How we see poverty

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SUMMARY

How we think about poverty is colored by how we measure it. For economists, that often means seeing poverty through quantities measured in large, representative surveys. The surveys give a comprehensive view, but favor breadth over depth. Typical economic surveys are limited in their ability to tease out informal activity, and, while they capture yearly sums, they offer little about how the year was actually lived by families. Year-long financial diaries provide a complementary way of seeing poverty, with a focus on week by week choices and challenges. The result is a re-framing of poverty and its relationship to money, calling for greater attention to financial access and a broader notion of how finance matters.

KEYWORDS: Poverty lines, financial access, microfinance, consumption smoothing, financial diaries

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By the end of the 19th century, the East End of London was notoriously over-crowded. Villagers had poured in from the countryside looking for work, soon joined by waves of immigrants squeezing into cheap tenements. Many suffered from the diseases of poor sanitation. It was to these slums that Charles Booth, the son of a wealthy Liverpool merchant, took research teams to map the extent of misery, street by street. What is most striking about Booth's London maps is the degree to which they mark out lives lived unpredictably. In carefully-drawn rectangles of blue and black, Booth marks the neighborhoods of those whose earnings are "intermittent", who can't rustle up more than three days of work a week, and who "struggle to make ends meet". He segregates those families from non-poor families whose lives are far more stable, with "regular work" or "good ordinary earnings," most of whom live on wider streets mapped in red and yellow.[1]

Most poverty analysis today flattens out the unpredictable, making no distinction between income that is "intermittent" versus that which is "regular." Instead, statistical agencies identify poverty according to families' average resources over a year. Those averages, and the survey data from which they are drawn, blur the valleys and peaks within a year. A year's worth of income earned through a steady weekly salary is treated identically to a year's worth of income patched together through casual jobs punctuated by ups and downs according to season or economic cycle. Only the average matters for poverty counters. Yet the two patterns can drive very different stories of stress, costs, and opportunities.

It is not that the averages mislead, it is that they conceal. For those who live on little, the condition of poverty is tied to the ups and downs as much as to the averages.

[1] Booth's maps are available through the Charles Booth Online Archive maintained by the London School of Economics. Their site is http://booth.lse.ac.uk/ The quotes on poverty descriptions are from the detailed classifications keyed to the 1898-99 map.

That revelation is the single most important contribution of the "financial diaries" collected in Bangladesh, India, and South Africa in year-long stretches between 1999 and 2005. The diaries were collected by three researchers who, like Charles Booth, aimed to illuminate the conditions of poverty through a different approach to data collection. The first diaries project was conceived of by David Hulme of Manchester University and Stuart Rutherford, the founder of a saving and credit cooperative in Dhaka. Rutherford led the studies Bangladesh, where his research team interviewed residents of Dhaka slums and of rural villages. In parallel, Rutherford and Hulme engaged Orlanda Ruthven who completed similar studies in India, both in Delhi and villages in eastern Uttar Pradesh. Daryl Collins expanded the work to South Africa and refined the methodology, again working in urban and rural areas.[2] In each setting, research teams visited the families every two weeks for a year. Conversations ranged broadly, but the focus was ultimately on money: everything the families earned, spent, saved, borrowed, received, and gave away. The combined sample size was small, roughly 300 families across the three sites, but the number of meetings was unusually intensive.

The main conclusion from those thousands of conversations seems obvious once it is stated, yet it had been hard to see. To put it briefly: The problem of living on $1 a day per person is that no one literally earns a dollar a day per person. Instead, a family may earn $5 one day and nothing for the next week. They earn $10 in the high season and little in the low. Their earnings are irregular and often unpredictable largely because income depends on two uncertain sources: self-employment and casual employment in the informal sector. Moreover, spending needs are irregular and unpredictable as well – and often lumpy. These include items like school fees, doctors' bills, transportation, funerals, and business needs. Not having enough money at the right time usually means either suffering without or taking costly steps to fill gaps. Most often this happens by depleting savings; selling off assets; taking expensive loans; or calling on the kindness, pity, or obligation of others.[3]

Once the ups and downs are recognized, it is a small step to see that if families *literally* earned $1 a day, their lives could be much better. Families could plan and they could more easily borrow against the future; they could live much steadier lives.

