 237$ dollar-years per year and have a net gain of $237 \cdot \$0.85 \doteq \$200$ per year.

Rather than measure the *size* of the net gain, it is simpler and less expensive to check the *sign* of net gain. Most clients will not enter into a contract unless they expect a positive net gain. Although clients may overestimate worth and/or underestimate cost once, they are unlikely to do so twice. Thus, for repeaters, net gain is probably positive. For example, BancoSol made 848,000 loans to 210,000 borrowers between 1987 and 1998. The average borrower had $848{,}000/210{,}000 \doteq 4$ loans and thus probably had

positive net gains. Of course, some borrowers drop out even through net gain is positive—not all people want debt all the time. Also, if borrowers use informal loans to repay microfinance loans and then use their next microfinance loan to repay the informal loan, then repeated use need not signal a positive net gain. Usually, however, repeated use does suggest that net gain is positive.

2.3 Depth

Depth of outreach is the value that society attaches to the net gain of a given client. In welfare theory, depth is the weight of a client in the social-welfare function. If society has a preference for the poor, then poverty is a good proxy for depth. For example, society likely prefers that a street child or a widow get a given net gain than that a richer person get the same net gain.

Direct measurement of depth through income or wealth is difficult. Simple, indirect proxies for depth are sex (women are preferred), location (rural is preferred), education (less is preferred), ethnicity (minorities are preferred), housing (small, flimsy houses are preferred), and access to public services (lack of access is preferred).

For a sample of borrowers of BancoSol in 1992, Hulme and Mosley (1996, pp. 52, 71, and 88) report "average beneficiary income" as $360 and "family income" as $3,000. About 78 percent of a sample of borrowers in greater La Paz in late 1995 were women (Gonzalez-Vega *et al.*, 1996). Two-thirds had not attended high school, and 97 percent

had not attended college. About 57 percent had indoor toilets, 84 percent had running water, and 95 percent had electricity.

Furthermore, Navajas *et al.* (1999) compare an index of fulfillment of basic needs for this same sample with a similar index from a census. About 80 percent of the borrowers of BancoSol were bunched just above or just below the poverty line. About 16 percent were far above the poverty line, and about 5 percent were far below it.

The most common proxy for depth is loan size. The size of a loan, however, has five dimensions (Figure 1 on page 28). Although most analysts look only at the amount disbursed, size may also be seen as the term to maturity, the amount of installment, or the time between installments. The best measure of size is the average amount outstanding in terms of dollar-years of borrowed purchasing power. Along each dimension of size, smaller amounts or shorter times usually mean greater depth.

Loan size differs for first loans versus repeat loans and when measured as a mean versus a median. The estimated mean amount disbursed to new borrowers in BancoSol in greater La Paz in late 1995 was $162, and the median was $58. For repeat loans, the mean amount disbursed was $691, and the median was $385. As usual, mean exceeds the median because the distribution of loan size is skewed to the right. Thus the median is the best gauge of loan size for a typical borrower.

Although deep outreach increases social benefits, it also usually increases social costs because it increases the per-unit cost of supply. It is more costly to judge the risk of the poor because they are more diverse and less able to signal creditworthiness

(Conning, 1999). Fixed costs also matter more for the poor—for both supply and demand—because transactions are smaller and more frequent. Coverage of the costs of greater depth usually requires either more donations or higher prices.

The poverty approach places a very high weight on the poorest and little or no weight on anyone else. In contrast, the self-sustainability approach is more willing to make trade-offs between the poorest and the less-poor.

2.4 Breadth

Breadth of outreach is the number of clients. Breadth matters because of budget constraints; the wants and needs of the poor exceed the resources earmarked for them. All else constant, the breadth of the poverty approach depends on the level of donations that it can attract.

Self-sustainable organizations with wide breadth may reach as many of the very poor as poverty-oriented organizations with narrow breadth (Rosenberg, 1996). For example, some self-sustainability-oriented credit unions in Colombia had more poor clients than some poverty-oriented village banks in Costa Rica and Guatemala (Paxton and Cuevas, 1998). Although the poor were a very small share of the loan portfolios of the credit unions, the portfolios were very big, and many poor people held deposits. Morduch (1998a) defends the poverty approach with reference to some common social-welfare functions. Suppose that a tenth of the clients at a self-sustainable lender are poor, that half of the clients at a poverty-oriented lender are poor, and that net gain

per client is the same for both lenders. To have the same effect on social welfare, the self-sustainable lender must have 15 to 125 times the breadth of the poverty lender.

