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CEB Working Paper N° 10/048
2010

Last update:

http://www.solvay.edu/sites/upload/files/CEB_WorkingPapers/LastUpdate/wp10048.pdf

Microfinance Over-Indebtedness: Understanding its drivers and challenging the common myths

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Abstract: The microfinance industry has been celebrated both for its social impact on poverty alleviation and for its profitability. With issues of over-indebtedness emerging among microfinance customers, both achievements are at risk. This paper contributes to the industry's understanding of the definition and causes of over-indebtedness. It reveals why the 5 myths of microfinance over-indebtedness erroneously oversimplify the reality of microfinance customers. The paper works with theoretical and empirical contributions from economics, psychology and sociology, and unites microfinance specific findings with the general consumer finance literature. In addition to external influences, it highlights the responsibility of lenders in driving microfinance customers into over-indebtedness. It also recognises the role that borrowers involuntarily play in over-indebting themselves. Enhancing our understanding of what microfinance over-indebtedness is and how it is caused, the paper provides the basis for tailoring over-indebtedness solutions to the root causes of the phenomenon and addressing the challenge at all suitable levels.

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JEL-codes: O16, O50, G21

* The author is grateful to Marie-Christine-Adam Foundation for its financial support. She thanks Prof. Marek Hudon for his valuable comments and suggestions. Any errors or misconceptions are the author's alone.

1. Introduction

Over the last decade, the microfinance industry¹ has achieved immense growth and unprecedented public celebration. Its social impact promise of reducing global poverty has been complemented by sizeable profits for some microfinance institutions (MFIs) and their investors. But the fairy tale is getting cracks: the impact on poverty alleviation may be an illusion and the social microfinance industry faces increasing criticism for exploiting and in the worst case over-indebting poor customers for profit motives.

The microfinance industry is torn in an ongoing debate about the desirable degree of commercialisation and the risk of mission drift (e.g., Allen 2007; Armendáriz and Szafarz 2009; Aubert, de Janvry and Sadoulet 2009; Cerven and Ghazanfar 1999; Copestake 2007; Drake and Rhyne 2002; Ferris 2008; Labie 2007; Mersland and Strøm 2010; Schicks 2007; Woller 2002b). Advantages such as access to private capital, professionalism, and a unique potential for outreach to the world's 2.5 bn unbanked notwithstanding, there are potential trade-offs between the interests of investors, MFIs and customers. While the social mission of the microfinance industry gives specific importance to protecting the interest of customers, the 2008/2009 global banking crises has pointed out that an unsustainable financial services offer based on irresponsible lending implies risks for the industry as a whole, not only for customers.

In this context, over-indebtedness is currently one of the most serious risks of microfinance, endangering both social impact and industry stability. It has the potential to push customers further into poverty, accompanied by the material, psychological and sociological consequences of debt. It has the potential to put MFIs, their portfolio quality, and their institutional stability at risk. Moreover, its consequences can spill over to investors, donors and the microfinance sector as such. In several countries such as Bosnia, Morocco, Nicaragua and Pakistan, an over-indebtedness crisis among microfinance clients has already materialised.² Over-indebtedness represents a serious challenge for all microfinance providers: not only for those focussing on social impact but also for lenders following a limited "do no harm"-philosophy.

From a perspective of customer protection, this paper aims to better understand microfinance over-indebtedness and its causes. There is wide-spread ambiguity about how to define and measure over-indebtedness. Also, to the author's knowledge, there is no comprehensive overview of the potential drivers of this phenomenon. Especially in the microfinance literature, academic work on the causes of over-indebtedness is hardly existent. This paper will develop and work with an

¹ This paper focuses on institutional microfinance, following the solidarity banking, village banking or individual lending models. It includes formal and semi-formal institutions that follow a social mission and are operating within structures that aim at operational sustainability or even profitability. Although microfinance has expanded to a broad range of financial services, this paper focuses on its original product, micro loans.

² In addition to the crises in Bolivia and South Africa in the late 1990s and early 2000s.

innovative definition of over-indebtedness based on borrower sacrifices. Providing an account of the most important factors that impact over-indebtedness, it will pin-point the role that external influences, lenders, and borrowers play in causing this problem. It will proceed to challenge 5 central myths of microfinance over-indebtedness, the benefits of competition, the dangers of consumer loans, the necessity of a tight repayment schedule, the irrationality of poor borrowers, and the need for MFIs to provide extensive loan information, including an APR. The paper's main contribution lies in bringing together the academic knowledge from several fields of research such as economics, sociology, and psychology and uniting the scholarship on consumer credit in developed markets with microfinance specific research.³

The next section will review the options for over-indebtedness definitions in the consumer finance and microfinance literature. Based on this overview, it will develop a unique over-indebtedness definition for microfinance research. Section 3 will analyse the causes of over-indebtedness and the responsibility of lenders and borrowers respectively. Section 4 will reveal surprising answers to the 5 myths of microfinance over-indebtedness. Finally, section 5 will conclude and point out directions for further research.

2. Defining and measuring over-indebtedness in microfinance: When is too much too much?

Despite the importance of the topic, there is no universal definition of personal over-indebtedness (BERR 2007; Brix and McKee 2010; Gonzalez 2008; Kempson 2002).⁴ Definitions in the consumer credit as well as microfinance literature vary e.g. depending on the scientific lens and purpose of the research, on data availability, and most importantly on the severity of debt problems that represent the threshold to over-indebtedness. Existing studies are based on a variety of sometimes roughly similar and sometimes opposing definitions.⁵ There have been several efforts to analyse

³ Contrarily to the paradigm of microenterprise finance, this paper uses the consumer finance literature from developed markets as a reference literature. It is more appropriate than a corporate finance perspective, as microfinance relies mostly on character-based lending techniques, a lot of microcredit is used for consumptive purposes, microborrowers make personal rather than professional credit decisions, and as – being personally liable for their loans - microborrowers face the same personal consequences of over-indebtedness that are discussed in consumer credit research.

⁴ Originally, over-indebtedness was defined only for corporate legal entities in the form of insolvency, when debts exceed assets ("negative equity"). For individuals, assets and relevant cash flows are much harder to define (just think of "human capital"), and over-indebtedness is often primarily liquidity related. Also, in contrast to legal entities, over-indebted individuals cannot liquidate or be "dissolved as entities". They have a human right to their existence (White 2008).

⁵ There is also some inconsistency with regards to the terms borrowing, credit, debt and indebtedness. Some researchers use all of these interchangeably, while for others, notably in the psychology literature, these terms have different meanings (Brown, Taylor and Wheatley Price 2005; Lea, Webley and Levine 1993; Lea, Webley and Walker 1995; Webley and Nyhus 2001). For them, borrowing is a planned and intended process and usually involves deliberate lending, the granting of credit. Debt and indebtedness in contrast is unintended and a problem situation that might emerge without

types of definitions and their advantages (e.g., Betti et al. 2001; Betti et al. 2007; European Commission 2008; Korczak 2003; Vandone 2009) but, to the author's knowledge, never a structured outline of all the options.

Figure 1 provides a systematic overview of the dimensions that distinguish over-indebtedness definitions and of the different categories that have been used in the broad range of academic and policy-oriented literature on developed country consumer credit and on microfinance. Depending on (1) the **purpose** of their research and their *academic backgrounds*, scientists work with different approaches to defining over-indebtedness. Several papers recognize this when offering high-level categorizations of over-indebtedness definitions (Betti et al. 2001; Betti et al. 2007; Korczak 2003), but mix this dimension with those of perspective and scale.⁶

FIGURE 1: DIMENSIONS OF OVER-INDEBTEDNESS DEFINITIONS

Type of choice	Dimension of choice	Categories			
1 Purpose	<i>Scientific lens</i>	Legal	Economic	Sociological	Other
	<i>Precision</i>	Definition	Indicator	Proxy	
	<i>Reference unit</i>	Individual	Household	Aggregate	
2 Method	<i>Composition</i>	Single criterion	Multiple criteria		
	<i>Scale</i>	Quantitative	Qualitative		
	<i>Perspective</i>	Objective	Subjective		
	<i>Data source</i>	External	Self-reported		
3 Severity	<i>Time horizon</i>	Current	Structural ¹	Permanent ²	
	<i>Debt condition</i>	Bankruptcy ³	Default ⁴	Arrears ⁵	Imbalance ⁶
	<i>Role of the borrower</i>	Innocent ⁷	Unintended ⁸	Deliberate ⁹	
	<i>Level of sacrifice</i>	To minimum existence level ¹⁰	More than expected	Liquidity buffer ¹¹	No sacrifice ¹²

¹ Long-term, stable ² Life-long
⁴ Includes "write-offs", "confiscation of assets" ³ Includes the criteria "in-court-/out-of-court-settlements", "attachment of wages"
⁶ E.g., "Unhealthy debt balance", "repayment difficulties" ⁵ Includes "credit counselling", "poor creditworthiness"
⁸ E.g., Wrong actions but not deliberate ⁷ Involuntary situation through no fault of one's own (external event)
¹¹ Inability to meet unexpected expenses ⁹ E.g., Strategic default or fraud ¹⁰ Common bankruptcy criterion in Western legal systems
¹² Intuitive definition with regards to microfinance as a social industry

A central challenge in the existing literature is that it does not always make the distinction between actual *definitions versus measurements or indicators* of over-indebtedness. Over-indebtedness studies sometimes implicitly use over-indebtedness indicators in lieu of a definition, even if these wrongly subsume some borrowers in the over-indebted category and exclude others. As these are often subject to discussion, Appendix 1 provides an overview of the different dimensions of

any credit involved. Instead, this paper follows the debt definition that does not imply an automatic negative connotation and uses debt and credit interchangeably.