[2] More on Collins's work and method can be found at www.financialdiaries.com and in Collins (2008) and Collins et al. (2009).

[3] Economists distinguish between predictable events (like seasonal ups and downs) and surprises (like unexpected illness). Households should be able to perfectly anticipate the former and save for them, so they're different from the latter. Yet when saving is difficult, the distinction is less clear, and in practice even seasonal shocks that are repeated year after year can have consequences similar to unexpected shocks.

The perspective re-frames the achievement of popular cash transfer schemes like Mexico's Progresa/Oportunidades or South Africa's old age pension scheme. These are not just massive income redistribution programs, they are also a way to ensure regular, reliable cash flows to families whose income would otherwise be irregular and unreliable.[4]

Similarly, the perspective re-frames the role of financial access for poor families. With no chance to earn steady income through salaried jobs, financial tools offer an alternative solution. This is not so much because financial access can fuel business investment (as microcredit advocates have long stressed), but because it can do something even more fundamental. Having the right financial tools allows people to move money through time by saving, borrowing and insuring. Financial access allows people to reliably move funds from times of surplus to times of need. Even if income is irregular and unpredictable, spending need not be (Deaton 1991, Morduch 1995).

This perspective and its implications is the core of *Portfolios of the Poor*, a volume which I co-authored with Collins, Rutherford, and Ruthven drawing on their financial diaries research (Collins et al. 2009).[5] In this essay, I introduce the lessons of *Portfolios* and show ways that the diaries help us see elements of poverty that are often hidden in economic research. I argue that the new data re-shape understandings of finance and its relationship to poverty.

A Taxi Driver in Dhaka, Bangladesh

Siraz heads one of the families in Rutherford's survey (and the depiction here draws heavily on Rutherford's contribution to *Portfolios*). Siraz's family is not "typical" (there is no truly typical family in the survey), but their behavior and choices reflected those seen often in the reports of others.

Siraz was 37 during the survey year, driving a mini-taxi and earning a steady wage. With that, he supported a wife and two children. Still Siraz's income was just $77 per month at the time of the

[4] This frame is highlighted by Santiago Levy, an architect of Progresa, but much of the subsequent discussion is on the transfer of resources or the conditional elements (money is only released if children are in school, vaccinations are up to date, and the like). The hypothesis is that there is special power in having a reliable, steady income source, over and above the average value of that source. In her work in South Africa, Daryl Collins finds an interesting side-arrangement, in which two grant recipients agreed to regularly split their monthly checks with each other (the women received their checks on different schedules) in order to further parse the cash flows. This is made possible by the fact that the grant is regular and reliable.

[5] The first chapter in English, French, and Spanish is available at www.portfoliosofthepoor.com.

survey, or, once put into terms of purchasing power parity (PPP) adjusted dollars, $1.76 per person per day (US$, converted from local currencies at 1993 inflation-adjusted PPP conversion rates).

Unlike most of his neighbors with low and variable income, Siraz's income is low and steady. As a result, Siraz and his family have advantages. Still, theirs is a fragile economic life, one that can be tipped by an illness in the family or other pressing expense.

The steadiness of the monthly wage is a great help for Siraz, and it allows him to borrow more easily. He borrowed interest-free loans from other taxi drivers, took wage advances from his employer, used shop credit, and went into rent arrears.

Siraz and his wife, Monwara, also saved at home, belonged to several savings clubs, and gave loans to others (serving as a form of saving). Monwara also saved and borrowed at a microfinance institution.

Microcredit advocates argue that families like Siraz's want nothing more than to borrow money to expand a business. And, in fact, Siraz contemplated borrowing to buy a rickshaw in the hope of generating greater profit. But in practice that is not what he did. Siraz's wife Monwara borrowed $60 from her sister, using a third of the loan to buy a cupboard, a third for household expenses, and a third to lend out to someone else. Siraz and Monwara were thus both borrowers and lenders.

