

## Microfinance Malaise: How Behavioral Economics Informs an Understanding of U.S. Microlending

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### Abstract

The U.S. microfinance market developed exponentially during the 1990s and the early part of the new century with the numbers of providers and borrowers increasing and the amount of capital expanding even more rapidly. By 2002, the supply of capital was outpacing the uptake of loans such that there was a surplus of loan pool capital despite the ever present claims of insufficient funding for small businesses. Prior research (Glackin, 2003) indicated that the full range of costs of borrowing is seriously underestimated and shortfalls in demand are heavily influenced by costs. This paper revisits the earlier research through the perspective of behavioral economics to create a more complete understanding of the market malaise and means to address it through program and policy options. Behavioral phenomena constitute what the prior research identified as significant issues in the delivery and uptake of loans.

*Keywords:* microfinance, microenterprise, microloans, behavioral economics

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### Microfinance Malaise: How Behavioral Economics Informs an Understanding of U.S. Microlending

Economists and other social scientists have invested considerable resources to study, assess, and evaluate microfinance in the United States, initially focusing on microcredit and the potential to accomplish a wide variety of social goals including poverty alleviation, the empowerment of women, and community economic development. In the approximately 30 years since the U.S. microcredit movement first emerged, it has evolved into the microfinance movement and undergone considerable change. Yet, U.S. microfinance has reached neither the significant scale nor financial sustainability anticipated by its supporters. Recent work in the field acknowledges that, “Achieving greater scale has been one of the primary challenges facing the microenterprise industry for more than a decade. (Edgcomb, 2010)”

Behavioral economics, while arguably a part of economic theory since the days of Adam Smith, has also grown and evolved considerably since the introduction of prospect theory

(Kahneman and Tversky 1979). Behavioral economics has focused on taking a fresh look at long standing theories and axioms and comparing research findings to projected results. Where theory and practice diverge, behavioral economists have identified heuristics, biases and other descriptors to create a more robust understanding. The experimentation and learning can be applied to U.S. microfinance to inform our understanding of its failure to reach scale and sustainability.

By addressing many of the key aspects of behavioral economics and the field of behavioral decision research in terms of potential applicability to U.S. microfinance, opportunities to explain prior market underperformance and to improve conditions are revealed. The demand-side analysis and taxonomy presented here provides a launching point for analysis. The various aspects of the taxonomy are revisited and new implications identified.

## **I. Microenterprise Development and Microlending**

Microlending has been adopted as an approach to poverty alleviation and community development in the United States over the past 30 years. Initially, practitioners and policy makers presumed that the lack of access to capital was the primary impediment to the capacity for the self-employed reaching self-sufficiency. Most previous research concentrated on the delivery system -- program design, program costs, outputs, and impact. By the advent of the 21<sup>st</sup> century there was a supply of capital chasing low-income entrepreneurs in many areas of the country.

The field of microfinance<sup>i</sup> has been active in the international context, particularly in Asia, Africa and Latin America, since the mid-1970s when Muhammad Yunus founded the Grameen Bank in Bangladesh. Roots of sustainable microfinance in the formal sector began in Indonesia with Bank Dagang Bali and subsequently Bank Rakjat Indonesia (BRI) as early as 1970 (Robinson 2001). Through 1,395 international microfinance institutions (MFIs), 86.2 million borrowers have taken up microloans (Gonzalez 2009). These programs have made financial services much more widely accessible to those at the bottom of the pyramid (BOP). The “microfinance revolution” was led by donor-funded nongovernmental organizations (NGOs) that were often unregulated and limited in capital resources so that they could only reach a very small portion of microcredit demand (Robinson 2001). This outreach often was to poor, rural women who had little or no access to other sources of capital. Models often consisted of solidarity or peer groups that made loan decisions and monitored members. The model which emerged over time is one in which profitable financial institutions finance the economically active poor (Robinson 2001; Armendariz de Aghion and Morduch 2010).

With shifting emphasis in microfinance to increasing scale and sustainability has come the addition of services to meet the needs of targeted populations. In the 1980s and 1990s the emphasis was on credit, groups, women, microbusinesses, and graduation while today a flexible range of services, convenience, continuity, and reliability rose to the forefront (Morduch and Rutherford 2003). There are common elements among programs, yet client may be understood differently than in the past. Morduch and Rutherford (2003, p. 3) note, “Now, typical microfinance clients might be better understood as men and women from poor households seeking a wide range of savings and loan services to support a diverse set of consumption needs and investment opportunities.”

The microenterprise development (MED)<sup>ii</sup> field in the United States emerged approximately a decade after it did so internationally. The growth and breadth and depth of international microcredit programs and interest in women’s empowerment were two driving

forces. The concept of microenterprise development has bipartisan appeal in the United States: “The ideology of the microfinance movement fits particularly well with American belief systems in self-reliance, independence, and individual achievement...The notion that people in the United States could learn from the developing world has added to the appeal of microfinance programs. (Taub 2002)”

Some original U.S. microloan<sup>iii</sup> programs, such as ACCION USA, FINCA and Working Capital were based upon peer group<sup>iv</sup> microcredit models in Asia and Latin America. While early international programs such as Grameen Bank and ACCION International had emphasized providing credit to rural microentrepreneurs with a focus on poverty alleviation and had begun to evolve into sustainable commercial financial institutions, U.S. programs in the 1980s were an assortment of goals, providers and target markets.

