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The Future of Microfinance Impact Assessment

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Introduction

To yield insight, an impact assessment must be at least as complex as the impact it seeks to measure. Otherwise, the assessment may miss important dimensions of impact and may ultimately lead policy-makers away from the most promising ideas for alleviating poverty. This is relevant to the discussion of research to assess the impact of microfinance, surveyed in a report recently released by the Grameen Foundation (Odell, 2010), as well as to the increasing role this research plays in the formulation of policy.

This paper will describe three different mindsets that occur in sequence along a continuum of increasing complexity. Each mindset *transcends and includes* the preceding mindset(s), which allows for the incorporation of additional factors and dimensions. The first is a deterministic mindset derived from Newton's laws of mechanics and focused on finding causal links between inputs and outputs. The second is a probabilistic mindset that addresses the chaos, uncertainty, and surprise found in complex systems. The third is an integral mindset that explicitly integrates subjective processes into the objective systems described at the probabilistic level. This paper will present the origins of each mindset, as well as how they are manifested in development policy and impact assessment.

The paper applies a futurist's perspective to understand how microfinance impact assessment may evolve along this continuum. Futurists can contribute to this discussion by placing today's policy and methodology debates in a longer-term context. Rather than rooting their frameworks in data from the past, futurists look for "weak signals" of important changes, then use their intuition to consider the possible forms these changes might take. This approach can identify emerging opportunities for surprising success, as well as new challenges to overcome. For microfinance, the opportunity – and the challenge – is to accelerate the evolution of impact assessment so that the more complex impacts of microfinance can be captured in a systematic way.

The deterministic mindset

Determinism has its roots in Newton's *Principia*, in which Newton outlined his fundamental laws of mechanics. The success of these laws in predicting many physical phenomena, such as the movement of planets, led many to extrapolate this type of thinking to other fields. The resulting

deterministic mindset was perhaps best expressed by Pierre-Simon Laplace, who in 1814 wrote that “we may regard the present state of the universe as the effect of its past and the cause of its future.” Laplace argued that an intellect that knew the position and movement of every particle in the universe would be able to predict any past, present, or future state (Laplace, 1951).

In development economics, this mindset has manifested itself as the quest to find the *causes* of growth. In this model, a poor country is seen essentially as a factory with a certain set of inputs (geography, resources, investment, human capital, etc.) which combine to provide a certain level of output (per capita GDP). For decades, development economists have argued about which input is most significant – that is, which is the *cause* of growth. While Amartya Sen and others have expanded the factory’s output to include such things as health and education, the constraint of causality has remained in place. Sen argues that “we must not only look at statistical connection but, furthermore, examine and scrutinize the *causal* processes that are involved in economic growth and development” (Sen, 1999, p. 150, emphasis original).

If there are *causes* of development, then we should be able to measure their *effects*. This is the intent, for example, of the randomized, controlled trials (RCTs) that have generated so much excitement in recent years. Using this methodology, researchers set up a “control” group that as much as possible mirrors the “treatment” group, to whom microfinance (the “treatment”) is offered. Any statistically significant difference in the dependent variable – e.g., poverty rates – between the treatment group and the control group is inferred to have been *caused* by the treatment. As Odell writes, “a well-designed impact assessment study can provide insight into the causal factors behind the success and failure of various microfinance institutions” (2010, p. 7).

The deterministic mindset is useful for testing the immediate and quantitative impacts of a microfinance program. For example, a RCT study by MIT’s Abdul Latif Jameel Poverty Action Lab (J-PAL) found positive but statistically insignificant increases in business profits, monthly business revenues, and spending on business inputs in the treatment area (Odell, 2010). However, other potential impacts, such as women’s empowerment, improved health, and children’s education, involve complex interactions among a variety of factors, and are thus unlikely to be captured by deterministic assessments – particularly over the short timeframes associated with these studies. (The RCT mentioned above consisted of a survey 15-18 months after microfinance had been introduced.) Thus, one should be wary of generalizations about the “success and failure of various microfinance institutions” based on deterministic studies alone.

The limitations of the deterministic mindset have been noted in other fields as well. For example, quantum mechanics has identified phenomena at the subatomic level that do not obey Newton’s laws but operate probabilistically. Geneticists have been unsuccessful in locating the genes that *predict* certain diseases (Wade, 2010). In fact, in a lecture to the Royal Society on the 300th anniversary of Newton’s *Principia*, noted applied mathematician Sir James Lighthill actually apologized on behalf of scientists “for having misled the general educated public by spreading ideas about determinism of systems satisfying Newton’s laws of motion that, after

1960, were proven to be incorrect” (McDaniel, 2005). This has led to the rise of a more complex mindset that can account for the probabilistic behavior of complex systems.