⁶ Betti et al. 2001, 2007 distinguish the administrative model, the 'objective' (or quantitative) model, and the subjective model. Their categorization is very similar to that of Korczak, distinguishing an administrative-legal, objective-quantitative and subjective-qualitative approach.

quantitative over-indebtedness measurements. Debt studies also differ in their *units of reference*, some considering over-indebtedness an individual phenomenon, others arguing to take all household cash flows into account (Disney, Bridges and Gathergood 2008). In the microfinance context, the appropriate unit may even be a borrower's extended support network of kin (Guérin et al. 2009b).

In terms of (2) **method**, over-indebtedness definitions diverge in applying either *single or multiple criteria*. If multiple criteria apply selectively they risk extending a definition too far (Disney, Bridges and Gathergood 2008; Kempson 2002), if they apply simultaneously they increase precision. Also, the term over-indebtedness can either represent exceedance of a certain *quantitative threshold*, e.g. a debt-to-income ratio, or can be defined in *qualitative* terms such as a perceived burden. While for regulatory purposes for example, qualitative definitions tend to produce uncertainty for lenders seeking to comply (Brix and McKee 2010), they are more flexible and better able to take into account individual borrower circumstances.

A crucial difference between definitions that overlaps with but does not equal the dimension of scale is the choice of perspective. Information can be of the kind that is externally verifiable and provided by an *objective* source, or it can be the *subjective* perception of borrowers. While objective data is the default in quantitative studies and considered more reliable, many researchers emphasize the merits of a subjective over-indebtedness definition (Betti et al. 2007; Bridges and Disney 2005; Guérin et al. 2009b; Lea, Webley and Levine 1993). They consider the individual the best judge of its complex debt situation and prospects. Guérin et al. 2009a point out that, rather than a material problem of a disequilibrium between assets, revenues and debt, for the individual borrower, over-indebtedness may be a question of perceptions and social consequences. Guérin et al. 2009b add that debt conditions are heterogeneous in conditions and meaning. It depends on the nature of the individual debt relationships rather than amounts, which debt is a burden. As a result, "total amount of debt" for many poor borrowers is not a meaningful concept.

Ultimately, methods of assessing over-indebtedness differ regarding their sources of data; notably *external sources or self-reports* by borrowers. Self-reports are considered less reliable than external data and at the same time better informed about borrower circumstances, future income prospects and meanings of debt. Lusardi and Tufano 2009 for example fully rely on self-reports. Lea, Webley and Levine 1993 combine official records from a utility company with self-reports, an approach that takes the individual knowledge and perception into account and enables a certain verification of self-reported data through triangulation with other sources.

The most essential aspects of an over-indebtedness definition lie in the dimension of (3) **severity**. Most researchers only consider a borrower over-indebted if his debt problems are of a long-term nature. To count as over-indebted, the debt problems need to be at least *structural* and persistent over a certain time horizon (Canner and Luckett 1991; Fisher 1933). According to certain economic

explanations of borrowing and saving, for example the Life Cycle Hypothesis (Modigliani and Brumberg 1980b, 1980a) and the Permanent Income Hypothesis (Friedman 1957), consumers aim at a stable consumption over a long time horizon. Permanently high debt levels at young age might therefore be fully rational. To define over-indebtedness, the correct reference would thus be a *permanent, life-long* estimate of borrowers' income (Betti et al. 2007; Disney, Bridges and Gathergood 2008). On the other hand, in the microfinance context, given imperfect capital markets, the short-term cash management challenges of low and volatile incomes, and high uncertainty about the future, borrowers rarely borrow with a life-long time horizon but rather with a focus on short-term liquidity. If studies focus on a *spot indicator at only one point of time* this is usually just a weak approximation, resulting from a lack of longitudinal data.

The criterion with the most diverse range of choice options employed in the literature is that of debt conditions. Researchers differ in the severity of repayment problems they consider the threshold to over-indebtedness. Some count only legally bankrupt borrowers as over-indebted, while others include cases of default or arrears, or even all borrowers who struggle with an unhealthy debt balance. *Bankruptcy* is easy to measure on an aggregate level but represents a very limited understanding of over-indebtedness, that is in addition difficult to compare between legal systems internationally (Betti et al. 2001) and over time (Disney, Bridges and Gathergood 2008). While *permanent arrears* are a very common criterion for over-indebtedness in developed markets, Guérin et al. 2009b point out that it might not be suitable in developing country environments where informal lending agreements play a large role. Informal agreements might not specify explicit payment deadlines or arrears on them might represent a sign of negotiation power rather than inability to pay. Conversely, a system of juggling different debts, continuously borrowing again to repay other loans, may hide over-indebtedness for a long time before it manifests in the form of delinquency (Finlay 2006). For *unhealthy debt balances*, the main challenge is that they would have to define appropriate thresholds and can thus never take all borrower circumstances into account. Depending on many implicit influence factors, a debt-to-income ratio that is unsustainable for one borrower might be absolutely manageable for another.

Finally, it is a common requirement in over-indebtedness definitions that problems exist against the *will of the borrower* (Korczak 2003). Gonzalez 2008 provides an exception, claiming that "overindebtedness occurs when the repayment outcome of a loan contract does not correspond to the original expectations of either the borrower or the lender or both." It can therefore result from either unwillingness to repay, or inability to repay, or costly actions required to repay. In fact, most indicators of over-indebtedness that do not rely on self-reports or carefully judged court cases, cannot distinguish the intentions of the borrowers. However, they do aim at identifying borrowers that got into trouble *innocently* or at least *unintendedly* against their will.

Over-indebtedness definitions further differ in the *sacrifices* they expect from borrowers. In many countries, bankruptcy proceedings require debtors to give up all income and assets above a certain

minimum existence level (see e.g. European Commission 2008 or Haas 2006). DeVaney 2006 displays a similar attitude with regards to microfinance customers, that microcredit must not deprive them of their "basic survival capacity" in order to repay. A less severe option is to consider borrowers over-indebted if they need to reduce their spending beyond what they are accustomed to or make *more sacrifices than expected* (Murray 1997). The extreme other end is represented by definitions that count *every sacrifice by the borrower as a sign of over-indebtedness* (Canner and Luckett 1991). This is a common expectation in the microfinance sector, with loans aiming to make borrowers better off and not to require sacrifices. However, this approach ignores that borrowers may well make a deliberate choice of sacrificing some of their usual consumption by taking a loan to reach a certain goal.

For the purpose of this paper, a definition is required that takes the reality of the microfinance industry into account and promotes its customer protection perspective. The article will therefore follow an interdisciplinary approach, defining over-indebtedness on a household level as broader kin support should not be the reason why a borrower manages to repay. It will honour the complexity of the phenomenon by means of multiple simultaneous criteria, working with qualitative elements to take the individual circumstances of borrowers into account and using subjective perceptions as the best judge of a household's debt situation.

In terms of severity, given the social mission of microfinance, default or even arrears do not represent a suitable threshold for this research. Instead, borrowers who still manage to meet their repayment obligations but have to take their children out of school or miss meals to do so should count as over-indebted. Besides there not necessarily being defined minimum existence levels in most microfinance markets, borrowers will often already live below any acceptable minimum level of income, independent of their loans. They are therefore the only ones to decide on an acceptable level of sacrifices for their loans. While some permanence of difficulties is well implied, the definition needs to take the limited time horizon of microborrowing into account as well as the implications of severe sacrifices even over short periods of time.

