Microinsurance
Learning and
Knowledge

MILK Brief #31:
"What would you have done without insurance?"
Examining the counterfactual across 16 Client Math studies[1]

The MILK Project's 16 Client Math studies chronicle, dollar by dollar, the ways in which microinsurance clients cope with large and small shocks. But if these clients had to cover the costs of the shock on their own, what would they have done? The quest for a **counterfactual** – the answer to the question, "what would have happened?" – is both essential and elusive. If we could know how microinsurance clients would have acted in the absence of insurance, we would be able to say with confidence whether insurance changes the way individuals and families respond to financial shocks.

Of course, it is **impossible to know for sure** what these clients would have done. We can't go back in time, take away their insurance policies, and replay the scenario to see how they react to the same shock. The next best alternative would be to select a **scientific control group**. Using this strategy, we would randomly assign insurance policies to some people and not to others, wait until a shock takes place, and then compare the reactions of the insured and the uninsured. Unfortunately, randomized control trials are expensive, time-intensive, and not always appropriate to study the value of microinsurance programs, especially for shocks that happen infrequently.[2]

If randomized control trials are infeasible, how could we make a reasonable guess as to what the insured might have done without insurance? The MILK team settled on two strategies:

1. **We interviewed uninsured people who suffered similar shocks.**
   In each study, we spoke to **uninsured people from the same communities** who faced the same or similar events, and compared their response to that of the insured. These uninsured people were demographically similar to the insured people we interviewed, so we might expect their responses to approximate what the insured would have done without insurance. The disadvantage of this method is **selection bias**: because the purchase of insurance is usually a choice or comes bundled with some other product or service (such as a loan), there may be inherent differences between insured and uninsured people. For instance, insured people may have higher levels of income, financial access or information, or they may be more risk-averse than their uninsured neighbors. Despite our best efforts to interview similar people in both groups, our non-scientific comparison groups cannot account for all possible differences.

2. **We asked insured people what they would have done without insurance.**
   This question, often asked in qualitative evaluations of interventions, is probably the **easiest** and **cheapest** way to get to a counterfactual. However, the information that clients offer is **hypothetical**. Clients may not know what they would have done, especially if the shock is a new experience, and as a result they may either overestimate or underestimate their alternatives.

Most of MILK's past publications have focused on the first method. While comparing non-randomized groups has some flaws, it has given us a detailed and informative look at life without insurance. In this brief, we take a closer look at our insured respondents' answer to the second question to see what it can tell us about the value of microinsurance.

[1] This MILK Brief was prepared by Laura Budzyna (April 2014).
[2] Research design to study the value of microinsurance is discussed in MILK Brief #6 (Morsink et al., 2011).

Imagine you didn't have insurance…

Toward the end of the survey, after respondents have already detailed all of the costs they suffered and all of the ways they covered these costs, the surveyor reads aloud a version of the following statement:

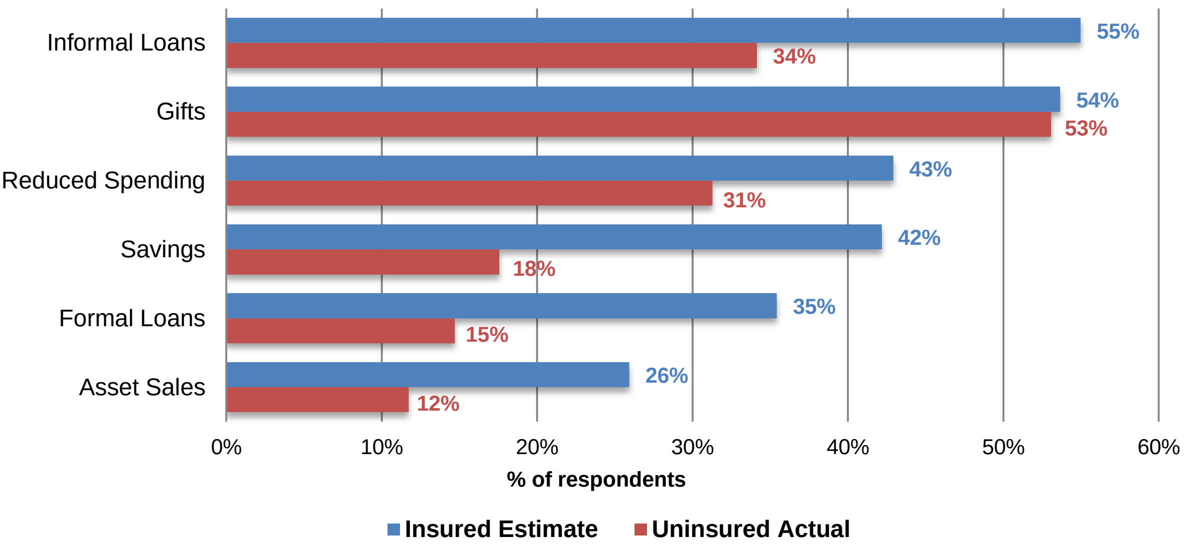
> ***Imagine you had not been a member of the scheme, and you had to pay all of your hospital bills yourself. How would you have gotten the money?***

Next, the surveyor runs down the list of strategies: *Would you have taken a loan from a bank or microfinance institution? Would you have borrowed money from family or friends? Would you have cut your spending? Would you have used your savings?* To each question, the client responds yes or no.

The responses varied from community to community, depending on customs, family structure and the financial services available. They also varied by shock; for instance, respondents are much more confident they would receive gifts from family and friends if a family member died than if they themselves were hospitalized. Figure 1 shows the aggregate predictions across our 16 Client Math studies in blue.

