

MILK Brief #7: A Microinsurance Puzzle: How do Demand Factors link to Client Value?¹

Why should low-income people buy insurance? The quick answer is, of course; because they need it. Studies from across the developing world have confirmed this need for financial risk management tools. However, people who may **need** insurance do not always **want** it. If clients have not bought a seemingly valuable insurance product, the considerations outlined in this brief can help to shed light on possible reasons why.

This significant gap between need and want creates a number of issues for microinsurance providers. For example, insurers looking to estimate the potential market for a product often significantly over-estimate demand. They might estimate the “need”, and likely resultant demand, for insurance by identifying a large population that lacks formal risk coping mechanisms and identifying insurable risks faced by that population. Yet without developing a good understanding of the factors that influence that population’s “demand” for microinsurance, these estimates commonly have no link to reality (McCord et al., 2011). Indeed, one of the largest frustrations that insurers share with us when implementing new microinsurance programs is that the original target market take-up is much lower than the rate they projected. As a result, when we speak to insurers about client value, they are often most interested in understanding the factors that may or may not influence demand.



Microinsurance literature has also focused substantially on demand. It often shows that consumers place a value on a benefit according to their perception or expectation. This **perceived** value includes, among other things, the perceived **likelihood** that the shock will occur (Ito & Kono, 2009) and their **trust** that they will be able to collect claims (Geisbert et al., 2011). Clients compare the perceived value of insurance to that of **alternative coping mechanisms** available to them, such as savings or reliance on family networks. In a world of perfect information and product **affordability**, clients who perceive value on these terms would always buy insurance. However, demand is not always driven by rational thought. Research in psychology and behavioral economics explores another set of drivers behind decisions, which can lead people to make choices that they themselves, after careful and rational consideration, would not prefer. These **non-value reasons** might include **social pressures, fears, or intuition**. This brief explores the linkages between demand and value and provides a framework for thinking about when demand for a microinsurance product may reflect the product’s value and when it may not.

Wondering Why People aren’t Buying? Start with the Product

Clients choose to buy insurance when, in their perception, the value of the product outweighs other available alternatives. But before they consider an insurance product’s value, potential clients must first be **aware** that the product exists. In some cases (e.g. Rao et al., 2009) a lack of awareness of the product among the target population can be the primary reason that demand (and take-up) may not reflect need.

Products of course need to be valuable from the start. If an insurer perceives a gap between demand and need, they may have simply misperceived the needs of the target population. There is a substantial body

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of existing research, both academic and practitioner,² that has examined characteristics of **products** and some characteristics of the **target population** (such as income and wealth) that can influence demand.

According to the literature on demand in microinsurance summarized in this table and in detail in Appendix A, clients perceive value in an insurance based on their assessment of the **cost of the product** (including indirect costs such as transaction costs of enrolling and paying premiums, as well as opportunity costs), the **likelihood of a shock** occurring (for example, a person who expects that he is very likely to experience an illness will tend to have higher demand for a health product covering that illness), the **size of the benefit** they will receive if the shock occurs, their **trust** that insurer will pay, any improvements in **service quality** (such as access to a better hospital or speedier payment of claims), and the **peace of mind** associated with knowing that financial losses caused by the shock will be covered. Potential clients weigh the perceived value of insurance against the value of other available strategies for coping with the risk, such as liquidating savings or assets, or informal risk-sharing with families or communities. The importance a particular client assigns to each of these factors depends on the context, on the client's needs, on their ability to pay and on preferences, including risk aversion.³

Increase in...	Causes demand to
awareness	↑
perceived cost	↓
perceived ability to pay	↑
perceived likelihood of shock	↑
perceived size of the benefit	↑
trust in the insurer	↑
perceived service quality	↑
peace of mind	↑
value of alternatives	↓

When Bad Things Happen to Good Products

Low take-up can happen even when products are well designed or offer value to clients. In this case, there may be an inaccurate **understanding** of the product, a **miscalculation** of the risk or its cost, or a lack of **trust** in an insurer simply because it is **unfamiliar** to a potential client. A number of studies find that demand is higher when a product is offered through a delivery channel that a client already has had a transactional experience with, because this familiarity increases clients' trust that they will be paid when they make a valid claim.