This research will therefore use a qualitative, sacrifice-based definition of over-indebtedness that is unique in the academic literature⁷: **A microfinance customer is over-indebted if he is continuously struggling to meet repayment deadlines and repeatedly has to make unduly high sacrifices to meet his loan obligations.**

The sacrifice-based definition excludes borrowers who strategically default on their loans or deliberately run up unsustainable amounts of debt, relying on a bail-out or the option to switch to a

⁷ It comes close to the definition of Gonzalez 2008 but excludes strategic defaults. In fact, the definition is closest to the microfinance practitioner views of Elizabeth Rhyne and Richard Rosenberg. In the literature, the notion of sacrifice for microcredit repayments has been brought up first by Brett 2006, however in that instance not in relation to over-indebtedness.

new provider. While boundaries blur, the criterion of "unduly high sacrifices" excludes deliberation. Although sacrifices as such are not desirable for the poor and vulnerable target group of microfinance, borrowers may well make a conscious decision to cut back on certain expenses for the purpose of the loan. Sacrifices are therefore deemed "unduly high" if they are bigger than the borrower expected when taking the loan and exceed the cost he is willing to take on for the loan purpose.

This definition is very close to an impact approach. A loan that makes the borrower worse off because sacrifices exceed benefits, is a loan that causes over-indebtedness. Under this definition, a low level of over-indebtedness is unavoidably bound to exist in any lending market and particularly one of poor and vulnerable borrowers. Preventing any loan for an investment that fails and makes the borrower worse off would restrict credit supply beyond its social optimum. However, such cases should be kept to a minimum. Future research should analyse to what extent simpler indicators such as debt-service-ratios, delinquency, or the number of credit arrangements, represent workable measurements or proxies for this definition. This would also show to what extent a bank's credit risk management is in line with avoiding over-indebtedness from a customer protection perspective.

3. The reasons for over-indebtedness: why do people over-borrow?

Microfinance customers have good reasons to take loans. However, borrowers have little reason to borrow to the extent of over-indebtedness. Neither should lenders - and even less so MFIs with a social mission – have an interest in over-indebting their customers. With a few exceptions⁸, over-indebtedness is thus an undesired consequence both for parties and in perfect markets should not exist. Based on the consumer finance literature, and where available, microfinance specific research, this section will analyse a range of explanations of why people may borrow more than they can handle, examining the influence of external factors, the problems caused by lenders, and the role of borrowers themselves. The paper will then proceed to revisit five typical misconceptions related to microfinance over-indebtedness.

In transferring particularly empirical findings from the consumer credit literature to the microfinance context, there are several challenges to keep in mind:

⁸ From a profitability perspective, lenders may well accept a certain level of arrears and default as long as the costs of improved risk management exceed the costs of delinquency. Except for the indirect impact through customer satisfaction, lenders do not take borrowers' sacrifices into account in their cost calculations and ignore when defaults can only be avoided at a high cost to the borrower. In some cases, the repayment problems of borrowers may even be in a lender's interest, increasing the interest earned with each given loan or, in some societies, keeping the borrower in a permanent obligation for bonded labour (see Breman, Guerin and Prakash (2009)).

- Studies differ in their definition of over-indebtedness. Also, some are not over-indebtedness specific but analyse the causes of being in debt, of accumulating credit or of financial difficulties.
- Studies vary in the types of loan products they take into account. Borrower behaviours might differ between e.g. credit card use and decisions on taking instalment loans.
- Borrower behaviours and characteristics differ between relatively similar Western markets (Betti et al. 2007; Disney, Bridges and Gathergood 2008; Kilborn 2005; Rinaldi and Sanchis-Arellano 2006) or even within countries (Collins 2008). Transferability to developing country microfinance markets and their cultural environments may be limited.
- Finally, only very few studies can claim to identify causal relationships (e.g. Webley and Nyhus 2001 to the extent that their longitudinal approach allows for conclusions on causes, or Brown et al. 2005 based on the Granger causality test). Most empirical research uses cross-sectional data (e.g. Lea, Webley and Levine 1993; Lea, Webley and Walker 1995; Livingstone and Lunt 1992; Walker 1996), identifying characteristics and behaviours "associated" with debt or over-indebtedness but not able to exclude spurious correlation.

Consequently, existing research is a suitable starting point to understand microfinance over-indebtedness but more microfinance specific empirical research will be required to confirm and extend the below findings.

→ **Outside influences:** The first set of factors that can push borrowers into over-indebtedness is outside the control of the lending parties. In some situations, in spite of sound lending decisions, **external shocks** can turn a debt load unsustainable. Adverse shocks to the income or expenses of a microborrower can turn an existing debt level from acceptable to unmanageable. An empirical study by Bouquet et al. 2007 in Madagascar confirms that credit problems are most frequently due to sudden drops in expected income or rising expenses. Besides personal shocks such as illness or job loss, macroeconomic developments such as the current financial crisis and its impact on the real economy can drive borrowers into unforeseen financial difficulties. Other researchers cite factors typical for developing countries such as natural disasters and changes in government policies (e.g. displacement of street vendors or new taxes that increase input prices) (Stearns 1991), economic or political crises, and fluctuations on foreign currency markets (Bensoussan 2009). Also, the **institutional and legal environment** influences the behaviour of lenders and borrowers – to the better or to the worse. For example, the existence of credit bureaus and the level of competition can enhance or reduce the risks of over-indebtedness. Crucial factors are a market's information sharing structure, the efficiency of the judicial system, and the amount of informal credit alternatives available (Anderloni and Vandone 2008; Vandone 2009). Similarly, macroeconomic instability and resulting income volatility can force borrowers in precarious living conditions to borrow more than they would choose (Gloukoviezoff 2008).

→ **Lender behaviour:** Whatever the institutional environment, over-indebtedness is ultimately created by the two parties that make the credit decision, lenders and borrowers. According to Vogelgesang 2003, it is most importantly MFI policies that determine over-indebtedness and default levels. The three major levers of lending behaviour that enhance over-indebtedness risks, are a) an excessive marketing and growth focus, b) unsuitable product characteristics, and c) conducive lending procedures.

a) MFIs can push borrowers beyond their limits due to an exaggerated **focus on portfolio growth** and by means of **aggressive marketing techniques**. The lending focused business model of MFIs can create a pressure for customers to continue borrowing instead of focussing on the protective services that they actually need (Guérin 2006) or taking a break when they do not require additional credit (Hulme 2007; Collins et al. 2009).⁹ Microfinance institutions tend to underestimate their impact on borrower debt load, believing that their loans would substitute for existing informal loans at poor conditions, whereas in reality they mostly add to a borrower's informal leverage (Guérin et al. 2009a; Morvant-Roux 2009; Roesch and Héliès 2007). Another mechanism driving MFIs to over-indebt clients, is the volume focused incentive system (Brix and McKee 2010; DeVaney 2006; Rahman 1999). It rewards credit officers for loan disbursements, even if clients will suffer from having to repay. Many MFIs mitigate this effect with complementary incentives for portfolio quality, avoiding incentives to lend to borrowers who will default. For existing lending relationships however, Roesch 2006 points out that portfolio quality incentives can be a reason for credit officers to re-lend to delinquent borrowers, enabling borrowers to keep up repayments beyond their actual capacity. Finally, accounts of aggressive sales techniques in microfinance refer particularly to marketing tactics that deliberately frame credit offers in a way to exploit the psychological biases of borrowers (Porteous 2009) e.g. door-to-door solicitations or limited-time offers (Brix and McKee 2010). As an individual's perception of affordability of a purchase is affected positively by the offer to buy a good on credit (Notani 1997), "easy money" can indeed incite borrowers to over-estimate their opportunities.

At the very root of the sales focus of MFIs is the industry's growth pressure and strive for financial returns that has in some instances over-ruled the institutions' social mission. This rapid growth does not only have the direct effects of lending to customers beyond their capacity but in rapidly expanding markets like Morocco has also exceeded the institutional capacity of MFIs for information systems, lending policies and governance and has ultimately led the sector into crisis (Reille 2009). According to pre-crisis MIX Market data¹⁰, the gross loan portfolio of Morocco's 10 reporting MFIs grew by more than 150% during 2006 and again by 75% in 2007. This equals a compound annual

⁹ Banerjee and Mullainathan (2009) explain that MFIs have an incentive not to move customers out of poverty and the dependence of loans, but to keep profitable borrowers trapped in a cycle of debt.

¹⁰ www.mixmarket.org

growth rate of 110% over two years, the portfolio more than doubling every twelve months. The fastest portfolio growth in 2006 was experienced by one of Morocco's main institutions, Zakoura, at 182%, nearly tripling its outstanding loans. In 2007, the smaller MFI ARDI grew fastest in gross loan portfolio, at 330%, adding more than four times its loan portfolio in the course of one year. Even for a professional management this speed of growth must imply serious challenges and risks.