2.5 Length

Length of outreach is the time frame of the supply of microfinance. If society cares about the welfare of the poor both now and in the future, then length matters. Length is difficult to measure because it occurs in the future. Profits are one proxy because, in the absence of guaranteed donations, profits signal some ability to buy resources on the market and thus offer some hope to survive if donors leave.

In principle, profits are not sufficient for length. Furthermore, profits are not necessary for length because donations could last forever. In practice, however, most lenders will not get donations forever, at least not from public sources.

In 1996, BancoSol made a profit of $1.5 million. Without public help, however, profit would have been about zero (Schreiner, 1997). Thus, even without donations, BancoSol could have maintained the real size of its assets. Furthermore, BancoSol was regulated and had experienced managers, a consistent structure of incentives, and a board of directors with a clear mission to seek constant improvement in service of the poor. I believe that BancoSol had great expected length.

2.6 Scope

Scope of outreach is the number of types of financial contracts supplied. Scope between products might mean both loans and savings services. Scope within a product

might mean loans to both groups and individuals. Furthermore, scope within a product means contracts with different terms. For example, a loan of $100 with one repayment due in one month is not the same product as a loan of $200 with amortized installments due each month for a year. BancoSol has ample scope not only because it offers loans with a variety of terms but also because, as a bank, it offers savings services.

In sum, depth is the social value of net gain, where net gain is worth to clients minus cost to clients. Breadth is number of clients, length is years of service, and scope is types of contracts. The social benefit of the outreach of a microfinance organization is net gain weighted by depth, summed across breadth of clients and across scope of contracts, and summed and discounted through length of time.

3. Trade-offs and feedback

Each of the six aspects of outreach depends on the other five. For example, the supply of passbook savings increases depth and breadth as well as scope because people too poor to borrow can still save. Savings services may also increase length; an organization that can attract private savings and fulfill regulatory requirements has external checks on its financial and organizational strength. The supply of passbook savings, however, increases the overall cost of supply and thus leads to higher prices for those services—such as loans—that directly earn revenue. All else constant, this increase in price reduces net gain per borrower. The change in social benefits due to a change in one aspect of outreach depends on how all six aspects interact.

Social benefits depend on worth, cost, depth, breadth, length, and scope, but the greatest of these is length. The debate between the poverty approach and the self-sustainability approach hinges on the effects of length on the other five aspects. More length requires either more profit or more donations, and profits and donations affect all aspects of outreach through their effects on incentives. All else constant, more profit requires higher prices and thus implies more cost to clients and less net gain per client. In practice, the drive for profits also tends to reward innovations that either increase worth to clients or decrease cost to clients. This happens both because higher worth allows higher prices without smaller net gains and because lower costs allow higher net gains without lower prices. The drive for profits may also lead to long-term increases in

breadth and length that may offset short-term decreases in net gains per client. Donations provide weaker incentives for innovation than profits because donors do not reward innovation and punish stagnation as consistently as clients because their own welfare is not as directly at stake. Donations do, however, reduce the need for high prices which, all else constant, increases net gain per client.

The poverty approach assumes that the higher net gain per client swamps the negative effects on length of low profits and of donations. The self-sustainability approach assumes the converse. The point here is that arguments for either approach should account for all six aspects of outreach and for their interactions through time. The poverty approach must discuss more than just depth, and the self-sustainability approach must discuss more than just length.

The case of BancoSol shows some of the possible trade-offs and patterns of feedback. In 1992, BancoSol was split off from PRODEM, a non-government organization founded in 1987 (Mosley, 1996). Although PRODEM was successful compared with most other microfinance organizations, its stakeholders believed that its NGO status constrained its potential breadth, length, and scope. For example, PRODEM was not regulated and thus could not mobilize savings. Furthermore, the founders of BancoSol hoped that its for-profit status would help to attract private investment; PRODEM had been frustrated by the slow, strings-attached processes required to get cheap funds from donors. Finally, the donors involved wanted to test whether an NGO could become a bank. The partial replacement of donors with market

forces was a way for the sometimes-but-not-always-altruistic stakeholders of BancoSol to commit to make the effort required to make a profit and, hopefully, to improve the welfare of the poor more.

The precommitment mattered because success was more difficult as a bank than as an NGO. Managers with experience in big, impersonal banks slowly replaced many of the visionaries and social workers who had founded PRODEM. With most growth financed with loans and deposits from private sources, the cost of liabilities rose. To comply with regulation, BancoSol had to overhaul its computer system at huge costs.