The probabilistic mindset

As Ilya Prigogine has written, “problems which have no solution on the deterministic level may have one on the probabilistic level” (Prigogine, 2000). The probabilistic mindset captures the features of complex adaptive systems, which can include chaos, uncertainty, surprise, emergence, positive and negative feedback systems, and non-linear change. The focus in this mindset is not on identifying causal mechanisms but on understanding the systemic conditions that would make a favorable outcome more likely. Ramalingam and Jones (2008) at the Overseas Development Institute have explored the implications of this mindset for development and humanitarian efforts.

In practice, this mindset can be seen in new efforts to address health, education, and other conditions that promote social and economic development over the long term, as well as in the increased collaboration across a growing number of agencies, donors, NGOs, and militaries. The mismatch between these efforts and the deterministic mindset that predominates in impact assessment may account for much of the debate around “aid effectiveness.” In fact, several principles of the Paris Declaration, such as “alignment,” “harmonization,” and “managing for results,” may implicitly attempt to address the community’s misgivings about making large investments in strategies for which causal mechanisms have not been shown.

At the same time, some efforts have been made to develop an impact assessment at the probabilistic level. The United Nations Development Programme’s Human Development Index (HDI), which indexes countries based on life expectancy at birth, a combination of the adult literacy rate and school enrollment ratios, and per capita GDP, represents a move in this direction. A further step is the Progress out of Poverty Index (PPI), which uses household survey data across several dimensions to assess the poverty levels of groups and individuals within and across countries (Counts, 2008). These holistic measures capture the multiple conditions that constitute poverty without an inordinate focus on finding causal links among them.

Interestingly, the pharmaceutical industry, which is the source of the RCTs that have recently been applied in development, is now moving *beyond* RCTs toward more probabilistic models of safety and efficacy research. Examples include the FDA’s Sentinel Initiative, which links a variety of health databases to provide safety assessments in the real world beyond the controlled world of RCTs. This shift is in part due to a recognition that RCTs measuring the *average* effect across the entire population may not capture all relevant effects. This can be seen in the fact that for every dollar spent on drugs in U.S. nursing facilities, the U.S. spends an additional \$1.33 to treat drug-related problems (Bootman, Harrison, & Cox, 1997).

Probabilistic approaches are appropriate for testing the longer-term social and economic development that occurs in communities where microfinance is made available. These might

include greater economic security, improved health status, women's empowerment, and increased school attendance. While deterministic assessments conducted over much longer periods of time may capture some of these effects, more significant at the probabilistic level is to understand the complex interconnections within the system. In this way, the assessment can provide insights not just on *whether* the program has an impact but *why* (Deaton, 2009).

However, even the probabilistic perspective has limitations, which have been highlighted by Indian economist Ratan Lal Basu. Basu has been highly critical of the HDI discussed above. Basu has compared the thinking behind the HDI to "dairy farm economics," noting that "in dairy farms, better fodder, shelter and veterinary checks for milk herds, as well as some education for other farm animals (e.g. the training of dogs and horses) is sufficient for animal development." Basu argues that to define and measure "human development" in these same terms is "a blasphemy for the entire human race" in that it ignores the moral and spiritual dimensions that distinguish humans from animals. Basu asserts that development work should include the "intentions" as well as the "capabilities" of human beings in order "to assist the biped to become truly human" (Basu, 2005). Doing so requires a shift to a more complex mindset.

The integral mindset

The integral mindset explicitly integrates subjective factors into the objective system described at the probabilistic level. In development, "weak signals" of this emerging mindset can be found in Basu's critique of the HDI, Sam Daley-Harris' focus on the "transformational dimension" of microfinance (Daley-Harris, 2010), and in Muhammad Yunus' explanation of "social business" as a way to "change mindsets" (Yunus, 2010, p. 16). The insight at the integral level is that our efforts to improve the systems in which people live can *also* change their subjective experience of reality. Taking the role of futurists, let us apply our intuition to these "weak signals" to imagine how this mindset may manifest itself in the years to come.