Growth also requires employee increases, leading to a constantly high share of inexperienced loan officers that may make weaker loan decisions than experienced colleagues and identify less with the values of their institution. In Morocco, during the year 2006, the MIX Market reports a 60% increase of MFI personnel and again a 43% growth in 2007. The most critical experience was again that of ARDI in 2007, when the MFI grew personnel by about 350% - that means nearly 80% of its employees at the end of 2007 were new to the institution. While at the time a >30 day portfolio at risk (PAR) above 1% was the absolute exception, the consequences of growth and other influence factors on portfolio quality showed in the years thereafter. At the end of 2009, PAR has reached its current peak in Morocco with an average of 7% for 9 of the 10 reporting institutions (no data available for ARDI). Two institutions, ATIL and Zakoura even report a PAR of 18% and 14% respectively. Interestingly, the only institution that still maintains a respectable PAR of <2% is Al Karama that grew relatively slowly in pre-crisis years.

b) MFIs further increase over-indebtedness risks if they offer **products that are not appropriate to the borrower's situation**. The impact chain in this case is not about inducing borrowers to take more credit than reasonable, but focuses on a debtor's ability to meet his obligations from existing contracts. For example if maturities are short and instalment schedules too inflexible this can make it very difficult for borrowers with volatile incomes to repay on time (see section 4.C). The difficulties get exacerbated if MFIs are excessively reluctant to reschedule loans for borrowers in honest liquidity difficulties. Repayment capacity is also a function of loan use. In Bouquet et al.'s empirical work in Madagascar (2007), the most frequent product feature that borrowers cite as a reason for repayment problems is the timing of disbursements. Productive investments, especially those subject to seasonality, require resources to be available when the investment opportunity exists. If MFIs do not disburse on time, customers do not earn the returns required for repayment. On a similar line, consumer loans are frequently identified as a potential source of over-indebtedness as they do not provide debtors with returns for repayment (see section 4.B).

Last but not least, even the focus of many microlenders on women can contribute to over-indebtedness. The anthropological research of Rahman 1999 in Bangladesh reveals that loans are in many cases used by husbands and channelling them through female borrowers simply increases repayment pressures in the local cultural setting. As this implies indebting individuals who do not have control over their finances and the use of the loans it can be a catalyst of over-indebtedness. In an ethnographic account of Bolivian women Brett 2006 confirms these complex intra-household

dynamics that indebt female borrowers without them having control over their resources and the loan use.

c) Finally, microlenders contribute to over-indebtedness due to their **lending procedures**. The most important lender contribution to over-indebtedness probably stems from a lax evaluation of repayment capacity in lending decisions (Navajas, Conning and González-Vega 2003; Roesch 2006) and the automatic increases in loan sizes over time (Brix and McKee 2010). Lending procedures furthermore promote over-indebtedness through a lack of transparency (Brix and McKee 2010; Stegman 2007). An Indian study for example discovers that more than 70% of clients believed that all (30%) or most (41%) of the rules regarding their loan contract were communicated to them orally and not in written form (Tiwari, Khandelwal and Ramji 2008). Excessive interest rates and fees contribute to debt problems (Cull, Demirgüç-Kunt and Morduch 2009), especially if borrowers are not fully aware of them (Collins 2008).

The final trade-off to be highlighted concerning lending policies is that of collection practices. Microfinance institutions increasingly face accusations of employing inappropriate collection practices that unduly increase the burden of indebtedness for borrowers by humiliating and intimidating borrowers or depriving them of assets (DeVaney 2006; Drentea and Lavrakas 2000). Borrowers are not necessarily aware of their rights and for example consider it normal for an MFI to force a delinquent borrower to hold the discussion with the loan officer in public outside her house, to extend group meetings to enforce repayment at the cost of business time or of punishment by husbands, or to seize the borrower's assets in spite of an uncollateralized loan contract (Tiwari, Khandelwal and Ramji 2008). At the same time, if collections are too lax, repayment difficulties may materialise too late when over-indebtedness has already become unavoidable (Vogelgesang 2003).

→ **Borrower behaviour:** To every credit decision there are per definition two parties: a lender and a borrower. Both have the obligation to make responsible choices. Both are in a position to let a credit agreement turn harmful for the other party or for themselves. A customer protection perspective should therefore resist the temptation of seeking fault only with lenders and with the adverse circumstances that borrowers face. It should equally pay attention to the role that borrowers play in destructive credit relationships and their contribution to their own over-indebtedness. It should recognise, that to a certain extent, protecting borrowers from over-indebtedness may mean protecting them from themselves.

a) Psychological research and behavioural economics have revealed numerous **cognitive and psychological biases** that can lead to borrowers over-indebting themselves. While original economic theory postulates rational decision makers, the rationality of human decision makers is in fact bounded by imperfect information and limited cognitive abilities, so that errors in judgement occur. For example, decision makers tend to suffer from an *overconfidence bias*, from the *availability heuristic* of underestimating probabilities of events one rarely experiences (Kilborn 2005;

Vandone 2009) and from *habit persistence*, reducing consumption too slowly in adaptation to income fluctuations (Brown 1952). They represent examples that may lead individuals to over-consume and to underestimate the risk of borrowing. From the perspective of the poor, Guérin 2000 reveals the cognitive effects of permanently living in a precarious situation: the constant focus on managing daily emergencies changes people's relationship to time so that the short term assumes disproportionate importance. Individuals may lose the ability to plan for the longer term and, as a result of their situation, may make more short-sighted decisions than richer agents.

There is empirical confirmation that individuals with limited information tend to rely on sometimes rather weak *proxies in their decision making*. Soman and Cheema 2002 find that consumers who are inexperienced with credit and trust the bank's judgement see the size of their credit limit as a signal of future earnings potential and affordability. The credit limit may encourage individuals to keep borrowing beyond what they can afford. Atkinson et al. 2006 provide empirical support for people making poorly informed financial choices, for example not reading terms and conditions and not comparing providers. Lusardi and Tufano 2009 discover strikingly low levels of debt literacy across the U.S. population, for example serious difficulty in grasping percentages. Those who are less debt literate bear a disproportionately large share of avoidable costs (e.g., late fees). They are also more likely to be over-indebted.

As a result, understanding credit offers and making sound borrowing decisions is quite challenging for the target group of MFIs, who usually has low education levels and little experience with formal lending institutions. Combined with the attractiveness of the Western lifestyle and the development aid rhetoric of microfinance, MFI customers might see their credit offers as signs of affordability and will not be able to restrict their borrowing to healthy levels.

Two more factors should be mentioned from the perspective of behavioural economics and psychology. One is that of self-discipline and a borrower's difficulties with *the inter-temporal balancing of utility* (see section 4.D). The other is the influence of a number of psychological concepts on over-indebtedness, particularly a *borrower's attitude* towards the future (van Raaij and Gianotten 1990; Brown et al. 2005), towards debt (Livingstone and Lunt 1992; Lea, Webley and Levine 1993), or towards money and money management (Stone and Maury 2006; Webley and Nyhus 2001; Tokunaga 1993) as well as an individual's *locus of control* (Tokunaga 1993; Livingstone and Lunt 1992; Webley and Nyhus 2001). If a certain borrower attitude implies a higher risk of the borrower slipping into over-indebtedness, MFIs might want to be more careful in lending to these customers, or they may want to introduce measures to counter the corresponding risks by means of awareness campaigns and trainings e.g. about a prudent debt attitude.

b) There are furthermore **sociological influence factors** that can drive borrowers towards over-indebtedness. The first are the general *pressures of consumer society and materialism* that may lead consumers to over-spend and borrow beyond their limits. Consumption loses its function of

satisfying basic needs and instead is required to build an individual's identity in society (Braucher 2006; Burton 2008; Roesch 2006; Viaud and Roland-Lévy 2000). Sociologists see a causal relationship between a culture of consumption and the level of consumer debt. On the one hand, they can reproach microfinance to be spreading this consumerism with their credit offers. On the other, in most societies such influences exist independently of microfinance. Instead of denying to the poor what we value in our own society, the solution is rather to be aware that the poor's borrowing decisions may result partly from such societal pressures.

A second influence factor is that of *inequality and social comparison*. It can drive lower income groups to borrow irresponsibly in a desire to keep up with the consumption levels of peers (Duesenberry 1949; Luttmer 2005). Empirical studies by Christen and Morgan 2005 and Brown 2004 confirm that income inequality contributes to increased consumer borrowing for conspicuous consumption. According to Lea, Webley and Walker 1995, debtors reveal the influence of social comparisons in their self reports. More often than non-debtors, they report having less money than peers (e.g. friends, relations, and "the people on TV") as well as being bothered by this inequality. This effect is however not independently significant in multivariate analysis.