When a client's perception of a product's value changes, demand can change without any substantive changes to the product itself. Thus a greater understanding of a product through training and education efforts should lead to greater demand. However, there is limited evidence of effective ways to improve demand through training and education. Some studies find higher demand in those who understand the product better and/or have taken a training session on insurance (e.g. Akotey et al., 2011; Donfouet & Makaudze, 2010), but this finding is not universal (e.g. Cole et al., 2010). Moreover, we can learn a few broadly applicable lessons from studies of the role of training and education on take up in a relatively new industry such as microinsurance, where there is still little consensus around best practices.

In thinking about how clients understand products, special attention should be paid to their **perception of the covered risk**, which may play a greater role in perceived value than product information that is readily available to them. Psychology and behavioral economics teach us that people tend to misperceive risk, often by large degrees; they frequently underestimate (but sometimes overestimate) the likelihood that these insurable events will occur (Laury et al., 2008; Shanteau, 1992; Urbany et al., 1989). People have particular difficulty accurately assessing low probabilities, and tend to either ignore those risks entirely or to make irrational decisions concerning them (Anderson, 1974; Shanteau, 1992, citing Shoemaker, 1980; Urbany et al., 1989). Perception of risk is also strongly influenced by prior events.

² McCord (2007) and Sebstad et al. (2006) describe these factors from the practitioner's perspective. We focus on academic studies in this brief because they provide more rigorous evidence of the links between client and product characteristics and demand, but note that practitioners identify similar influencing factors.

³ The role of risk preferences in decisions to purchase insurance has been studied extensively, particularly for traditional insurance products (see, e.g., Marquis & Holmer, 1996; Shanteau, 1992; Tversky & Kahneman, D, 1991). These preferences often change with the size, type, and probability of the insured event. Other preferences, such as a potential client's financial goals, can also affect how these factors are weighted (see, e.g., MetLife, 2011).



People underestimate the likelihood that a low-probability insurable event may occur two years in a row, even when they have accurate information about probability.⁴ This belief that when an event happens, one is “inoculated” against a repetition of that event appears to be more pronounced for very low frequency events (Shanteau, 1992). This can be especially common with climatic or natural disasters. The difficulty and cost of determining the true probability of an event may also deter some people from purchasing insurance, especially for very low probability events, even if the premiums are favorable (Kunreuther & Pauly, 2004).

Psychological factors can also influence demand⁵

The factors influencing perceived value described above do not give us a complete picture of why people choose to buy (or more often, not to buy) microinsurance. Even if we assume that a microinsurance product is valuable and that potential clients have an accurate understanding of its value, other forces may keep demand low. In their book *Nudge: Improving decisions about health, wealth, and happiness*, Richard Thaler and Cass Sunstein describe some of the mistakes that people make when decisions are influenced by intuitive or unconscious responses rather than deliberate, self-conscious reasoning.⁶ A few of these are especially notable in the context of demand for microinsurance. **Status quo bias** is our tendency, when faced with a decision, to do nothing or maintain our current or previous decision (Bertrand et al., 2006; Samuelson & Zeckhauser, 1988). Studies have found that people tend overwhelmingly to “choose” the default option in health and retirement plans (Samuelson & Zeckhauser, 1988), auto insurance decisions (Johnson et al., 1993), and organ donation (Johnson & Goldstein, 2003). When offered the opportunity to purchase additional insurance coverage, participants in the RAND Health Insurance Experiment also showed inertia (resistance to changing their current plan) (Marquis & Holmer, 1996). In the context of deciding whether to enroll in a microinsurance product, the status quo or default option for almost all potential microinsurance clients is *not* enrolling, which may partially explain why enrollment rates continue to be low even if potential clients think the product is valuable.