Rather than shift these increases in the cost of supply to clients, BancoSol improved efficiency. It did this in part through bigger and longer loans as clients aged and revealed their risk and in part through economies of scale. The push to cut average costs led to growth in the number of clients with debt from 23,000 in 1991 to 81,000 in 1998. In late 1995, 12 percent of households in greater La Paz had debt with BancoSol (Navajas *et al.*, 1999).

From 1996-1998, return on equity was 18, 23 and 43 percent. To get profits for shareholders, BancoSol had to provide net gains for clients. Costs to clients decreased in 1994 when BancoSol dropped its requirement for compensating balances and when the real yield on the loan portfolio fell from 45 percent in 1992 to 35 percent in 1998. Worth to clients also increased in 1996 when BancoSol, which had until then made all loans through groups, started to make some individual loans.

Did these increases in net gain, length, and scope cause depth to decrease? Gonzalez-Vega *et al.* (1997) find that the size of loans to new borrowers did not change much through time. Increases in the average amount disbursed and in the term to maturity were due not to mission drift but rather to growth in client demand and in knowledge of the risk of repeat clients. In fact, BancoSol may have started to court even poorer borrowers to gain market share. At BancoSol, the search for profits increased worth, cost, breadth, length, and scope, and did not decrease depth.

4. Outputs, benefits, and costs

The poverty approach usually tries to measure only social benefits, while the self-sustainability approach usually tries to measure only social costs. The social worth of microfinance, however, depends on both benefits and costs. As far as I know, this section is the first attempt to measure both of them in a present-value framework.

4.1 Cost-effectiveness analysis

Benefit-cost analysis compares social benefits with social costs. In contrast, *cost-effectiveness analysis* compares outputs with social costs. The estimate of social cost per unit of output is useful because outputs are less expensive to measure than benefits.

Knowledge of average costs does not imply knowledge of average benefits. Still, average costs may be enough to guide policy choices and to inform subjective judgements of the social worth of microfinance organizations because average costs tell the minimum level of average benefits required for social benefits to exceed social costs. Whether actual (unmeasured) average benefits could be this high must still be argued, but cost-effectiveness analysis at least provides a benchmark. If average costs are very high or very low, then measurement of social benefits may be moot.

For the Grameen Bank of Bangladesh, the best-known microfinance organization in the world, an estimate of the average social cost of a year of membership is $8 (Schreiner, 1997). Although no one knows for sure, most experts would guess that unmeasured benefits probably exceed $8 per year (*e.g.*, Pitt and Khandker, 1998).

The social cost of BancoSol from 1987-1996, measured as the present value of cash flows from public donors, was $2.1 million (Schreiner, 1997).[1]

In 1987-1996, BancoSol produced 30.7 million discounted dollar-years of borrowed purchasing power. Thus, social cost per unit of output was $2.1/30.7 ≐ $0.07. Thus, BancoSol was a good social investment if the average borrower got a net gain of 10 cents or more per dollar-year of debt. In section 2.2, I estimated net gain as $0.85. Although both of these estimates are quite rough, their relative magnitudes suggest that the social benefits of BancoSol probably exceeded social costs, even if displacement of non-borrowers was 50 percent (Bendick and Egan, 1987).

4.2 Benefit-cost analysis

Net benefits are the social value of outreach minus social cost. To compute net benefits, I write a formula that combines the six aspects of outreach in a measure of social value. Let t index length in years from 1 to T. Let s_t index scope as the number of types of contracts in year t from 1 to S_t. For a given type of contract s_t, let breadth be N_{ts}, with each client indexed by n_{ts}. Let the worth in year t of product s_t to client n_{ts} be w_{tsn}, and let the cost be c_{tsn}. Net gain is worth w_{tsn} minus cost c_{tsn}.

[1] Social opportunity cost was taken as 20 percent per year in real terms. The results are robust to opportunity costs between 0 and 30 percent. Private funds have no imputed social opportunity cost because I assume that private sources make sure that their own benefits exceed their own costs when they put their own funds in BancoSol. In contrast, I assume that public sources cannot be trusted to make sure that the social returns from BancoSol exceed those of the marginal development project.

To value depth of outreach, let the function $D_{tsn}(w_{tsn} - c_{tsn})$ give the social value in year t of the net gain from contract s_t for client n_{st}. The social-welfare function $W(\cdot)$ aggregates the social value of net gains across clients, contracts, and time:

$$\text{Social value of net gains} = W[D_{111}(w_{111} - c_{111}), \ldots, D_{TS_TN_{TS_T}}(w_{TS_TN_{TS_T}} - c_{TS_TN_{TS_T}})]. \quad (1)$$

The time frame for BancoSol is 1987-1996. For simplicity, I ignore individual loans and assume that scope includes only group loans until the introduction of savings services in 1992. I also ignore all variation in contractual terms in all years. I assume that all large time deposits were held by the rich with no social benefit and that all small passbook deposits were held by the poor with a net gain per dollar-year on deposit of \$0.02. As estimated above, the net gain for each dollar-year of debt is \$0.85.