A third point from the sociological perspective is that *economic socialisation* influences people's readiness to take on debt. The attitudes and experiences of parents with debt and money are relevant factors (Stone and Maury 2006; Tokunaga 1993) and few microborrowers will have learned from their parents how to handle credit from (semi)-formal institutions. The level of societal support for debt determines to what extent the average borrower perceives debt as a burden to be avoided or as an easy solution (Lea, Webley and Levine 1993; Norton 1993). Furthermore the social obligations to support to relatives and neighbours at any cost may drive people into indebtedness (Cressy 2006; Guérin 2000), an influence that is likely to be particularly strong in microfinance environments.

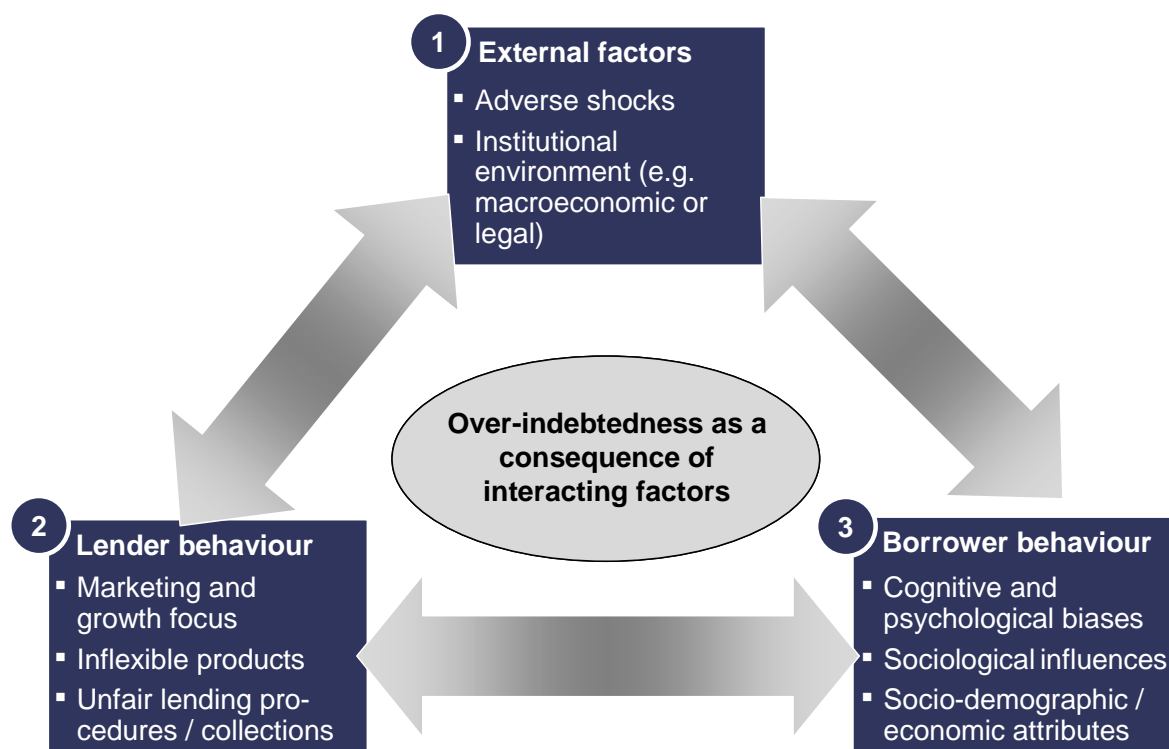
c) Ultimately, empirical studies have analysed a range of **socio-demographic and economic characteristics** for their association with over-indebtedness. While some might not be causal relationships, others are likely to be part of the drivers that explain why borrowers get over-indebted. The most common socio-demographic factors include young *age* (Bridges and Disney 2004; Drentea and Lavrakas 2000; Lea, Webley and Levine 1993; Livingstone and Lunt 1992; Vogelgesang 2003), more and younger *children* (Canner and Lockett 1991; Lea, Webley and Levine 1993; Lea, Webley and Walker 1995), low levels of *education* (Bridges and Disney 2004; Campbell 2006; Canner and Lockett 1991; Gonzalez 2008; Tokunaga 1993), and low or unstable *labour market status* (Banque de France 2005; Lea, Webley and Walker 1995; Gloukoviezoff 2008). Other households particularly at risk are single adult households and those with recent *changes in family composition*, e.g. divorce (Banque de France 2005; Bridges and Disney 2004; Canner and Lockett 1991; Del-Río and Young 2005; Lea, Webley and Levine 1993; Lyons and Fisher 2006; Vogelgesang 2003; Webley and Nyhus 2001), as well as people living in rented *accommodation* as

opposed to home-ownership (Bridges and Disney 2004; Lea, Webley and Walker 1995; Disney, Bridges and Gathergood 2008). Finally, ill *health* (Del-Río and Young 2005; Disney, Bridges and Gathergood 2008), *gender* (Lea, Webley and Levine 1993; Lyons and Fisher 2006) and *ethnicity* (Del-Río and Young 2005) are related to indebtedness. Many of these characteristics associated with over-indebtedness such as having a lot of young children, unstable labour market status, low education and ill health are likely to be highly prominent among microfinance customers. Even if they should not lead to overly careful lending and exclusion of the target group, they should be taken into account in avoiding over-indebtedness.

The most common economic factor in the literature is *low income* (Anderloni and Vandone 2008; Bridges and Disney 2004; Disney, Bridges and Gathergood 2008; Kempson 2002; Lea, Webley and Levine 1993; Lea, Webley and Walker 1995; Livingstone and Lunt 1992; Muldrew 2000). In a developing country study, Collins 2008 finds a correlation of indebtedness to income only in urban but not in rural areas, credit in urban areas consisting mainly of formal and in rural areas of informal arrangements. Other studies point towards the influence of *income instability* (Atkinson et al. 2006; Webley and Nyhus 2001), low *wealth* (Del-Río and Young 2005; Disney, Bridges and Gathergood 2008) and low *returns on the investment* that the loan is used for (Gonzalez 2008; Hulme 2007). While microfinance institutions are aware of lending to low-income costumers that equally combine income instability and low wealth levels, they might add to over-indebtedness by overestimating the returns on investment for their customers and not taking into account that a large share of their credit is not actually put to productive use and does not earn any returns.

d) To sum up, figure 2 provides an over-view of the causes of over-indebtedness. Among external influences, adverse shocks to the income or expenses can turn debt unmanageable. Similarly, the institutional and legal environment can enhance or reduce the risks of over-indebtedness. In microfinance markets in developing countries, institutional protection from over-indebtedness may be weak. A significant share of the responsibility for over-indebtedness lies with lenders. MFIs can push borrowers beyond their limits due to an exaggerated focus on portfolio growth and by means of aggressive marketing techniques. They sometimes offer products that are not appropriate to the borrower's situation, enforce an unrealistic instalment schedule, resist the need to reschedule loan agreements, artificially limit maturities, delay disbursements and so on. Microlenders also contribute to over-indebtedness due to their operating procedures, being too lax about up-front evaluations of repayment capacity, offering intransparent terms and conditions, and using coercive collection practices. Finally, microborrowers play an important role in their own over-indebtedness. Due to cognitive limitations, difficulties to resist temptation, and sociological pressures, they sometimes make irresponsible borrowing decisions. The tendency towards over-borrowing also depends on borrowers' socio-demographic and economic characteristics, many of those that are related to over-indebtedness being particularly prominent among the target group microfinance.

FIGURE 2: DRIVERS OF OVER-INDEBTEDNESS



If a credit relationship actually leads to over-indebtedness that is usually the result of several interacting factors. If a borrower made perfectly informed, rational decisions and did not give in to temptation or subject himself to social pressures, an MFI would most likely face no risk to over-indebt this customer. At the same time, if an MFI put its social mission and customer interest above all other goals, designed products that perfectly matched their customers' needs, carefully evaluated repayment capacity and took the psychological limitations and biases of their customers into account in their communication and lending decisions, even imprudent borrowers would hardly be at risk.

In reality, both parties are bound to make mistakes given the complexity of the situation and their information asymmetries. Adverse shocks may turn even the best borrowing and lending decisions into over-indebtedness triggers in some cases. It is therefore important to design measures to prevent over-indebtedness that tackle address as many of the over-indebtedness reasons as possible. For the remaining microborrowers that can still not be protected from over-indebtedness, additional curative and rehabilitative customer protection measures are required.