The U.S. microenterprise development field has been characterized by diversity and relatively small scale since its inception. MED is viewed variously as a strategy to assist in asset accumulation, poverty alleviation, community and economic development, empowerment of disadvantaged populations, and to improve access to credit. MED programs operate at the intersection of social welfare and economic development (Servon 1999). The target populations include low-income populations, women, minorities, welfare recipients, refugees, residents of targeted geographic areas, specific ethnicities, and those lacking access to credit. Programs providing MED services include local governments, community action agencies, women’s economic development organizations, traditional business and economic development organizations, refugee services, community colleges, and stand-alone microenterprise development agencies (Else 2001). The most recent comprehensive roster, the *2002 Directory of U.S. Microenterprise Programs*, identifies 650 U.S. MED programs with 554 practitioner programs that served a cumulative total of 541,000 clients through FY 2000 (Walker and Blair 2002). The 198 microlenders identified have cumulatively issued over \$210 million in over 37,000 loans. During FY2000, lenders served a total of 9,800 borrowers with an average of 50 loans per agency.

In the United States, the field evolved differently from its evolution internationally in terms of scale and sustainability. Early shortages of loan pool capital had been generally eliminated with deployment at 57 percent in FY2000 (Walker and Blair 2002). However, recent reductions in loan pool capital by investors, reduced earnings from program investments and other economic factors have led to a reduction in supply. Some of the most innovative programs are operating at higher levels of deployment (Edgcomb, Klein, and Gomez 2010). The FIELD program of the Aspen Institute in cooperation with the Association for Enterprise Opportunity has established the Scale Academy which is focused on the issue.

## **II. Prior Research on Market Failure in U.S. Microlending**

Earlier research by Caroline Glackin (Glackin 2002, 2003) examined the factors contributing to a market failure in U.S. microfinance. This paper builds upon that research to add value from behavioral economics. The research, as will be describe herein, identified the substantial gap between microloan capital availability and loan disbursements and provided explanatory insights into the sources of this gap. The high level of idle capital among U.S. microenterprise programs (43% in 2002, Walker & Blair, 2002) can be attributed to a number of possible causes. Idle capital can be due to factors on the supply side or the demand side. One supply factor posited (Glackin 2002, 2003) was the rapid increase of funding availability

outpacing the capacity of programs to add microloan customers. Many programs began to receive large capital infusions in the late 1990s through the U.S. Small Business Administration's (SBA) Microloan Program and the Community Development Financial Institutions (CDFI) Fund's Core Program. However, there has been ample opportunity for the market to absorb this supply since then. Another possible supply side explanation is incomplete or insufficient information flows to target populations, so that they are not aware of the funding and do not recognize it as an option.

Demand-side factors include lack of demand for capital and lack of viable microloan customers. While there may be a perception that microloans are the only financing option for microloan customers, there are alternatives such as friends and family, credit cards, home equity loans, loan sharks, and title lenders. Another factor that may apply is that microentrepreneurs do not approach microlenders due to an expectation of being declined, as has been found with minority small business owners (Bates 1995; Blanchflower, Levine, and Zimmerman 1998; Cavalluzzo, Cavalluzzo, and Wolken 1999). Bhatt (1997) asserts that the operational policies of some microenterprise programs may have driven potential customers to seek other sources of financing, perhaps increasing economic inequities rather than reducing them. In one study, over half of the borrowers from a large microloan program used microloans to consolidate other debt, indicating that they already had access to capital (Himes and Servon 1998). In addition, another study reports that the bulk of the demand for microloans is probably met via credit cards (Bates and Servon 1996). Schreiner summarizes the situation; "Although credit-card debt is high priced, it has low transaction costs and very low total costs. Likewise, loans from the so-called fringe banks – pawn shops, check cashing outlets, and rent-to-own stores – have high prices but low total costs...competition has pushed other financial intermediaries closer to the poor" (Schreiner 2001).

Among all of the possible causes for lack of loan capital uptake, the prior study by this author explored the cost of consumption of microloans in the United States, the barriers to access and the constraints on microentrepreneurs. While these factors underlie the concerns of information flows, demand, and qualifications, they go well beyond these simplistic explanations and uncover a complex and diverse set of issues that can and do have a profound effect on the ability of microloan programs to serve the poor. These factors were identified and measured to an extent not previously accomplished.

In the United States context, scant attention has been paid to this question. As the field has matured, interest in outcomes has become prevalent. More thorough analysis of program costs has emerged, replacing early unsophisticated cost estimates. When microloan programs were striving to obtain sufficient loan capital, they did not expect to have substantial idle loan pool capital. The FIELD program (Edgcomb and Klein 2005) estimated that there were approximately two million entrepreneurs, later increasing the number to 10 million (Edgcomb and Klein 2009), who could not access services they might need. As microenterprise programs worked to reach scale and sustainability, they also raised increasing amounts of loan pool capital. Concern with the taking up of the excess capital only began to arise in recent years. As Taub (2002, p. xi) states, "Unfortunately, the hype surrounding these efforts has often outrun their performance," noting that low volumes and high default rates are problematic in the United States.