The loan from the sister was not cheap. The terms of the deal were that the $60 loan would be repaid as $2 a week for fifty weeks. Putting that in annualized percentage terms, the loan was taken at an annual rate of 115%. But, in the end, Siraz repaid the principal but not the interest. The loan that Siraz made to a fellow rickshaw-driver was even more expensive, carrying a cost of 17.5% a month or a 210% annualized percentage rate.

Drawing lessons

What does the story of Siraz tell us? The first element is that the diaries show life unfolding, something so basic yet hard to see in large surveys that yield measures of quantities fixed at a given time. The diaries depict negotiating and juggling, they reveal a stream of obstacles and opportunities and choices to confront.

Insight on the methodology is seen in the South African sample in *Portfolios*, which entailed the most careful data collection and largest sample. Daryl Collins found that the early interviews missed much of the economic action. Expenses were recorded, but the source of funds to support them were hard to track down. Gaps were filled in when the next interview occurred two weeks later, until after six interviews the average difference between what was spent and what was earned (and what was borrowed and what was saved) narrowed to below six percent. In other words, it took three months of meeting, talking, and probing to feel confident in the story.

Large economic surveys can miss much about the financial lives of the poor

Collins's calculation shows how much can be missed in a single one-time interview. The calculation showed that the problem is both imprecision in responses to given questions and, more important, the failure to reveal entire categories of activity. The early interviews missed hard-to-see sums like money saved with a friend or a steady remittance back home to the village. Over time, the financial diaries came to reveal far more financial activity than researchers had expected. We see this in Siraz's list of loans and loan-like activities-- involving other taxi drivers, his employer, the shopkeeper and the landlord. Most loans were arranged informally and would have been missed without a prompt. The ups and downs of needs create the need for an active financial life, but much of the time the activity is hidden from surveyors completing forms for ambitious, large surveys.

Microfinance may matter absolutely, but the relative impact could be small

Siraz's list of financial activities puts into perspective evaluations of (and hopes for) microfinance. It's tempting to believe that microfinance arrives into an empty space, creating financial opportunities for the first time. Or that microfinance pushes out wholly inferior, exploitative lenders, like loan sharks. But the diaries, especially those in South Asia, show that that is not the case – and they echo arguments made by Rutherford (2009) in studying finance and poverty through the lens of particular financial devices.

As noted, in addition to loans the survey team found that Siraz and Monwara also saved at home, belonged to several savings clubs, and lent to others. And we saw that Monwara belonged to a microfinance institution. The microfinance institutions may do a respectable job in providing their services, but the financial diaries show that the control groups at the heart of statistical evaluations are apt to have all of these kinds of options too. When comparing people with access to a particular microfinance institution to those without, the story of Siraz and Monwara reminds us that not having access to a given institution does not preclude access to other institutions and options. It is essentially the "portfolio" of options that matters. The absolute gain from access to a particular microfinance provider may be meaningful, but with financial activity so widespread, the net impact (over and above existing options) is likely to be much smaller than advocates portray.[6]

[6] Armendáriz and Morduch (2010) review the ideas and evidence on microfinance impact evaluation.

Financial lives are constructed through portfolios of possibilities

The great mix of devices and activities --the savings clubs and zero-interest loans, the help from friends and the deals with the landlord—shows how much work is involved in creating a financial life. There are so many devices and providers because no single device or provider provides all that is needed. Or they fail to provide particular qualities that are desired.

Perhaps most strikingly, the introduction of microfinance did not sweep away all of the other arrangements. Even having access to three different microfinance providers failed to do so. Instead, the formal and informal co-exist, creating a kind of "portfolio" of options on which to draw as opportunity and need require.