4. Challenging 5 myths about microlending and over-indebtedness

Based on the above understanding of the root causes that drive over-indebtedness, this section will challenge the five common myths of microfinance that A) MFI competition is always good for customers, that B) microloans should be used for productive investments only, that C) the success of the microcredit methodology relies on small, regular instalments and a zero-tolerance policy, that

D) the poor over-indebt themselves by making more irrational decisions than the rich, and that E) transparency requires MFIs to publish extensive loan information including annual percentage rates (APRs).

A. Competition is good for borrowers

The ruling opinion in microfinance research is that competition between several MFIs in a market will benefit the MFI's customers (Cull, Demirgüç-Kunt and Morduch 2009; Fernando 2006; Woller 2002a, 2002b). It will make MFIs more professional and efficient, bringing down costs and increase customer service. Whenever commercially oriented MFIs are criticised for high interest rates, a lack of transparency or other profit maximising strategies that are little customer friendly, microfinance experts tend to cite upcoming competition as the silver bullet that will bring the expected benefits of market orientation to MFI clients.

While this argument has come true in certain situations, especially in Bolivia (Porteous 2006), the downsides of competition have been given little attention. In fact, competition impacts the incentive structures for both borrowers and lending institutions. It increases asymmetric information problems by making information sharing more difficult (McIntosh and Wydick 2005). On the borrower side, it reduces repayment incentives for borrowers given the choice of alternative credit sources (Gonzalez 2008). On the side of lending institutions, competition can create pressure on MFIs to over-lend, particularly if new market entrants are more aggressive and pay less attention to repayment capacity (DeVaney 2006). It may also trigger a shift to a more profitable target group, most MFIs aiming to serve the same clientele (European Microfinance Platform 2006). Hellmann, Murdock and Stiglitz 2000 provide theoretical support for these concerns, showing that competition increases moral hazard and incites lenders to gamble. They claim that the negative effect of competition reduces franchise values (i.e. the capitalised value of expected future profits) and thereby lowers incentives for making good loans and incites opportunistic lender behaviour.

Empirical findings on the effects of competition are unclear to date. Against common expectations, Krishnaswamy 2007 does not find confirmation that competition drives MFIs to attract clients of other institutions without properly evaluating their payment capacity. Instead he measures better repayment rates in more competitive branch locations and concludes that MFIs can successfully manage the risks of a competitive environment. According to the empirical findings of Vogelgesang 2003, the effects of competition vary with the macroeconomic environment: in good times the increase in supply leads to better repayment rates, but in economic crises it triggers a deterioration of repayment behaviour.

To conclude, there is a need for further research into the relationship of competition and benefits for borrowers, particularly regarding the risks of over-indebtedness. Studies should be conducted in the geographies that did indeed experience repayment crises and over-indebtedness problems (e.g.

Morocco, Nigeria, Pakistan) and try to isolate the influence that competition between lenders played in leading to these crisis. In the mean time, we should be more careful in considering the effects that competition might have on microfinance customers. It may well represent the major institutional factor to influence over-indebtedness, particularly in the absence of credit bureaus.

B. MFIs should not offer consumer loans

The benefits of microfinance were originally promoted as poverty alleviation through microenterprise development. The idea was not that of consumption smoothening for individuals but an investment into a microenterprise, the returns of which would increase the microentrepreneur's income and help him build assets to move out of poverty. Consumer loans were not considered appropriate as they do not create returns and thus, instead of offering the social benefits of microenterprise loans, risk over-indebting borrowers (Adler 2009; Bensoussan 2009; Gonzalez 2009; Vogelgesang 2003).

A simple argument against this exclusive lending for productive purposes is its lack of feasibility. In fact, a lot of microcredit is used for consumptive purposes (Dichter 2007; Brett 2006). The cash of a microloan generally flows into the borrower's household and is in most cases dedicated to a number of different household expenses, including consumptive and productive uses. As there is no distinction between household and business cash flows, MFIs are hardly able to prevent the use of a loan for household purposes. Furthermore, in a detailed longitudinal study of financial diaries of poor households in developing markets, Collins 2008 finds that even distinguishing which loans or parts of them are used for productive or consumptive purposes is extremely difficult in reality. The paper provides an example of hybrid loan use such as buying a school uniform to provide a child access to schooling – a consumer good and at the same time an investment in the child's education and future income generating ability. Also, an emergency loan that helps a household to fund its daily meals and avoids them falling ill or selling productive assets to cover their liquidity gap might indirectly have productive consequences.

Moreover, feasibility is not the only challenge to the investment loan logic. Over the past years, a number of literature reviews and impact studies have put the original paradigm of microfinance into question. They find only mixed results of impact studies to date and no sufficiently reliable econometric studies to prove that positive impact is in fact attributed to microfinance (Azevedo 2006; Banerjee et al. 2009; Chowdhury 2009; de Mel, McKenzie and Woodruff 2008, 2009; Dupas and Robinson 2009; Garikipati 2008; Goldberg 2005; Odell 2010; Ahlin and Jiang 2008; Karlan and Zinman 2009, 2010; Roodman and Morduch 2009). While increasingly rigorous impact studies continue to assess the empirical results of microfinance, microfinance theory is gradually moving away from the microenterprise approach to a more comprehensive household finance approach, pointing towards the role of microfinance in short-term consumption smoothing and managing the

risks of low and volatile incomes rather than facilitating business investments (Collins et al. 2009; Karlan and Zinman 2009; Roesch and Héliès 2007; Rosenberg 2010)¹¹. Microloans for consumptive purposes serve as a liquidity buffer for emergency needs in situations of health problems or other unanticipated expenses. In addition, the benefits of financial services for the poor include enabling the borrower to make big ticket expenses such as for religious ceremonies and life-cycle events such as weddings.¹² Ultimately, investments into income generating opportunities might also represent such a big ticket expense. There is a slightly counterintuitive effect that not only an excess offer of credit but also its scarcity can cause over-indebtedness: A consumer's lack of tools to manage his financial situation can lead to accumulating non-credit debt or expose borrowers to high cost informal sources that equally increase the risk of over-indebtedness (Zinman 2010; Gloukoviezoff 2008; Anderloni and Vandone 2008; Betti et al. 2001; 2007).¹³

To some up, consumer loans are still frequently identified as a potential source of over-indebtedness as they do not provide debtors with returns for repayment. However, researchers increasingly point out the valuable contribution of consumer loans to consumption smoothing and risk management and warn the industry of depriving the poor of this valuable tool by over-emphasising the myth of poverty alleviation from investment credit (Adler 2009; Collins et al. 2009; Guérin et al. 2009a; Morduch 1995; Rahman 1999). Microloans for consumptive purposes do bear risks, but they can also have positive social impact and to many poor borrowers are more important than investment loans. It is therefore important to offer both types of microloans but tailor loan decisions and products better to the various loan uses, avoiding investment loans where investments do not create sufficient returns and consumer loans where they are not justified by a specific need.

¹¹ Morduch has already highlighted the importance of managing consumption through adverse income shocks in 1995. Besides obvious advantages e.g. of keeping up regular meals for the household, short-term consumption smoothing can have far reaching effects: For example, income irregularities frequently cause children to be taken out of school (Jacoby and Skoufias 1997). The risk management effect of microfinance can reduce the impact of shocks and have positive effects on schooling and education levels (Maldonado and González-Vega 2008).

¹² According to empirical findings of Roesch and Héliès 2007 in South India, emergency uses (health and consumption expenses) are the most frequent motivation for microloans, followed by ceremonies, housing and education.

¹³ The modern view of reasons for microborrowing is an extension of Rutherford (2000) who had already recognised that all basic financial services for the poor ultimately come down to meeting one major need: converting small amounts into lump sums that are required for life cycle events, emergencies and investment opportunities. In this regard, credit can represent just a different mechanism of saving: where reliable savings mechanisms hardly exist, borrowing can be the best instrument to discipline customers to accumulate resources for a specific purpose Banerjee and Duflo (2007); Betti et al. (2007).

C. Microfinance requires a tight loan schedule and zero-tolerance policy

A key feature of the microfinance methodology is its regular instalment schedule. On the one hand, the high frequency of repayments is considered a mechanism that enables borrowers to repay; small regular amounts being easier to assemble than large less frequent ones. On the other hand, it is considered an important incentive or disciplining mechanism for borrowers to repay their loans, highlighting any repayment problems to the loan officer early on. In addition to the instalment schedule, a focus of microfinance best practice has in the past been on its zero-tolerance policy (see e.g., Stearns 1991). It incites MFIs to teach their borrowers the importance of regular repayments and differentiate MFI lending from frequently forgiven government lending. It promotes the early recognition of repayment difficulties and keeps borrowers from piling up obligations (Gonzalez 2008). It avoids strategic defaults and even mass defaults that can result from the spill-over effects of a certain level of delinquency on non-delinquent borrowers (Krishnaswamy 2007; Stearns 1991).