The consumption costs<sup>v</sup> of services for social welfare are at the core of the analysis. Microloan customers in the United States are individual consumers of microfinance products. While microloans are not public goods and are generally not offered by government entities, they

act like government provided goods and services in many ways and carry their characteristics. Microloans can support social welfare objectives. Microloans are available to the “disadvantaged” entrepreneurs who are either on the margins or disconnected from the mainstream. They are available through third sector and public sector organizations, albeit often with private sector support. They are priced at an interest rate well below “cost” and are offered for unbankable customers. The consumption costs of such goods are not particularly well understood, but are typically regressive, with the highest costs associated with the smallest loans, and include participation costs (Warren and Weschler 1986). Services may not be consumable as available or may be too costly, thereby pricing people out of consumption of products and services designed for them. These costs include such factors as time, effort, money, and psychological and physical burdens. In essence, goods may be effectively rationed via these consumption costs.

The above applies directly to microlenders and entrepreneurs. They have a choice, although constrained, as to whether they elect to have a microloan. The assumption for this discussion is that the supply of microloan capital is adequate to meet the consumers’ needs. Quite simply, the microentrepreneur has a decision to make regarding whether the loan is “worth it” and to pursue a microloan.

The determination of the worth of a microloan includes not only the assessment of the interest costs, but also the effort, suitability, and other opportunity costs. While the totality of understanding the decision process is complex, theories of consumption reduce it to a decision based upon either maximizing or satisficing utility. Because entrepreneurship can easily be understood as the customer’s best available option (Servon 1999), this study assumes satisficing behavior. Therefore, the microloan customer is expected to borrow at the level that satisfies their needs to the best of their ability. The operational assumption for the earlier research is that the expected utility of the microloan equals or exceeds its cost.

The totality of costs of a microloan is not entirely transparent or completely opaque at the inception of the borrowing process. In the case of a microloan, the interest rate is typically clearly revealed as well as any up front training fees. Other up front financial costs and opportunity costs are frequently hidden, whether intentionally by program design or program staff or because they vary so substantially from customer to customer. In any case, the prospective microloan borrower makes the initial decision to pursue borrowing with partial information rather than full information. This leads to an “under pricing” of the loan, making it more desirable. However, during the process, potential borrowers may renege and withdraw from the process as the additional costs are revealed. For those who borrow and then encounter unanticipated costs, the value of the loan, perhaps in terms of profits or other values, is reduced so that the loan does not have the full anticipated value.

Although this paper is not a complete cost-benefit study, it can be observed that when microentrepreneurs borrow from microlenders they are receiving a “bundled good” much as homeowners buy not only a home (shelter) but the features, benefits and amenities associated with that home. In the case of a microloan, the bundle may consist of the products or services acquired with the proceeds, the value of training and technical assistance, pride of ownership, the power of self-determination, and anticipated earnings and wealth creation. Hedonic price indices model this “bundle” of value and permit the estimation of values of bundles for other consumers (Malpezzi, Ozanne, and Thibodeau 1980; Deaton 1992). The challenge inherent in using hedonic price indices with microloans is that, unlike a house, there is not a clear and specific

selling price, but there are explicit and implicit costs. This warrants further investigation, although it is beyond the scope of this work.

Economists have debated the existence, nature and importance of liquidity constraints for entrepreneurs (Evans and Jovanovic 1989; Holtz-Eakin, Joulfaian, and Rosen 1994; Cressy 2000; Xu 1998). Liquidity constraints matter because they serve as barriers between potential customers and the loan capital that they need. While liquidity constraints are the basis of the microenterprise field, the potential impact on microentrepreneurs has not been fully explored.

The prior research includes the development of an analytical framework for the consumption costs and factors for U.S. microloan customers and the development of a taxonomy. Through the use of in-depth case studies of two U.S. microloan programs, the analytical framework is tested and a more complete understanding of costs, barriers and constraints emerges. Finally, a model for estimating costs for U.S. microloan customers is developed and program and policy implications are identified.

First the research identifies primary drivers of microenterprise borrowing. Next, there is a preliminary estimate of an individual's financial and transaction costs<sup>vi</sup> of borrowing under alternative financial assumptions using data on training, technical assistance and loans from diverse U.S. microloan programs. From the aggregate information, several techniques are used to obtain estimates of borrower costs. These include: a review of the pertinent literature on costs and microenterprise, an identification of costs, the calculation of the specific costs associated with programs analyzed by the Aspen Institute in the Self-Employment Learning Project and included in the *1999 Directory of U. S. Microenterprise Programs* (Langer, Orwick, and Kays 1999); and an estimation of total costs.

Without incorporating the full range of consumption costs as well as the required skills, sophistication, and knowledge, the customer costs of borrowing are seriously underestimated. Assuming that prospective borrowers at least require that the costs of borrowing or the perceived value or "worth" of the loan equals or exceeds the benefits of borrowing, rational microentrepreneurs may determine that taking a microloan is not worthwhile when they are effectively priced out of the market.