To use the general social-welfare function $W(\cdot)$ in equation 1, I assume a specific form that is additively separable across time, clients, and products. The discount rate $\delta = 1/(1+r)$, and the social rate of time preference r is 0.20 in real terms for all years.

Finally, I must choose a functional form to value depth. To keep things simple, I assume $D_{tsn}(w_{tsn} - c_{tsn}) = (w_{tsn} - c_{tsn}) \cdot 0.9/\rho$, where $\rho = 0.94$ is the average index of fulfillment of basic needs for borrowers of BancoSol in greater La Paz in late 1995 and where the poverty line is 0.9. This form of $D(\cdot)$ implies that the social value of a given net gain increases as clients are poorer and decreases as clients are richer. For example,

a given net gain for someone with an index of 0.45 has four times the social value as for someone with an index of 1.8 (0.9/0.45 = 2 versus 0.9/1.8 = 0.5).

Other functional forms may have better theoretical support (Deaton, 1997). The assumptions here are meant to lead to a simple formula that combines the six aspects of outreach in a measure of the social value of net gains to clients:

$$\text{Social value of net gains} = \sum_{t=1}^{T} \sum_{s=1}^{S_t} \sum_{n=1}^{N_{ts}} \delta^t \cdot (0.9/\rho) \cdot (w_{tsn} - c_{tsn}). \qquad (2)$$

To compute this in a spreadsheet, note that the sum of net gains across all clients N_{ts} for a contract s_t in year t is the same as the net gain per dollar-year of debt or on deposit multiplied by the average number of dollar-years of debt or deposits, $\bar{q}_{ts}$. If I replace δ^t with ϵ_t, a discount factor that recognizes the quirks of discounting average stocks (Schreiner, 1997), then I can write:

$$\text{Social value of net gains} = 0.96 \cdot \left(\sum_{t=1}^{T} \epsilon_t \cdot 0.85 \cdot \overline{q_{t1}} + \sum_{t=1}^{T} \epsilon_t \cdot 0.02 \cdot \overline{q_{t2}} \right). \qquad (3)$$

The result is in the last cell of Table 1 on page 27. For 1987-1996, the estimated discounted social value of net gains to clients of BancoSol is $25.6 million. Given social costs of $2.1 million, net social benefits are $23.5 million. Subject to the imperfect assumptions, gross simplifications, and coarse estimates used here, BancoSol was a good use of public funds earmarked to help the poor.

4.3 Caveats

This result is, to say the least, very rough and of unknown precision. The estimate of net social benefits rests on a legion of heroic assumptions, especially with regard to worth to clients, social opportunity costs, and the forms of the social-welfare function and the depth function. For example, estimated social costs ignore subsidies from unreported deposits held by public entities. Furthermore, estimated social benefits ignore demonstration effects in Bolivia and elsewhere even though these effects were the main reason BancoSol was created. Thus, the exercise here should be viewed not as a definitive measurement but rather as an attempt to show how the new framework of outreach can help to think about net social worth. Finally, BancoSol is one of the best microfinance organizations in the world—estimates of its net social worth do not apply to other microfinance organizations nor to the microfinance movement as a whole.

5. Discussion

The poverty and self-sustainability approaches start from different assumptions about the six aspects of outreach. The poverty approach assumes that it is best to help a few very poor people a lot for a short time with only loans; the self-sustainability approach assumes that it is best to help many less-poor people a little for a long time with a range of financial services. Neither approach has recognized that social benefits depend on all six aspects and that a change in one aspect changes all the other aspects. Arguments for either approach should use empirical measurements and explicit assumptions about each aspect.

The essence of my own argument is that the poor are many but the donor dollars are few, that society cares about the poor both now and in the future, and that self-sustainability produces the strongest incentives to improve social benefits through time. The self-sustainability approach tries to weave a web of reinforcing incentives that reward those stakeholders who improve the welfare of clients. The poverty approach relies more on altruism. As an economist in a school of social work (and as a human), I recognize the power of both selfishness and selflessness. I favor self-sustainability because selfishness is more robust to selflessness than vice versa. For example, if all stakeholders are always altruistic, then self-sustainability does no harm; stakeholders will give back to the poor the rewards diverted from them to satisfy the supposed selfishness of the stakeholders. If, however, some stakeholders are sometimes

selfish, then self-sustainability constrains the harm that their selfishness inflicts on the target group. Greed is not good, but a system that recognizes that some people are sometimes greedy may well improve the common good best.