Saving requires structure and support, not merely a bank account

Like other families in the survey, Siraz and Monwara do not save in a bank account. Mostly they save using savings clubs, informal groups that pool resources to support accumulations – and often earn a small profit by lending money (with interest) to others. The savings clubs provide a regular meeting schedule, a group of people bound in a commitment to save, and a clear path to accumulating. A typical bank account offers none of that. The lesson from watching Siraz and Monwara is that their ability to save requires more than having an account at a bank with their name attached. It requires instead a structured, supportive mechanism to turn extra sums of money into accumulations for the future.[7]

The second element is that bank balances are a limited metric of saving. The financial diaries give many examples of families that build up and draw down their stock of savings during the year. A view of balances at any given moment (or the change from year to year) fails to reveal much of the action since saving is marked less by slow and steady accumulation over years and more by active building up and taking down with spans of months. Another way to see this evidence is that the diaries reveal that saving across years is one of the great challenges for poor families.

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[7] Bauer et al (2011) summarize the literature on behavioral economics, poverty and finance, and provide an alternative way to think of microcredit.

Interest rates are not so simple

The story of Siraz and Monwara reveals limits to other pieces of microcredit belief. One common refrain from microfinance policymakers is that the existence of moneylenders justifies microfinance pricing policy. The logic goes that poor families have no recourse but to borrow from moneylenders at interest rates topping 100% per year. So, in that context, a microfinance loan charged at 40% per year could be seen as a godsend, even though we in New York or Paris or Tokyo might see such interest rates as exploitative in our own contexts.

Yet the story we see through the lives of Siraz and Monwara is more complicated. Yes, they took out a loan at an annualize interest rate of 115%. But, in the end, Siraz only ended up repaying the principal, not the interest. A variant of this finding is also found by Collins in South Africa, in which expensive loans taken for one month are in fact seldom repaid on time (with no penalty), bringing the effective cost much lower.[8] The stated price and the actual price often diverge. What's more, Siraz if anything was the "exploiter" when he turned around and charged his colleague 210% on an annualized basis.[9]

But the most important bit of data is that most of the loans taken are not high-priced transactions. Instead, they are zero interest loans. The pattern is repeated in all the study sites. The data undermine the popular idea that the sky is the limit (or more precisely that 100% per year is the limit) when setting microcredit interest rates. Microcredit loans often replace zero-interest loans – which, despite their appealing price, come with obligations and are not always easy to obtain. The microcredit innovation has been to provide credit that can be counted on, following set rules and expectations.

Borrowing for consumption is a critical strategy

I have already touched on another microcredit claim: that finance is desired first and foremost to invest in business. Siraz and Monwara show that consumption loans are often desired with greater priority, both to pay for daily expenses and to cover lumpy purchases (like the cupboard they bought with the loan from Monwara's sister). These loans may be repaid with cash flows from business, but they do not necessarily fund those businesses. This pattern is found in Stuart

[8] Chapter 5 of *Portfolios of the Poor* gives Collins's calculation that a very expensive consumer loan costing 30% per month would in fact have an effective interest rate of 8.3% per month if not repaid for 3 months. The result happens because the month-long loan is not repaid on time and no penalties or extra interest are added.

[9] Patole and Ruthven (2004) provide insight from the diaries on how microcredit is viewed and used. Rutherford completed additional diaries on Grameen Bank, which are described in chapter 6 of *Portfolios.*

Rutherford's follow up work on a group of Grameen Bank customers, reported in chapter 6 of *Portfolios*. About half of the Grameen loans were used for "micro-enterprise' investment, with the rest used for various other purposes.

Some see this "diversion" to consumption purposes as an inappropriate mis-use of funds lent by microfinance institutions like Grameen Bank. The perspective from the financial diaries is instead that the insistence on business loans reflects a failure to mesh financial products with the needs of poor families. Due diligence is needed whenever loans are made, and at this scale such diligence should reflect whether the household has the cash flows to comfortably service loans, not whether a family is guaranteed to use a loan for a particular business end that the lender deems worthy. The diaries are also a reminder that such due diligence requires understanding a range of financial obligations, most of which are informal and often below radar.

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In nineteenth century London, concern with poverty was mainly the province of reformers and politicians, and of novelists like Charles Dickens. Charles Booth's aim was to sharpen the evidence, to cut through partisan debates and bring light to dark, crowded alleys -- goals surely familiar to today's social scientists.