Loss aversion refers to our inclination to strongly prefer avoiding losses over acquiring gains (Tversky & Kahneman, 1991). This implies that if potential clients think of insurance as a financial product they have to pay for, demand will be lower than if they concentrate on its role as a tool for avoiding losses. Changes in the way a microinsurance product is framed by marketing literature or insurance promoters can influence how the target market views it, while the product’s attributes and the facts available to potential clients remain the same (Bertrand et al., 2006; Dalal & Morduch, 2010).

People’s choices also tend to **conform** to those of the people they are exposed to (Thaler and Sunstein, 2008). People who observe others making even obviously wrong choices tend overwhelmingly to conform to those choices in their own actions (Asch, 1956). This tendency can lead to perpetually low enrollment rates in microinsurance, as potential clients base their decision not to enroll in part on observation of their neighbors’ reluctance to sign up. On the positive side, group lending programs in microfinance are often tapped as a channel for selling insurance that leverage the positive “peer pressure” effect of the group toward buying insurance.

Another reality that has little to do with the value of a product but can drastically decrease demand is the difficulty all people face in **making and sticking to plans** with respect to their financial lives. This difficulty, which is often more acute for the poor, tends to have more severe consequences for them, because they have fewer good options, variable and uncertain income, and less room for error

⁴ Shanteau (1992) describes a lab experiment in which participants were told that a disastrous event occurred last year, were told the probability of that event, and were asked the likelihood of recurrence.

⁵ Dalal and Morduch (2010) explore the “psychology of microinsurance,” describing how changes to a product’s design, pricing structure, and marketing approach may increase demand by building on insights from behavioral economics.

⁶ The term “Automatic System” is used to describe the influence of intuitive or unconscious responses, and “Reflective System” to describe deliberate, self-conscious reasoning. Where a person’s Reflective System might decide whether to buy a microinsurance product after carefully considering its value, the influence of that person’s Automatic System could lead to a very different result (and one that they would not, upon careful reflection, actually prefer). The authors go on to discuss how policy interventions can “nudge” people toward making the decision they prefer, the one they would make after careful consideration of all relevant issues.



(Mullainathan & Krishnan, 2008). A related barrier is lack of confidence in financial skills, which can deter people from making plans (MetLife, 2011). **Small up-front “hurdles”** that do not represent real barriers to enrollment can nonetheless act as very effective deterrents (Bertrand et al., 2006). These hurdles can include presenting multiple options on a flyer advertising a loan product in South Africa (Bertrand et al. 2005), requiring low-income Chicagoans to take an extra step to open a savings account (Bertrand et al., 2006), or making people travel a trivially longer distance to access a medical facility (*Ibid.*, citing Van Dord & Moos, 1976).

Implications for MILK’s work: Demand as the link between value and business case

Literature on demand for microinsurance and traditional insurance, behavioral economics, and psychology can teach important lessons about when and how demand for microinsurance products reflect perceived value, actual value, or non-value influences. MILK’s client value team is exploring these issues further through original research on client value of microinsurance. We are keen to better understand the factors that drive demand, and how these are linked to clients’ perceptions of value in microinsurance.

Demand lessons also serve as a link between client value and making a business case for microinsurance. Porteous (2005) describes the “access frontier” approach to understanding how markets work to reach the poor. It recommends identifying the crucial “market development zone” of potential clients who are eligible to enroll and can afford the product. Understanding why people would choose to buy or not to buy insurance based on their perception of its value, their understanding of the product, and non-value factors can help identify this “market development zone”. It can also help insurers think critically about product flaws.