The earlier case study research consists of six parts to estimate microloan customer costs, barriers and constraints. Managers and customers of two U.S. microloan programs complete a written questionnaire. Then, the research also includes information session observation, interviews with staff and key informants, and customer and leaver interviews. A document review completes the research. Both quantitative and qualitative methods are used. A mixture of content analysis and statistical analysis is applied to the data.

According to the 2002 *Directory of U.S. Microenterprise Programs* (Walker and Blair 2002), there were 198 agencies that reported microlending activity. For this research, the researcher selected a two microlenders to operationalize the applied research question. The choice of two case studies for this exploratory analysis is based upon a desire to complete in-depth analysis of multiple aspects of the research question. Certainly, the study of two programs is not sufficient to support broad generalizations and additional research could include a range of U.S. microloan programs. However, for this initial analysis to identify the barriers, costs and constraints, a study of two programs with differences along key variables is appropriate. Table I profiles the programs. Both had been in existence for over 10 years and have not only historical performance, but also good individual and program data.

< Table I here >

One program included in the study is an urban program (Program A), based in a large northeastern city, which emphasizes individual loans. Program A began lending in 1992 as a peer group lender and had made 516 loans through the end of 2001 totaling \$1.3 million. As of March 2002, Program A had 76 active microloan clients (excluding those who were significantly delinquent). It is part of one of the oldest and largest microloan programs in the United States. Loans range from \$1,500 to \$25,000. The program does not generally provide start-up financing and offers stepped loans. It is credit-driven rather than training-led and is part of a network of microlenders.

The other program included in the study is a rural program (Program B), covering 11 counties in the Midwest with an over 20,000 square mile coverage area that has a total population of approximately 310,000 and emphasizes training and consulting. Program B began lending in 1990 and had made 253 loans through the end of 2001 totaling over \$2.8 million. As of July 2002, Program B had 41 active microloan clients. Loans range from \$500 to \$100,000 with \$35,000 used as the limit for microloans. The region has traditionally depended upon natural resources and tourism. The program often provides start-up financing and has a standardized business plan curriculum that it uses and licenses. It is a training-led lender rather than a credit-led one.

Neither of these programs is considered to be typical of microlending programs across the United States in scale, amount of training and technical assistance offered/required, or underwriting. They are, however, two of the most respected and studied programs in the United States. The management of Program A has placed considerable emphasis on streamlining the microlending process to reduce the costs of program operations. Program A can be viewed as a “critical case” for analysis, in that the program has utilized both peer and individual loans, has survived a critical juncture when portfolio performance was abysmal, and has made numerous programmatic changes to support financial viability. The barriers, costs and constraints facing Program A’s customers should be among the lowest in the United States. The management of Program B has placed considerable emphasis on developing the appropriate training and technical assistance for microentrepreneurs in this rural area and on making access to services a priority. Program B can be viewed as a “critical case” for analysis of rural, training led microlenders.

In the cases studied through multiple methods, it is apparent that much more than out-of-pocket costs matter to microentrepreneurs. Other factors are more important to customers, leavers, and key informants. Such factors may include: psychosocial factors; discrimination; regulatory and legal; economic factors; lack of information; trust; social capital; religious practices, and language and culture. There are costs and experiences that are common across programs and individuals, while others are unique to single microentrepreneurs. The common factors tend to be program-driven. However, within any program, individual experiences depend upon the microentrepreneur’s individual life circumstances, as well as interactions with individual program staff. In other words, program policies, rules, standards and services can be largely controlled by the field staff in terms of their effects upon customer costs.

The results of the study suggest that (a) at least some microentrepreneurs perceive the benefits of taking a microloan as greater than the costs, and (b) some microentrepreneurs find that doing so is worthwhile more than others. Throughout the process, prospective borrowers must complete small and large tasks to the satisfaction of program staff and other decision-

makers. These “hoops and hurdles” create a filtering process that may price certain prospective borrowers out of the market. The decision with respect to “is it worth it?” is unique to each microentrepreneur. Microentrepreneur self-confidence and staff responsiveness are critical components of retention and completion. The taxonomy summarizing factors applicable to U.S. microloan customers in the sample programs is in Table II.

< Table II here >

Customer and staff ratings of the importance of various factors to customers are not aligned with one another. Table III includes the rankings by party. Customer ratings include the top factors as: capital availability, lack of cash flow, lack of equity, poor credit history, and no collateral. Staff ratings are: poor credit history, capital availability, time for training, lack of cash flow, and lack of equity. Interestingly, staff rates time constraints for training and technical assistance and the lack of experience and business training among the top 10 factors and customers do not include them, opting to emphasize financial factors, lending limits and discomfort with banks. Further, those potential customers that did not borrow cited program requirements and customer service as the most common reasons for not borrowing, and both factors are controlled by programs. Pricing and personal/family issues are also prevalent. Fully 80 percent of those leavers interviewed did not borrow elsewhere although only 51.7 percent had not started a business. A substantial number of microentrepreneurs started their businesses without the debt capital they thought necessary.