The poverty approach relies on altruism to attract resources and to motivate effort for innovation and efficiency. As a point of logic, altruism may be the best strategy. Perhaps altruism is enough to drive stakeholders to work to improve the welfare of the poor, or perhaps non-self-sustainable microfinance is the most efficient way to help the poor. After all, selfish incentives may fail to prompt enough innovation and efficiency to make net gains in the self-sustainability approach bigger than in the poverty approach. My own belief, however, is that microfinance is a weak tool to help the very poor, especially with a focus on loans instead of savings. Even if worth to very poor clients is very high, the cost of supply is also very high.

Self-sustainability assumes that length of outreach helps the poor best because, with uncollateralized loans to borrowers without steady cash flows from wage jobs in places without credit bureaux, the chief motive to repay—apart from honesty—is the promise of access to future loans. Non-permanent lenders—those without profits or perpetual donations—will suffer from default. Default does not improve social welfare, at least not as much as a pure gift would. It destroys the lender, makes liars out of borrowers and gives them a bad credit record, and steals from the poor of the future. Because donations are limited, length usually requires profits, at least for lenders with much breadth. In turn, the drive for profits tends to improve all aspects of outreach,

except perhaps depth. Increases in worth or decreases in the cost of supply allow a lender both to increase profits and to maintain or increase net gains per client.

Self-sustainability may still require some altruism. If, as depth increases, worth to clients does not increase as fast as the cost of supply, then profits and/or net gains per client must decrease. Because depth matters, microfinance organizations must constrain creep toward less-poor clients who cost less to serve. In the poverty approach, selfless concern for the poor constrains mission drift. In the self-sustainability approach, constraints on creep take three forms. First, competition or growth may push organizations toward unserved niches. Second, unless costs are subsidized, microfinance mostly attracts the unserved because costs to clients in microfinance exceed costs to clients who can use banks. Third, stakeholders may be both selflessly concerned for the poor and selfishly concerned with profit. Thus self-sustainability does not rule out altruism and may require it to ensure depth. It is probably less difficult to find stakeholders who balance selfishness with selflessness than to find completely selfless stakeholders.

Both approaches must find people who will sacrifice profits for depth or effort for efficiency. Although most people are often selfless and although altruism finds strong support from gurus, saints, and deities, the main force for development through time has been structures of incentives that reward those who increase the welfare of others (North, 1994). Selfless stakeholders are scarce, at least in the numbers needed to help the masses of the poor both now and in the future. Because altruism is beyond the

scope of public policy, self-sustainability aims to use what selflessness it can get now to create a system that will serve the poor regardless of future altruism. Although private people are free to support the poverty approach, public policy should focus on self-sustainability; only those shepherds who tend their own flocks can leave them to search for a single lost sheep.

A commentator on an early draft said that “the one thing we have learned is that the success of microfinance organizations rests with their providing the right incentives.” While true, this is not helpful for policy. The big question is not whether to have the right incentives, but rather how to get them, and indeed, how to know which incentives are right. The framework for outreach presented here shows how the poverty approach and the self-sustainability approach attempt to answer these questions.

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Table 1: Social value of net gains to clients of BancoSol, 1987-1996

Line		Source	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
A	Discount factor for average stocks, Eta	Data	0.865	0.753	0.626	0.521	0.438	0.363	0.301	0.255	0.213	0.177
B	1/Rho	Data	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
C	Net gain to a dollar-year of debt	Data	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
D	Net gain to a dollar-year on deposit	Data	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
E	Dollar-years of debt	Data	0.1	0.4	0.7	1.8	3.3	6.1	15.8	31.9	30.9	37.0
F	Dollar-years of deposits	Data	0.0	0.0	0.0	0.0	0.0	0.7	0.9	1.6	2.8	3.6
G	Accum. discounted dollar-years of debt	G(t-1)+A*E	0.1	0.3	0.8	1.7	3.1	5.3	10.1	18.2	24.8	31.4
H	Accum. discounted dollar-years on deposit	H(t-1)+B*F	0.0	0.0	0.0	0.0	0.0	0.7	1.6	3.1	5.8	9.2
I	Social value of net gain to clients	0.96*(0.85*G+0.02*H)	0.0	0.3	0.6	1.4	2.5	4.4	8.3	14.9	20.4	25.8

Source: Data from BancoSol and from Schreiner (1997). All monetary figures are in millions of constant dollars as of December 1998

Figure 1: Five dimensions of the size of a loan