Questions to ask if a product has low demand

1. Have we identified an appropriate target market that is likely to buy insurance?
2. How much of our target market is not buying our product?
3. Does the product actually fill a risk management need of this market more optimally than other tools available to those potential clients? *If not, what product interventions might improve value?*
4. Are those potential clients aware of the product?
5. Is their perception of its value inaccurate in some way?
6. Are they influenced by non-value factors?
7. *What marketing interventions can overcome the challenges created by #4-6?*

Reaching this critical market segment that “needs” insurance but does not yet demand it requires first identifying the relevant characteristics of the segment, then offering valuable products through effective marketing. When a target market is ripe for insurance yet take-up is still low; modifying the product, providing more or clearer information, or implementing other creative marketing strategies can be useful in improving take-up. The work discussed in this brief can tell us a great deal about what factors may influence demand for good products and how. By tapping into this research, practitioners can develop targeted adaptations to products and marketing strategies to increase demand by better aligning clients’ perception of products’ value with their actual value.

References

1. Anderson, D. R. (1974). The national flood insurance program – problems and potentials. *Journal of Risk and Insurance*, 41, 579-599.
2. Asgary, A., Willis, K., Taghevaei, A. A., & Rafeian, M. (2004). Estimating rural households’ willingness to pay for health insurance. *European Journal of Health Economics*, 5, 209-215.
3. Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs*, 70 (9), 1-70.
4. Atokey, O. J., Osei, K. A., & Gemegah, A. (2011). The demand for micro insurance in Ghana. *The Journal of Risk Finance*, 12, 182-194.
5. Bertrand, M., Karlan, D., Mullainathan, S., Shafir, E., & Zinman, J. (2005). What’s psychology worth? A field experiment in the consumer credit market. Working Paper No. 11892. Cambridge: National Bureau of Economic Research.
6. Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision-making among the poor. *Journal of Public Policy and Marketing*, 25, 8-23.
7. Bhat, R., & Jain, N. (2006). Factoring affecting the demand for health insurance in a micro insurance scheme. Indian Institute of Management Working Paper no. 2006-07-02. 10365. National Bureau of Economic Research.
8. Cai, H., Chen, Y., Fang, H., & Zhou, L.-A. (2010). Microinsurance, trust, and economic development: Evidence from a randomized natural field experiment.
9. Chantarat, S., Mude, A. G., Barrett, C. B., & Turvey, C. G. (2010). The performance of index based livestock insurance: Ex



ante assessment in the presence of a poverty trap. (Under review).

10. Chee, G., Kimberly, S., Kapinga, A., & Musau, S. (2002). Assessment of the community health fund in Hanang District, Tanzania. Bethesda, MD: Partnerships for Health Reform, Abt Associates Inc.

11. Cole, S., Giné, X., Tobacman, J., Topalova, P., Townsend, R. & Vickery, J. (2010). Barriers to household risk management: Evidence from India. Harvard Business School working paper 09-116.

12. Dalal, A., & Morduch, J. (2010). The psychology of microinsurance: Small changes can make a surprising difference: Microinsurance Paper No. 5. Geneva: International Labour Organization.

13. Donfouet, H. P. P., & Makaudze, E. M. (2010). Economic value of willingness to pay for a community-based prepayment scheme in rural Cameroon. Microinsurance Research Paper No. 3. Geneva: International Labour Organisation Microinsurance Innovation Facility.

14. Dror, D. M., Radermacher, R., & Koren, R. (2006). Willingness to pay for health insurance among rural and poor persons: Field evidence from seven micro health insurance units in India. *Health Policy*. doi:10.1016/j.healthpol.2006.07.011

15. Fitzpatrick, A., Magnoni, B., Thornton, R. L. Micro-insurance utilization in Nicaragua: A report on effects on children, retention, and health claims. Forthcoming.

16. Geisbert, L., Steiner, S., & Bendig, M. (2011). Participation in micro life insurance and the use of other financial services in Ghana. *The Journal of Risk and Insurance*, 78, 7-35. doi: 10.1111/j.1539-6975.2010.01405.x

17. Giné, X., Townsend, R., & Vickery, J. (2008). Patterns of rainfall insurance participation in rural India. *World Bank Economic Review*, 22, 539-566. doi:10.1093/wber/lhn015.