< Table III here >

The earlier research included a simple analysis of the costs of borrowing for customers in each of the programs based upon self-reported and program data. With values assigned for borrower time and the added financial costs, an average loan of \$8,911 from Program A cost approximately \$3,624 (40.7%) and an average loan of \$14,007 from Program B cost approximately \$9,746 (69.6%). The training and registration, technical assistance, application, and interest costs for Program A were \$1,311 (14.7%) and for Program B were \$4,367 (44.8%). The study did not ask borrowers which of the costs were transparent or which they had calculated, so that it is not know what costs were apparent and meaningful to them.

### **III. How Behavioral Finance and Economics Enhance Understanding**

Even as microcredit has evolved into microfinance, the field continues to strive for improvements in efficiency and increases in demand. The previously described research explored the demand side of the microfinance market equity by examining the barriers, boosters, costs, and constraints facing microenterpreneurs in accessing microloans. The results identified a method from program to estimate explicit and implicit borrower costs, adapt requirement and other programmatic aspects to improve accessibility without impairing credit quality. However, this earlier work can be informed by the work in behavioral economics and opportunities for increasing scale and sustainability are enhance by this perspective. Applied research informed by behavioral economics and finance may prove invaluable to the microfinance field.

Testing behavioral aspects such as mental accounting, loss aversion, hyperbolic discounting, availability heuristics, and framing could yield substantial understanding of how

prospective borrowers decide whether to apply for microloans and to accept or decline the financing that is offered by microfinance institutions. Improved understanding, if adapted into product design, service delivery and marketing could generate an exponential increase in demand. One area that appears to have abundant opportunities for U.S. microfinance is libertarian paternalism (Thaler and Sunstein 2003). By designing in choice that are “best” for borrowers as default selections where choice points arise, more borrowers might secure loans that are well-suited to them.

The previously developed taxonomy can be recast in light of behavioral finance and economics with categories of cash and non-cash costs, regulatory/policy barriers, and behavioral aspects of decisions and viewed as sunk costs, lump sum costs, and intertemporal costs. This recast typology of microloan borrower costs might better be described as shown in Table IV. Beginning with prospect theory (Kahneman and Tversky 1979), behavioral economics has addressed gaps between neo-classical economic theory and observed behavior. It focuses on market failures and offers up explanations for what amount to patterns of anomalies. Building upon the concept of bounded rationality (Simon 1957), behavioral economics recognizes the use of heuristics rather than strictly relying upon optimization because the complexity of choices and the inability of individuals to accurately assess expected utility, and identifies patterns in the anomalies. As shown in the revised taxonomy, a number of aspects of behavioral economics appear to fit the prior research findings (Glackin 2002, 2003) with respect to the demand side factors of the U.S. microfinance movement. We will address each in turn.

< Table IV here >

The key points of prospect theory, which created a reference dependent model of consumer choice, may well fit prospective microloan customers as they decide whether or not to take up a microloan. Assuming that the individual’s reference level is his or her status quo, monetary consequences of acquiring current debt in the form of a microloan, often partially repaid prior to experiencing risky future benefits, may lead to both positive and negative returns having diminishing returns characteristics. If in fact losses are weighted more heavily than gains and the probability of loss is greater than that of a gain; loss-aversion may lead to lower demand. It is unclear whether decision makers will be risk averse, although they may well be. One could argue that by virtue of being entrepreneurs they are risk seeking. Research on how decision makers view the final results of their choices would be valuable to programs.

Loss aversion, as commonly demonstrated through endowment effects experiments appears to be a factor for at least some U.S. microloan customers. Economists’ research on loss aversion (Kahneman, Knetsch, and Thaler 1991; Tversky and Kahneman 1991; Bernartzi and Thaler 1995; Thaler et al. 1997; Genesove and Mayer 2001) has empirically demonstrated that buyers routinely value a commodity less than do sellers. One way to apply this is to consider that lenders value their funds more highly than do borrowers. They may misunderstand the full cost of loans, thereby literally assigning a different value and not perceiving the gap. Or, the lenders may view the value of their loans as the anticipated percentage gains in sales or profits for borrowers with allowing for the prospect of losses. Another case of endowment effects may arise in the U.S. context when borrowers must pledge collateral they value at a higher level than the lender values it. In addition, any loss of assets for the poor is more substantial and meaningful than a loss of equal monetary value to a more affluent individual (\$10,000 is a greater portion of wealth to someone with a net worth of \$12,000 than of \$100,000.).

Mental accounting (Arkes and Blumer 1985; Gaerling, Karlsson, and Selart 1999; Heath 1995; Heath and Soll 1996; Prelec and Loewenstein 1998; Ranyard et al. 2006; Thaler 1999) is likely a factor in the microloan process as well. In fact, interviews reflected the inclusion of sunk costs in borrower assessment of value even though sunk costs are already paid and should not influence rational behavior. Honoring this sunk cost occurs when these nonrefundable expenses are treated as being equal to current investments (Hastie and Dawes 2001). As prospective borrowers move through the lending process, it seems likely that they hold perceptions about the outcomes they expect and that they compare actual performance to those perceptions. It is reasonable to expect that microloan consumers sort sources and uses of funds into mental accounts. Finally, borrowers may practice “choice bracketing” by the ways they view their accounts (Read, Loewenstein, and Kalyanaraman 1999). More research is needed to determine the prevalence of using mental accounting among microloan customers.