On the other hand, the typical weekly instalment schedule of microfinance may be too inflexible given the volatility of microborrowers' cash flows (Collins et al. 2009; Guérin et al. 2009a). At their typical low level of income, they might simply have no sustainable option to repay a loan in a “bad” week. Also, in the microfinance investment loan logic, the typical repayment schedule starts too early for most productive investments to already generate returns (Azevedo 2006).¹⁴ While testing their hypothesis only in a low delinquency environment, Field and Pande 2008 find that switching from a weekly to a monthly instalment schedule is feasible without effects on repayment discipline. Further research should investigate the question of instalment schedules in environments where more differences in repayment capacity are visible and assess the impact of loosening the other typical characteristics of the microfinance methodology.

Also, the wide-spread zero-tolerance policy hinders loan officers from rescheduling loans for borrowers in short-term liquidity difficulties. By forcing them into delinquency and potentially adding late fees or increased interests to their obligations, the lack of rescheduling may turn a short-term liquidity gap into a longer-term problem. It may put the obligors under avoidable repayment pressures and the stress and humiliation of delinquency. According to reports in practitioner-oriented publications, the promotion and implementation of a zero-tolerance policy in microfinance has reached the extent that MFIs happily reported how borrowers in an area of famine had gone hungry and even sold their chicken to be able to repay on time (Campion and Lindner 2008). In addition to impeded reschedulings, there are also examples of unsuitable reschedulings, e.g. adding the missed instalment immediately to the next one instead of adding one more instalment at

¹⁴ In addition to the frequency of repayments, maturities for non-productive credit are perceived as too short by many borrowers (Bouquet et al. 2007).

the end of the repayment schedule. This almost certainly implies over-burdening the borrower again (Gloukoviezoff 2008).

To conclude, both the regular instalment schedule of microfinance and the zero-tolerance policy serve a good purpose and might indeed help some borrowers to stay out of over-indebtedness. At the same time, they are not appropriate to all borrower circumstances and should not be applied as sternly as has been promoted in the past or they may well create the exact debt problems they are aiming to avoid.

D. The poor face higher over-indebtedness risks because they make more irrational decisions than the rich

One of the causes of over-indebtedness is the sometimes unreasonable behaviour of borrowers, taking on more debt than they should because they cannot resist the temptation of immediate consumption or consider the negative consequences of a loan in the future less important than its immediate benefits at present. From the perspective of behavioural economics, there are several approaches to explain why people inadvertently fail to act for their own happiness. For example, choices that are rational based on the current utility function in every single instance may not maximise long-term individual welfare.

An early account of time inconsistency is that of *procrastination* according to Akerlof 1991.¹⁵ If it is rational for example, to save for emergency or retirement, but present costs of postponing consumption seem higher than the distant benefit of the savings, then in each individual moment it may seem rational to start saving just a little bit later. The loss of postponing saving by one more day seems negligible. However, individuals tend not to foresee that the dilemma will be the same in the next instance and in all the following ones, ultimately leading to over-consumption and leaving the individual without savings. For borrowing, the effect may be the same, a small purchase on credit not causing problems, but the chronic accrual of credit leading to over-indebtedness. The cumulated effect of a series of repeated small mistakes results in a serious loss for the individual.

The most wide-spread explanation of time inconsistent behaviour is the *hyperbolic discount function* (see Laibson 1997). According to this theory, near-term events are subject to higher discount factors than far away events. The result is again that individuals will decide to e.g. start saving or stop borrowing next month – and then repeatedly postpone it to the month after. To help conscious consumers overcome the negative effects of their hyperbolic discount function, consumers need commitment devices such as fixed savings plans. This way, at the time of decision making, temptation does not yet come into play. Gul and Pesendorfer 2004 provide a similar explanation with their *theory of temptation*. They develop a theoretical model of dynamic self-control

¹⁵ Also see the savings example in Guérin 2000.

preferences, assuming that consumers use self-control to mediate between temptation and their utility in the long run. If individuals are not able to resist temptation in the present period, self-control is a question of commitment mechanisms for future periods. Finally, Fudenberg and Levine 2006 develop the "*dual-self*" model as an alternative approach to explain self-control problems. They represent decisions as games between a short and a long-run self with the same preferences but different views on the future, claiming that this is a simpler and less ambiguous model than hyperbolic discounting and can explain the same empirical findings, e.g. over-borrowing.

Several researchers have analysed the role of temptation and time inconsistencies particularly for the poor. They confirm that the poor are subject to the same behavioural biases but their findings differ with regards to the comparison of the poor versus the rich. Strotz 1956 for example argues that the poor are more likely than higher-income households to give in to temptation and chose immediate gratification. Banerjee and Duflo 2007 state the same but explain that this is not due to higher irrationality. They emphasise that for the poor, their potential daily savings are very small and the likelihood high that the savings get consumed before having accumulated enough to make an investment. In this situation, even starting to save may not seem worthwhile. This effect is later labelled "*temptation tax*" (Banerjee and Mullainathan 2009). Banerjee and Mullainathan 2009 model additional reasons, why the poor may be more subject to temptation than the rich: The goods that usually lead to temptation and spontaneous purchases are *low-price satiation goods*. Increasing spending on such goods increases pleasure only up to a certain limit, that may be unproblematic for the rich but a significant share of income for the poor. If the poor seem more irrational than the rich, that is largely a result of *declining temptations*. In addition, investments that the poor can make are very small. They may seem unimportant because they will never make a substantial change to the individual's economic circumstances. Several scholars thus consider the poor more time inconsistent and short sighted than the rich, some providing arguments why this short-sightedness is actually not a sign of stronger irrationality. Bertrand, Mullainathan and Shafir 2004 go even further, suggesting that the poor are in fact just prone to the same biases as everybody else – but in their vulnerable situation these biases have worse consequences.

There also is empirical support for time inconsistent behaviour among the poor and for their need for commitment devices (Ashraf, Karlan and Yin 2006; Guérin 2000). While most studies cannot distinguish reasons and link time inconsistencies to irrationality or to the incentive structures of lives in poverty, Bauer, Chytlová and Morduch 2009 add empirical confirmation that present-biased women borrow more from microfinance institutions. They show that this is most likely not because the microfinance customers are giving in to temptation, but rather because they are aware of their present-bias. They use the loans as commitment devices and mechanism to replace savings, in fact handling their psychological biases quite well. The study therefore supports the argument that higher irrationality levels are not the reason for the time inconsistent behaviour of the poor.

To sum up, microfinance over-indebtedness may be caused by time-inconsistent borrowing decisions of microfinance customers that fail to create a sustainable balance between the short-term benefits and long-term costs of a loan. Time inconsistency and temptation are strong behavioural influences already for consumers in developed countries. In addition, there are numerous reasons, why microfinance customers may find the inter-temporal balancing of their utility particularly difficult, resulting from the incentive structures they live in. Moreover, the same amount of weakness and temptation in a microborrower is likely to lead to worse consequences than for richer individuals and may push him into over-indebtedness even faster. The poor are thus not less rational than the rich but they are subject to stronger challenges and the impact of their mistakes is more severe. While it is true that poorer individuals are more at risk of over-indebtedness than those that are better off, this is not due to a lack of rational abilities but rather due to their difficult financial situation and the effects that their circumstances have on their decisions.

E. To avoid over-indebtedness, MFIs need to be transparent: provide sufficient information and state an Annual Percentage Rate (APR)

An important reason for the over-indebtedness of borrowers is that the consequences of taking a loan are simply hard to understand. Lenders can exploit this challenge, promoting a loan's upsides and trying to downplay or hide the cost of credit. In microfinance pricing, there are numerous means for MFIs to obscure the actual cost of their products to clients. Among the most common MFI techniques to reduce pricing transparency are the introduction of fees to increase income without stating higher interest rates, the communication of monthly instead of annual interest rates, and the application of interest to a constant instead of declining balance.

Customer protection advocates have therefore promoted an increase in pricing transparency. Especially, a comparable format in stating interest rates is required to represent the full cost of a loan product and enable borrowers to compare offers between different lending institutions. Experts promote the communication of an Annual Percentage Rate (APR), a measure that is considered less subject to tricks and – based on a common formula – makes credit offers more comparable. Furthermore, the quest for transparency requires institutions to publish extensive information on their terms and conditions, making all the implications of their products available to loan applicants before signing a loan contract. In developed countries, standardized documents of many pages of loan details have been developed to oblige lenders to provide comprehensive information on their loan offers.