As the graph below illustrates, insured respondents were most likely to predict that they would have received informal loans and gifts from friends and family. To a slightly lesser extent, they guessed that they would have cut expenses and dipped into their savings. Compared to the other options, they were least likely to say that they would have taken out formal loans or sold assets; still, these "last ditch" strategies were mentioned by between one-quarter and one-third of the sample.

Figure 1: What would you have done without insurance? (Predicted vs. Actual)



How good were their predictions?

When we order the predicted strategies from most common to least common, they match up closely with the strategies that uninsured respondents actually used.[3] Even though the question is hypothetical, it can give us a **good sense of which strategies are most or least available, or most and least desirable**.

However, when we compare the *percent* of insured respondents who guessed that they would use a strategy to the *percent* of uninsured respondents who actually used that strategy, we begin to see the differences between the two approaches. Across the board, it was **more common for an insured client to *guess*** that they would use a given strategy **than for an uninsured respondent to actually *use* it.** In other words, the insured respondents **overestimated** their need or ability to use each strategy. This was particularly true in the cases of **savings, formal loans**, **informal loans** and **asset sales**,

[3] MILK's upcoming brief explores the diverse coping strategies of respondents across all 16 studies (Zimmerman et al., 2014).

where the gap was largest between insured clients' predictions and uninsured respondents' actual use (Figure 1).

The amount of overestimation varied by shock. In the cases of both death and property damage, the largest gap was in the use of *savings*: a much higher proportion of insured respondents believed that they would use their savings than uninsured respondents actually did. For hospitalizations, the insured overestimated the likelihood of use of *informal loans* from family and friends. Interestingly, this excess was offset by a marked *underestimation* in the use of gifts; it is plausible that in cases of severe illness, friends and family were more likely to donate funds without the expectation of repayment. For outpatient health shocks, the insured grossly overestimated the need to borrow, dip into savings, and collect gifts. In reality, health costs were generally modest enough for uninsured respondents to manage these costs without resorting to those strategies. It is also possible that in addition to possibly overestimating the costs of care, the uninsured might also resort to under-spending by not following-up or completing treatment.

In sum, we can see that MILK's two methods for obtaining counterfactual inference yield comparable results in terms of the *relative* use of alternative strategies: the most common and least common strategies are the same. However, they yield very different results in terms of *absolute* use: the insured tended to overestimate their use of different strategies, at least compared to what the uninsured respondents actually used. What accounts for the differences?

Why do clients overestimate their options?

We have already noted that because insured clients may never have experienced a given shock before, they may guess incorrectly as to what they would have done. But why, as the gaps in the data suggest, might they ***overestimate*** rather than ***underestimate*** their options?

While differences between insured and uninsured samples might explain part of the discrepancy, other factors are likely at play. For instance, the wording of the "what would you do?" questions – naming strategies and asking for yes or no response – may have inadvertently suggested options that insured respondents may not have considered without prompting.

We also suspect that in many cases, people **believe they have more options than they do**. For instance, they may be confident that they could rely on family and friends for loans during difficult times, but these networks may not be sufficiently willing or able to provide support.[4] From this perspective, we may conclude that respondents are actually more vulnerable than they believe, suggesting that insurance may be filling a need that respondents themselves do not recognize. This misperception may explain some of the challenges with low demand for insurance products.[5]

Those who have already purchased insurance may overestimate the cost of the shock and the need to use burdensome strategies to cover these costs. Insured respondents demonstrated an **exaggerated perception of how difficult life would be without insurance**, which could be a sign of how highly they value, or even overvalue, their insurance. This is a manifestation of what behavioral economists call the *endowment effect*: the tendency to overvalue things we have.[6] These clients seem to perceive that insurance has helped them avoid heavy costs and burdens, and may be **validating their purchase** by overstating the difficulties of life without it. This suggests that there is a potentially powerful link between the tangibility of a product, the perception of its value, and renewals.

Which counterfactual is best?

Although the "what if" questions are valuable to researchers because of the perceptions they reveal, they may not paint the most accurate picture of how clients would fare in the absence of insurance. Despite its imperfections, the **uninsured group remains MILK's best estimate of the counterfactual**. This has implications for broader market research into the design of new microinsurance products. Since most people do not know what they would do in the face of an unfamiliar shock, simply asking people about their preferences yields unreliable data. Market studies would benefit from incorporating **observational research** on the actual coping strategies of the uninsured.

[4] MILK explores the complexities of friends and family as a support mechanism in "MILK Brief #25 (Poulton et al., 2013).
[5] MILK explores the challenges of demand in "MILK Brief #7 (McCord et al., 2012).
[6] (Thaler, 1980)

There may be a third alternative. When we synthesize the data from 16 Client Math studies, we happen upon a surprising counterfactual: **the insured respondents themselves**. In other words, to know what the insured clients *would have done*, we may only need to look at what they *did*. Insured clients do not rely on insurance alone; they use it in combination with other mechanisms. Our data show that in general, **insured and uninsured respondents use the same number and types of strategies** to finance a shock, with some variation between studies.[7] The difference lies in the **dollar amount** of each strategy; for instance, insured and uninsured respondents were equally likely to borrow after a shock, but uninsured clients borrowed in higher amounts. As a result, we posit that the strategies that clients use *in combination with* insurance are likely to be the same strategies that they would have used *without* insurance.

Although these findings may tempt us to skip the hassle of finding a comparison group, we can't be sure that the insured and uninsured will react so similarly in all cases. The best option is to **triangulate**: ask clients what they would have done without insurance, observe what they did in combination with insurance, and investigate what uninsured people did after a similar shock. Together, these three illustrations of life without insurance can give us a richer understanding of the value – both real and perceived – that insurance can offer.

References

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MICRO INSURANCE CENTRE

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. Contact Michael J. McCord (mjmccord@microinsurancecentre.org), who directs the project, for more information.

[7] (Zimmerman et al., 2014)