As alluded to earlier, borrowers may experience time discounting. It is not clear how they perceive the value of their microloans – immediate as a lump sum, as gains distributed over time, or as a lump sum gain in the future – or how they value it as an intertemporal transaction. Work of behavioral economists (Frederick, Loewenstein, and O'Donoghue 2002; Loewenstein and O'Donoghue 2002; Loewenstein, Read, and Baumeister 2003; Diamond and Vartianinen 2007; Mullainathan 2007) would suggest that a consistent discount rate does not apply across the decision horizon. Microloan customers may value their choices differently across time, perhaps in a manner consistent with hyperbolic discounting theory, such that they are impatient in the short-run and patient in the long-run. Mullainathan (2007) suggests that with time inconsistency, “The relationship between the profitability and social efficiency of microcredit potentially is weak. The question is the extent to which the loans exaggerate short-run impatience and to which they solve long-run liquidity constraints.” Understanding how borrowers (and prospective borrowers) value their choices over time could assist in developing products and services that are better suited to the targeted individuals and result in greater scale and sustainability.

The importance of trust in financial relationship for the poor and for microloan customers has been widely reported. Some researchers (Rhyne 2009; Carr and Schutz 2001) suggest that lower-income families choose not to use mainstream financial services partially because they distrust the service providers. Where microloans are granted through a peer lending model with joint liability, trust of other group members is essential (Smets and Baehre 2004) and strategies to reduce the importance of trustworthiness or to increase knowledge of other members becomes critical (Guinnane 2001). Of particular interest is the suggestion that, “Group liability is often more a threat than a reality, but it can be a very powerful threat. (Harper 2007)” Borrowers and those who chose to exit from programs without borrowing express distrust of MFI program staff as concerns as well as belief in the trustworthiness of staff as motivating factors (Glackin 2003). Other research (Hall 2008) demonstrates evidence that low-income individuals place a greater significance on trust in their financial choices than those who are wealthier. If trust involves the features of vulnerability and uncertainty (Heimer 2001), then it is particularly utilitarian to understand it with respect to microfinance clients, who are among the most vulnerable populations. The literature on trust is extensive and may be particularly relevant to the discussion of the failure of the U.S. microfinance market.

Representativeness as described by behavioral economics may also be a factor for microloan borrowers. To the extent that they establish probabilities of outcomes based upon how well the example represents the class (Camerer and Loewenstein 2003), they may misjudge

probabilities based upon their knowledge of a class of information. In the case of microentrepreneurs, the classes could include lenders, lawyers and the like.

Because the process of securing a microloan in the United States is multi-step and extends over a multi-day to several month period, shortened by certain online products, borrower typically experience sequential decision making. Sequential decision making occurs when decisions or outcomes are interrelated because they depend upon each other (Gaerling, Karlsson, and Selart 1999). The order of decisions and/or outcomes may matter to microloan customers.

The data in the prior primary research demonstrate that emotional upheaval and a range of emotions are involved in the microlending process in the United States. While traditional economics might rely upon decisions being made based upon the probability and desirability of the consequences of the choices, expected emotions (to occur when the outcomes occur) and immediate emotions at the time of choice, may explain a significant number of decisions (Rick and Loewenstein 2008). Rick and Loewenstein suggest that, "And much of the thrust of behavioral economics has involved, or at least could be construed as involving an enhanced understanding of emotions." The role of emotions in microfinance decision-making could be evaluated to better understand it and to improve the experience.

This brief review of the behavioral economics literature with respect to prior research results in the area of U.S. microfinance has shown that there are numerous points of intersection where behavioral economics may inform an understanding of market failure. Further research is needed to determine the applicability and full implications.

#### **IV. Implications**

The implications of this research range from programmatic opportunities to policy options to revisiting target markets and customers. If microenterprise development is to fulfill its mission as part of the U.S. poverty alleviation tool kit, microloans must be truly accessible to those who can and will best use them. It is insufficient to "build it and they will come" in the field of microenterprise. Microfinance programs should reach their target customers and serve them efficiently and effectively without pricing borrowers out of the market due to high costs and barriers yielding insufficient worth. The value of the microloan to the customer is determined not only through its price and terms, but also by the interests, preferences, constraints, and opportunities for customers. In order to take up microloans, microentrepreneurs must be able to identify funding resources, believe that they can access the resources, and perceive the value of them. Behavioral economics and finance can inform the process of evaluating approaches to better serve the target populations by understanding their decision making.

The research suggests that there is a range of potential programmatic approaches to reduce barriers, costs and constraints for U.S. microfinance customers and to strengthen the positive factors. The microlending process can be streamlined without significantly reducing loan quality through such options as: elimination of duplication, minimizing time spent and maximizing the value of that time, and requiring applicants to provide only information that is used by the programs to analyze risk. Financial costs can be reduced through careful attention to minimizing such costs as: training and technical assistance, transportation, child care, documents and copying, interest, service charges and fees, bank fees, and compliance. Program partners can improve communications and collaboration. Expectations can be made explicit for all parties; so that costs are transparent and anticipated outcomes are clear.