Economics has been successful largely by objectifying human behavior within economic systems. Thus, to capture subjective dimensions, economists will need to draw upon other fields, like psychology, that have studied these dimensions in the past. One framework which could prove useful in this regard is Jane Loevinger's model of ego development. This model describes eight distinct stages of ego development that occur in a fixed sequence, although the highest stage reached by different people will vary. The three lowest stages of the model are summarized below:

- At the Impulsive stage (E2)¹, the individual "is a creature of physical needs and impulses, dependent on others for control...There is little sense of causation" and "rules are poorly understood" (Hy & Loevinger, 1996, pp. 4-5).

¹ The first stage explicitly described by Loevinger's model is numbered E2 in order to acknowledge the existence of an earlier stage, found among infants, where the individual must "construct for him or herself a stable world of objects" (Hy & Loevinger, 1996, p. 4). This stage is included in the numbering system for theoretical completeness, but is beyond the scope of Loevinger's work.

- At the Self-Protective stage (E3), individuals “appreciate rules and know it is to their advantage to play by them. They are creatures of more or less opportunistic hedonism; they lack long-term goals and ideals. They want immediate gratification and, if they can, will exploit others for their ends” (Hy & Loevinger, 1996, p. 5).
- At the Conformist stage (E4), the individual “identifies self with the group or its authority – be it parents, teachers, or peers. Rules are accepted just because they are the rules...What is conventional and socially approved is right” (Hy & Loevinger, 1996, p. 5).

Former president of Peru Alejandro Toledo has described how poverty forces children to be “prematurely adult” (Daley-Harris, 2009, p. 4). While the deterministic and probabilistic mindsets see this premature adulthood primarily in objective terms – e.g., child marriage, limited access to education, the need to take up difficult jobs – the integral mindset seeks to understand the developmental effect of a truncated childhood on the individual. In this context, it should come as no surprise that studies of ego development have consistently found the lower stages of ego development to be correlated with low income or socioeconomic status (Loevinger, 1998).

Integral development policy sees opportunities to improve the systems in which people live while also promoting developmental processes within the individual. This may already be occurring in the Grameen model of microfinance, where the “Sixteen Decisions” and the fact that some members of a group do not receive their loans until other members begin to repay theirs may promote a shift from the Self-protective stage (E3), where the borrower’s interest is focused on the loan itself, to the Conformist stage (E4), where the borrower is able to internalize rules and consider alternative courses of action based on the likely future consequences. This is significant to the alleviation of poverty, since many psychologists view the Conformist stage (E4) as the basic requirement for functioning successfully in a modern society.

An integral mindset would seek to replicate these features across development efforts in all sectors. For example, in giving aid to promote agricultural development, a donor might distribute the aid in small amounts through groups of farmers who meet regularly and are accountable to one another for specific actions within their control. This approach may prove especially useful in countries such as Haiti, Uganda, and Yemen, where very young age structures would suggest a high proportion of the population at the Impulsive (E2) and Self-protective (E3) stages even under the normative conditions that exist in advanced economies (Meade, 2010, forthcoming).

Impact assessment at the integral level would need to capture the subjective frame of reference of the people affected by the development program. Since *objective* tests explicitly remove this frame of reference from the analysis, this would require a *projective* test where the subject “projects” her frame of reference for evaluation by the tester. One example of such a test is the Washington University Sentence Completion Test (SCT), which consists of 36 sentence roots, which the subject can complete however she wants. A scorer then compares these answers to a list of sample responses that would indicate each stage of Loevinger’s model (Loevinger,

1998). Integrating this type of instrument alongside objective measures would ensure that subjective as well as objective impacts are captured and understood. This would thus represent a higher evolution of impact assessment.

Conclusion

This paper has outlined three distinct mindsets, each of which transcends and includes the one that came before it. To some degree, each mindset is manifested in development policy and impact assessment, and each mindset has its uses in assessing the impact of microfinance. However, the tension between these mindsets has generated much confusion in this area. For example, David Roodman of the Center for Global Development has written, “Seeing women crowd into a branch of the Lead Foundation in Cairo to get new loans forced me to confront this paradox: thanks to work on the computer back in the hotel room, I was concluding that there was little solid evidence that microcredit helps on average – yet who was I to tell these women what to do with their lives?” (Roodman, 2010).

This “paradox” results from a mismatch between the program and the methods used to assess its impact. An impact assessment must be at least as complex as the impact it seeks to measure. When it is not, we should be wary of attempts to drive policy based on the results. Furthermore, it is incumbent upon those who have seen first-hand the more complex impacts of microfinance to accelerate the evolution of impact assessment to higher levels of complexity.

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