Even if designed for the purpose of protecting customers, both, the APR formula and the extensive reporting formats for loan terms and conditions might not always promote the benefit of customers. This is largely due to a misalignment between transparency guidelines and the mental processes of

human beings. If transparency guidelines are not compatible with people's way of thinking, they risk not being effective or even counterproductive.

Psychologists have identified that people often do not think about spending decisions and loan decisions by means of discount rates as economic logic would suggest. Instead there have been several suggestions, how human decision makers keep track of their budget and make spending decisions that fit their cognitive capacity. According to Thaler 1985, individuals construct cognitive representations of their finances in the form of implicit or explicit *mental accounts*. It allows them to keep several budgets in mind that divide income and expenditures into separate categories e.g. for food expenses, leisure expenses, and luxury expenses. Each can have its own budgeting constraint as a frame of reference for consumption and credit decisions. Regarding a loan contract, mental accounts suggest a check of the intended expenditures in the form of repayments against the future budgets for the item to be purchased, indicating the affordability of the purchase on credit. In a similar perspective, Kahneman and Tversky 1984 suggest the concept of a *psychological account* as a frame of reference for consumption decisions. They focus on a "total account" perspective at each point of time that is complementary to Thaler's notion of on-going budgeting representations. Applied to loan decisions, a total account represents the sum of all budget periods over the duration of the loan, without discounting future repayments.

Ranyard and Craig 1995 combine both Thaler's and Kahneman and Tversky's theories in the perspective of *dual accounting*. They confirm that people often do not think about the cash flows of instalment credit in terms of discounting but instead use a mental framework where both total accounts and recurrent budget period accounts influence credit decisions. Total accounts represent the total cost related to a loan to balance income and expenditure in the long term. As total accounts do not take temporary stresses of repayment obligations into account, the evaluation of the recurrent effects of repayment obligations is covered by ongoing budget period accounts to maintain a temporary equilibrium in any future period.¹⁶ Using dual accounts therefore improves decision quality – and is a very different approach from rational economic discounting.

Empirical findings confirm the psychological theories on time-related information processing: Tiwari, Khandelwal and Ramji 2008 find that clients think about their loans in terms of how much they owe on a weekly basis but know very little about their interest rate or total interest expenses. This supports the theory of mental accounts. Ranyard and Craig 1993 find that borrowers underestimate the repayment periods and total repayment amounts of flexible loans. In line with the theory of psychological accounts, borrowers need information on total interest charged to improve their estimates. Lewis and van Venrooij 1995 repeat these findings for fixed loans. Stating an APR to represent the cost of credit is therefore not compatible with borrower's instinctive cognitive

¹⁶ Recurrent accounts alone would bias decisions towards longer loans with lower monthly payments and probably drive up overall cost.

approach to a loan decision. In consequence, if loan information is not appropriate to mental processes, underestimating loan duration may imply underestimating the impact of a credit decision and thus potentially contribute to over-indebtedness.

Finally, Collins et al. 2009 point out that especially for the short-term loans frequently used by microfinance customers to bridge liquidity gaps, an APR may not represent an appropriate measure of price. After all, when borrowers make loan decisions just over a few days or weeks, they are going to decide based on the actual cost of the loan to their budget rather than on a hypothetical annual price. Collins et al. 2009 compare pointing out the high APR of a loan to borrowers to dissuading someone from taking a taxi to the airport based on the cost they would face if they used a taxi for every trip they had to make all year round. In the situation of many microfinance borrowers, the interest on a loan is rather perceived as a fee for a service (bridging the liquidity gap) than as the inter-temporal cost of funds. Last but not least, the trend towards communicating more and more precise and comprehensive loan information to borrowers is noble as such – but it may actually contribute to the information overload that borrowers already suffer from and discourage them from making well reflected borrowing decisions. The more extensive the documentation, the more confusing and discouraging it seems.

As a result, MFIs should take the challenges of their customers with regards to budgeting and time related information processing seriously and adapt their customer communication accordingly. If the terms and conditions are presented in a way that is not suitable for the borrowers' mental representations, they may not understand the implications of taking a loan and may over-indebt themselves. From a customer protection perspective, MFIs should therefore aim at the right balance between transparency and understandability, providing an easy to grasp overview of their loan costs that focuses on the information psychology has shown to be easiest to process.

5. Conclusion

Over-indebtedness is a serious risk to the microfinance industry. First, it completely contradicts the sector's social mission. It can enhance the poverty of microfinance customers, threaten their social position and even lead to psychological disorders and health problems. Second, at the latest when over-indebtedness triggers default, it represents a threat to the institutional sustainability of MFIs. As a third aspect, over-indebtedness is threatening to damage the reputation of the microfinance industry as such and have spill-over effects that would affect even healthy institutions and their customers. Given the current trend towards an interpretation of microfinance impact as reducing the vulnerability of poor households, it is interesting to note that the over-indebtedness evidence points to an increase in household vulnerability due to microborrowing. Based on an improved understanding of the causes of over-indebtedness, it is therefore necessary to implement effective

customer protection measures to reduce the risk of over-indebtedness for MFI customers and to provide relief to those borrowers who are already in trouble.

This paper develops an innovative sacrifice-based definition of over-indebtedness. Borrowers should count as over-indebted if they consider themselves to be suffering from unacceptable sacrifices to repay on time, taking their subjective knowledge about their future prospects and the diverse implications of the different types of debt into account. In a review of influence factors, this paper provides an unprecedented overview of the over-indebtedness causes that have been identified in the microfinance literature to date, as well as in the industrial nation's consumer finance literature from the perspective of economics, psychology and sociology. It highlights the interacting factors and responsibilities behind the over-indebtedness phenomenon, uniting the interdisciplinary approaches into a comprehensive analysis of over-indebtedness causes. Lenders are shown to enhance over-indebtedness risks via their marketing and growth focus, unsuitable product characteristics and inappropriate lending procedures. Borrowers contribute to the problem as a result of their cognitive biases, psychological misrepresentations, and responsiveness to sociological pressures. In addition, external influences such as adverse shocks to the income and expenses of borrowers can drive borrowers into over-indebtedness, facilitated by the institutional and legal environment.

Further deepening the discussion of over-indebtedness drivers, the paper challenges a number of conventional beliefs such as the inappropriateness of consumer loans for microfinance customers, the requirements of a tight repayment schedule in the microfinance methodology, and the universal benefits of competition for customers. As a result, the paper provides the basis for the design of appropriate customer protection mechanisms, tackling the phenomenon at its roots. Only with the knowledge of the different external factors, lender behaviours and borrowers behaviours that create over-indebtedness, can governments or regulators, MFIs, industry organisations and other parties such as educational institutions for financial literacy tailor effective over-indebtedness protection measures to the microfinance market.

Further research is required into this very young field of scholarship, testing the transferability of over-indebtedness drivers from the consumer finance literature to the microfinance context. Empirical research will have to confirm the prevalence of over-indebtedness in a specific geography and to examine in more detail the causes of debt problems in that market. Also, qualitative research needs to provide insight into the experiences of over-indebted customers and the sacrifices they have to make. On the basis of these findings, the microfinance industry will have to develop appropriate approaches of customer protection. Academic research can contribute to this process both with answers to the above questions and by analysing the available customer protection approaches in the commercial banking industry for transferability to the MFI sector.

Appendix 1:

DIMENSIONS OF OBJECTIVE OVER-INDEBTEDNESS MEASUREMENTS

Type of choice	Dimension of choice	Categories			
1 Measures	<i>Metric</i>	Continuous	Ordinal	Dichotomous	
	<i>Unit of measurement</i>	Absolute amounts ¹	Ratios (relative amounts)	Absolute number ²	Duration ³
	<i>Parameters</i>	Stock data	Cash flow data		
	<i>Level of differentiation</i>	Fixed thresholds	Flexible thresholds ⁴		
2 Components	<i>Types of expenses</i>	Debt expenses	Debt + fixed expenses	All expenses	
	<i>Types of products</i>	Installment debt ⁵	Revolving debt	Mortgages	Non-credit debt
	<i>Types of obligations</i>	Repayments + interest	Interest only		
	<i>Types of income</i>	Gross income	Disposable income	Above minimum existence level	

1 E.g. of debts or in arrears

2 E.g. of credit arrangements or loans in arrears

3 E.g. of delinquency

4 E.g. specific to borrower characteristics such as age

5 Can be further differentiated into secured and unsecured loans

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