18. Ito, S., & Kono, H. (2009). Why is the take-up of microinsurance so low? Evidence from a health insurance scheme in India. Institute of Developing Economies.

19. Kamuzora, P., & Gilson, L. (2007). Factors influencing implementation of the Community Health Fund in Tanzania. *Health Policy and Planning*, 22, 95-102. doi:10.1093/hdoi:10.1093/heapol/czm001.

20. Kunreuther, H., & Pauly, M. (2004). Neglecting disaster: Why don't people insure against large losses? *Journal of Risk and Uncertainty*, 28, 5-21.

21. Laury, S. K., McInnes, M. M., & Swarthout, J. T. (2008). Insurance decisions for low-probability losses. Andrew Young School of Policy Studies Research Paper Series Working Paper 08-05. Atlanta: Georgia State University.

22. Marquis M. S., & Holmer, M. (1996). Alternative models of choice under uncertainty and demand for health insurance. *Review of Economics and Statistics*, 78, 421-7.

23. McCord, M.J. (2007). Microinsurance NOTE 4: Product development – Making microinsurance products successful. USAID

24. McCord, M. J., Zenklusen, O., & Steinmann, R. (2011). "Not so fast! Towards realistic growth expectations in

microinsurance". The MicroInsurance Centre.

25. Mechanic, D. (1998). The functions and limitations of trust in the provision of medical care. *Journal of Health Politics, Policy and Law*, 23, 661-86.

26. MetLife. (2011). MetLife Study of the American dream: The do-it-yourself dream.

27. Mullainathan, S., & Krishnan, S. (2008). Psychology and economics: What it means for microfinance. New York: Financial Access Initiative.

28. Petrolia, D. R., Landry, C. E., Coble, K. H. (2011). Risk preferences, risk perceptions, and demand for flood insurance. Under review. Available at SSRN: <http://ssrn.com/abstract=1843326>.

29. Porteous, D. (2005). The access frontier as an approach and tool in making markets work for the poor. DFID.

30. Rao, K. D., Waters, H., Steinhardt, L., Alam, S., Hansen, P., & Naeem, A.J. (2009). An experiment with community health funds in Afghanistan. *Health Policy and Planning*, 24, 301- 311.

31. Samuelson, W., & Zeckhauser, R. J. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, 7-59.

32. Schneider, P. (2004). Why should the poor insure? Theories of decision-making in the context of health insurance. *Health Policy and Planning*, 19, 349-55.

33. Schneider, P., & Diop, F. (2001). Synopsis of results on the impact of community-based health insurance on financial accessibility to health care in Rwanda. Health, Nutrition and Population Family Discussion Paper. Washington, DC: World Bank.

34. Sebstad, J., Cohen, M., & McGuinness, E. (2006). Guidelines for market research on the demand for microinsurance. USAID.

35. Shanteau, J. (1992). Decision making under risk: Applications to insurance purchasing. In J. F. Sherry & B. Sternthal (Eds.), *Advances in consumer research*. Chicago: Association for Consumer Research.

36. Thaler, R., & Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.

37. Thornton, R., Field, E., Hatt, L., Islam, M., & Solís, F. (2009). Social security insurance for the informal sector in Nicaragua.

38. Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference dependent model. *Quarterly Journal of Economics*, 106, 1039-1061.

39. Urbany, J. E., Schmit, J. T., Butler, D. D. (1989). Insurance decisions (or lack thereof) for low probability events. *Advances in Consumer Research*, 16, 535-541.

40. Zick, C. D., Mathews, C. J., Roberts, J. S., Cook-Deegan, R., Pokorski, R. J., & Green, R. C. (2005). Genetic testing for Alzheimer's Disease and its impact on insurance purchasing behavior. *Health Affairs*, 24, 483-490. doi: 10.1377/hlthaff.24.2.4

Microinsurance Learning and Knowledge (MILK) is a project of the MicroInsurance Centre that is working collaboratively to understand client value and business case in microinsurance. Barbara Magnoni leads the client value effort and Rick Koven leads the effort on the business case. For more information contact Michael J. McCord (mjmcord@microinsurancecentre.org), the project director.