Booth had little survey methodology to draw on: there was scant scholarship on poverty, no established poverty lines, no parallel to our $1.25 a day global headcounts. Although the idea of a poverty line later came to be associated with Charles Booth, such a line that neatly divides the haves from the have-nots is, in practice, a twentieth century apparatus.[10]

When Charles Booth and his colleagues surveyed the conditions of poverty in nineteenth century London, they were guided by what they saw: struggling communities in which economic instability was as much a constraint as having low incomes. Poverty was seen as a set of constraints that created obstacles to meeting needs, not a status determined by any single measure such as average income or consumption.

The drive to quantify conditions using large data sets has been a big step forward, but it has tended to reduce explicit discussions of poverty to relationships with poverty lines. Moreover, there is only so much that a one-time survey can show. Even the most detailed photograph can't be manipulated to reveal what a film or novel can.

Much recent work on poverty, pushed especially by the United Nations, aims to expand notions of poverty. Health conditions and education and gender equity are integrated; alternative

[10] The origin of the poverty line and Charles Booth's role in it are described by Allan Gillie (1996).

measures like the Human Development Index are created and relentlessly promoted (Fukuda-Parr 2003). The efforts aim to diminish the centrality of money in defining poverty.

The diaries instead suggest that we don't take the connection between poverty and money seriously enough. Understanding families' capabilities requires seeing how they obtain and keep resources. The problem for families is not just how much they have when all is counted up, but when exactly they have it, and how reliably they can get it when needed. This is not to undermine the importance of health, education, gender and other concerns. Instead it is to argue that the role of money in shaping the experience of poverty needs more attention, not less.

The microfinance movement deserves much credit for connecting poverty and finance in the popular imagination. But that outcome has been achieved through a limited narrative, with its stress on the need for capital to support small businesses. That turns out to be only a small part of a larger story. The financial diaries show that the connection between finance and poverty is more fundamentally connected to the ability to borrow and save and insure for a wide range of purposes, a vision that is at the heart of new approaches to financial inclusion (e.g., CGAP 2010). The next step is to complete the circle. Analytical frameworks need to make the ups and downs of household finance as central in poverty analyses as they are in the lives of the poor.

REFERENCES

Armendáriz, Beatriz and Jonathan Morduch (2010). *The Economics of Microfinance*, Second edition. Cambridge, MA: MIT Press.

Bauer, Michal, Julie Chytilova, and Jonathan Morduch (2011). "Behavioral Foundations of Microcredit: Experimental and Survey Evidence from Rural India." *American Economic Review*, forthcoming.

Collins, Daryl (2008). "Debt and Household Finance: Evidence from the Financial Diaries" *Development Southern Africa* 25 (4), pp. 469-479.

Collins, Daryl, Jonathan Morduch, Stuart Rutherford and Orlanda Ruthven (2009). *Portfolios of the Poor: How the World's Poor Live on $2 a Day*. Princeton, NJ: Princeton University Press.

CGAP (2010). Annual Report. Washington, DC: Consultative Group to Assist the Poor.

Deaton, Angus (1991). "Saving and Liquidity Constraints." *Econometrica* 59, pp. 1221-1248.

Fukuda-Parr, Sakiko (2003). "The Human Development Paradigm: operationalizing Sen's ideas on capabilities". *Feminist Economics* **9** (2–3), pp. 301–317

Gillie, Alan (1996). "The Origin of the Poverty Line." *The Economic History Review*, New Series, Vol. 49, No. 4 (Nov.), pp. 715-730.

Morduch, Jonathan (1994). "Poverty and Vulnerability," *American Economic Review (AEA Papers and Proceedings)* 84 (2), May, pp. 221 - 225.

Morduch, Jonathan (1995). "Income Smoothing and Consumption Smoothing," *Journal of Economic Perspectives* 9(3), Summer, pp. 103 - 114.

Patole, Meenal and Orlanda Ruthven (2001). "Metro Moneylenders: Microcredit providers for Delhi's poor." *Small Enterprise Development* 13 (2), pp. 36-45.

Rutherford, Stuart with Sukhwinder Arora (2009). *The Poor and their Money*, 2nd edition. Bourton on Dunsmore, Warwickshire, UK: Practical Action Publishing.