New methods to increase applicant creditworthiness can be implemented. One of the most promising new models in the United States is a “proven” business model both in the United States and throughout the world. It is a “savings led – credit model” that is being implemented. Key to many of most highly regarded development finance programs in the world and vital to addressing the issues of equity and collateral in the United States, is the role of savings in microenterprise development. Individual Development Accounts (IDAs) are a policy solution that may open many doors for microentrepreneurs and microloan programs. IDAs can be treated as credit enhancements for microloan applicants (Glackin and Mahoney 2002; Ssewamala and Sherraden 2004). In addition, programs may investigate the financial needs of target markets and identify other unmet or unsatisfied needs. Internationally, microfinance institutions have tested a number of different approaches to this concern including adding educational and health services to their mix, but have discontinued the majority of the non-financial services when others have taken them up and eliminated the need for microfinance institutions to bridge the gap (Morduch and Rutherford 2003).

Programs can take proactive measures to mitigate the negative effects of certain factors affecting microloan customers and build a positive environment for microlending. Programs can be designed and implemented to have positive contributions to success factors. They also can partner with other organizations to provide support. For example, the emotional factors can be constructively directed via clarifying expectations regarding personal data and minimizing intrusive data requests, and by consciously creating a welcoming, caring environment, and building trust. Programs can work deliberately to avoid discrimination. In addition, with respect to regulatory and legal factors, programs can facilitate access to services and information. Target markets for microloans can be reconsidered to maximize potential gains.

A number of public policy implications also arise out of this analysis of microloan customer costs and factors. There are broad policy implications, issues concerning laws and regulations, and administrative and funding considerations. From a policy perspective, given the limited and declining amount of financial support offered to the microenterprise field by federal, state and local governments, policies that are more supportive of microentrepreneurs could be implemented. These policy options range from the retention of means-tested benefits until self-employment becomes sustainable and sufficient assets are accumulated to prevent the rapid return to poverty through reduced or progressive regulations on business enterprise. Incremental public policy changes may occur with respect to microenterprise development, some of which could reduce barriers, costs and constraints for potential microloan customers. Further, need and demand can be explored from a marketing perspective to identify policy factors and policies can address the “market failure” of commercial financial institutions in serving disadvantaged U.S. microentrepreneurs.

Specifically, behavioral economics presents the opportunity to apply the tenants of libertarian paternalism to U.S. microfinance markets. Libertarian paternalism (Thaler and Bernartzi 2004; Thaler and Sunstein 2003) suggests that the framing of choices to put forward the best choice for the individual’s well-being without taking away choice has the potential to lead to better decisions. By designing in choices that are “best” for borrowers as default selections where choice points arise, more borrowers might secure loans that are well-suited to them. This does not mean increasing rigidity in product and service design, but it potentially means simplifying the loan processing to reduce barriers, costs and constraints. A careful analysis of individual program and aggregate industry materials and processes could yield a reformulation of decision points and defaults to improve borrower experiences and to increase

product uptake. This could also lead to greater costs efficiencies and sustainability in addition to enhanced scale.

When the analytical framework, research results and implications are considered together, a clear picture of the barriers, cost and constraints facing U.S. microloan customers appears. Behavioral finance and economics bring new lenses to the issues and can contribute to increasing scale and the attainment of program sustainability in U.S. microfinance.

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**Notes**

<sup>i</sup> Microfinance is defined as “a financial mechanism through which formal and informal financial institutions make very small loans (“microcredit”) to the entrepreneurial working poor (“microentrepreneurs”) to start, maintain, or expand small businesses (“microenterprises”)” (Carr & Tong, 2002, p. 2).

<sup>ii</sup> Microenterprise development in the U.S. is defined as financing, training, mentoring, counseling and other kinds of technical assistance provided to individuals starting or operating a business that generally employs less than five people, or that can use a loan less than \$35,000.

<sup>iii</sup> A microloan is defined as a loan of \$35,000 or less for the owners of a business with five employees or fewer.

<sup>iv</sup> Peer group models or solidarity groups involve a group of borrowers, often four to ten of them, who are responsible for loan review and approval and are accountable for repayment. In the U.S., the group also may serve as the training and technical assistance source. Typically, if one borrower is delinquent or in arrears, no other group member may borrow.

<sup>v</sup> In the context of this paper, consumption costs are the costs of the consumer to acquire and usefully utilize a microloan. Some of these costs are readily quantifiable while others are not. If consumption costs are too high, potential and entitled consumers may be priced out of the market for microloans.

<sup>vi</sup> Transaction costs are the implicit and explicit expenses incurred by participants in financial markets to effect financial transactions – excluding interest payments, the cost of funds and loan losses. These costs fall into two broad categories: the opportunity cost of time spent by borrowers...as they negotiate financial contracts, and explicit expenses incurred by all participants to form, to fulfill, and to enforce those obligations (Adams 1995).