Appendix A. Summary of Literature on Client Demand for Microinsurance

Perception		How Perceived Value Can Influence Demand: Existing Microinsurance Literature	
of:	May be influenced by:	Leading to effects on demand:	
Cost of insurance / Ability to pay	Subsidized premiums	<i>Positive</i> , as cost of the premium goes down ^{11, 15, 37}	
	Streamlined and easy-to-understand procedures	<i>Positive</i> , as time costs and psychological costs of enrollment go down ^{15, 37}	
	Credit/liquidity constraints	<i>Negative</i> , as it is difficult to make funds available at the time premium payments are due ^{10, 17}	
	Premium flexibility	<i>Positive</i> , as premium schedules match the timing and the nature of income flows ⁴	
	Involvement of an effective delivery channel	<i>Positive</i> , as the transaction costs of paying premiums and processing claims are diminished ⁴	
	Household wealth or income	<i>Positive</i> , as more money is available to pay premiums ^{7, 10, 11, 13, 14, 17, 32}	
Probability of shock	Age	<i>Positive</i> , to the extent that older people are more aware of their actual or near future risk management needs or experience greater risk, <i>but</i> in some cases younger people are more willing to pay ^{2, 13, 16}	
	Household size	<i>Positive</i> (in the case of group coverage policies), as there are more people that a shock could happen to ^{7, 10, 14, 32, 33}	
	Educational level	<i>Mixed</i> , as more educated people sometimes better understand the benefits of insurance ^{2, 16} , but other studies find no relationship ^{4, 17, 18}	
	Past experience of a shock or use of covered service	<i>Positive</i> , to the extent people use past experience to predict future needs ^{7, 14} and to the extent that experience with the event tells the client more about the event, its likelihood, and its consequences ²⁸	
	Current illness or current health or other risk	<i>Positive</i> , as those who are currently ill or perceive their risk to be high are more likely to purchase insurance (adverse selection) ^{18, 40}	
Cost of shock	Past expenditures for similar shocks	<i>Positive</i> , to the extent that high past expenditures predict high future need ⁷	
	Availability of assistance	<i>Negative</i> , as expectations that disaster assistance, other charity, or help from family and friends reduce the cost of the shock that the client expects to bear ²⁸	
Trust in insurance	Participation of a familiar delivery channel	<i>Positive</i> , to the extent people have experience with and trust of the delivery channel and see it as on their side, <i>but</i> there may be no effect if clients don't understand why the organization is involved ^{4, 11, 16, 17, 37}	
	Familiarity with the product or participation in similar programs	<i>Positive</i> , as clients better understand how the product works ¹⁷ and as receiving payments for the other program improves perception that insurance is reliable ^{8, 13}	
	Incentives to insurance promoters	<i>Positive</i> , as promoters have a larger monetary incentive to convince potential clients of the benefits of insurance ⁸	
	Endorsement from a trusted third party	<i>Positive</i> , as people believe the endorsement and have greater confidence that they will receive payments they are entitled to ¹¹	
	Lack of trust in administrators	<i>Negative</i> , as concerns about corruption and a lack of transparency make people doubt that they will get the appropriate benefits ^{18, 25, 32}	
	Basis risk ⁷	<i>Negative</i> , as the likelihood that insurance will not cover a shock increases (this is especially important for the most risk-averse) ¹⁷	
Service quality	Distance from covered providers	<i>Negative</i> , as the farther people are from covered providers, the less likely they are to use them ^{2, 14}	
	Low quality of services at covered facilities	<i>Negative</i> , to the extent services at covered facilities are viewed as low quality ^{18, 28}	

⁷ Basis risk is the imperfect correlation between an insured person's actual loss and the insurance coverage. It is especially relevant in agricultural index-based products, where payouts are linked to a trigger such as a rainfall gauge that may not be met even if the insured suffers a loss (Chantarat et al., 2010).