**Table I: Characteristics of Programs Studied**

	<b><u>Program A</u></b>	<b><u>Program B</u></b>
Location	Northeast	Midwest
Setting	Urban	Rural
Year Program Started	1992	1989
Type of Lending	Individual, formerly group	Individual
Type of Technical Assistance	Individual consulting	Classes & individual consulting
Average Loan Size	\$2,519	\$11,607
Loan Size Range	\$1,500 - \$25,000	\$300 - \$100,000
Average Loans per Year	52	21

Source: 2002 *Directory of U.S. Microenterprise Programs* and program data.

**Table II: Taxonomy of U.S. Microloan Borrowing**

	<b>Financial Costs</b>	<b>Opportunity Costs</b>	<b>Other Factors</b>
<b>Upfront Costs</b>	Training & Registration Fees	Training Time	Psychosocial Factors
	Technical Assistance Fees	Technical Assistance Time	<ul style="list-style-type: none"> <li>• Risk Aversion</li> </ul>
	Transportation	Travel Time	<ul style="list-style-type: none"> <li>• Loss of Privacy</li> </ul>
	Child Care	Social Welfare Policy Costs	<ul style="list-style-type: none"> <li>• Emotional Upheaval</li> </ul>
	Application Fees	Preparation Time	Discrimination
	Docs. & Copying	Elapsed Time	Regulatory & Legal
	Closing Costs	Group Participation	<ul style="list-style-type: none"> <li>• Licenses &amp; Regulation</li> </ul>
	Compliance		<ul style="list-style-type: none"> <li>• Operational Complexities</li> </ul>
			<ul style="list-style-type: none"> <li>• Documented U.S. Standing</li> </ul>
<b>Distributed over Time</b>	Interest Payments	Pledged Collateral	Economic Factors
	Loan Service Charges	Equity Required	<ul style="list-style-type: none"> <li>• Credit History</li> </ul>
	Late Fees & Penalties	Mandatory Savings	<ul style="list-style-type: none"> <li>• Cost Shifting</li> </ul>
	Compliance Costs	Travel Time	<ul style="list-style-type: none"> <li>• Collateral</li> </ul>
	Group Loan Payments	Reporting/Post Closing	Information Gaps
	Transportation		<ul style="list-style-type: none"> <li>• Business Knowledge</li> </ul>
	Bank Fees & Charges		<ul style="list-style-type: none"> <li>• Resource Knowledge</li> </ul>
	Documents & Copying		<ul style="list-style-type: none"> <li>• Geography</li> </ul>
Membership Dues		<ul style="list-style-type: none"> <li>• Learning Factors</li> </ul>	
			Trust
			Social Capital
			Religious Practices
			Lending Limits
			Income Level
			Business Type
			Program Resources
			Language & Culture

**Table III: Comparison of Scoring Rank of Top 10 Challenges by Source  
Microloan Barriers, Costs and Constraints**

	<b>Customers</b>	<b>Staff</b>	<b>Type of Factor</b>
Capital Availability	1	2	Social
Lack of Cash Flow	2	4	Financial Constraint
Lack of Equity	3	5	Financial Constraint
No Collateral	4	7	Financial Constraint
Weak Collateral	5	10	Financial Constraint
Discomfort with banks	6	8	Psychosocial
No Credit History	7		Financial Constraint
No Co-Signer	8		Social Capital
Poor Credit History	9	1	Financial Constraint
Too Few Dollars	10		Programmatic
Time for Training		3	Transaction Cost
Lack of Experience		6	Human Capital
Lack of Business Training		9	Human Capital

**Table IV: Revised Taxonomy of U.S. Microloan Borrowing**

	<b>Cash Costs</b>	<b>Non-Cash Costs</b>	<b>Regulatory and Policy Barriers</b>	<b>Behavioral Factors</b>
<b>Sunk Costs</b> Invested Prior to Loan Approval	Training & Registration Fees	Training Time	Licenses	Framing Effects
	Technical Assistance Fees	Technical Assistance Time	Business Regulations	Loss Aversion
	Transportation	Travel Time	Documented U.S. Citizenship	Endowment Effects
	Application Fees	Application Preparation Time	Credit History	Mental Accounting
	Documents & Copying	Preparation Time	Religious Laws & Practices	Time Discounting
	Compliance	Additional Effort	Lending Limits	Time Inconsistent Preferences
	Peer Group Dues or Fees	Group Participation Time	Business Type Limits by Law or Lender Policy	Trust
	Child Care			Representativeness
<b>Lump Sum Costs</b> Expended upon Acceptance	Closing Fees	Equity Commitment	<b>Individual Barriers</b>	Sequential Decision Making
	Transportation	Travel Time	Business or Resource Knowledge	Availability Heuristic
	Documents & Copying	Preparation Time	Language & Culture	Confirmation Biases
	Peer Group Fees	Group Participation	Learning Factors	Context Effects
	Compliance	Additional Effort	Social Capital	Choice Bracketing
<b>Time Distributed Costs</b> or Incremental Costs	Interest Payments	Collateral Pledged		Emotions
	Loan Service Charges		<b>Programmatic Barriers</b>	
	Late Fees & Penalties		Geography	
	Compliance Costs	Time	Program Resources	
	Transportation	Travel Time	Staff Skills	
	Bank Fees & Charges		Cost Shifting	
	Group Loan Payments	Group Participation		
	Membership Dues			

