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# CLIENT VALUE SERIES

Brief No. 1

## Is there value in microinsurance?

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### EXECUTIVE SUMMARY

Does microinsurance provide value to clients and their families? In the face of limited evidence of value, the MicroInsurance Centre's MILK project and the ILO's Microinsurance Innovation Facility set out to answer this question several years ago, by completing original research and leveraging other evidence from the field. The answer that has emerged from our work – and is supported by new evidence from other studies – is that microinsurance can and often does provide value. However, it does so to varying degrees and in different ways, and sometimes not at all. This brief provides a number of concrete insights into how, when, in what ways and to what extent client value emerges from microinsurance.

This brief assesses the value of microinsurance for clients. Showing value from microinsurance requires us to establish a chain from inputs (microinsurance products, services, and delivery), to outputs (enrolment and use), outcomes (costs, financing, and behaviours), and ultimately impacts (financial protection, reduced vulnerability, and better health). We draw from a diverse body of work to establish this chain, and in summary, we find:

<sup>1</sup> This brief is the first in a series of three briefs on client value of microinsurance. The series is produced by the ILO's Microinsurance Innovation Facility and the MicroInsurance Centre. In the introduction letter to the series we explain research methodologies. Brief 2 provides strategies for practitioners to improve client value and Brief 3 presents advice for governments, regulators and donors. All briefs can be accessed at our websites. Aparna Dalal and Michal Matul work for the Facility; Emily Zimmerman and Barbara Magnoni on the MILK project.

Microinsurance provides value through better **financial protection**:

- leading to lower out-of-pocket costs or other forms of financial relief, though it does not always do so. Microinsurance does not generally cover indirect costs (such as transaction and opportunity costs), but the incentives it creates can lower those costs.
- reducing reliance on burdensome financing strategies and encouraging the use of more effective, efficient financing when a shock occurs.
- leading to better financial choices, notably increased investment, in the absence of, or before a shock.

In the medium and long term, the financial protection afforded by insurance, and the incentives to invest that it creates, can **reduce vulnerability**, leaving insured households better equipped to weather a wide array of risks, even those not covered by insurance.

Health microinsurance also has value by **improving health**:

- improving access to healthcare, although different or higher priced care does not *necessarily* imply better care.
- improving utilization of healthcare services in terms of frequency and timing.

These behaviours can translate into better health outcomes among the insured, but such outcomes are difficult to prove, especially in the short term.

This brief is organized as follows: Section 1 introduces the definition of client value and the theory of change

through which value is realized. Section 2 presents the evidence on value, using three main areas of impact – improved financial protection, reduced vulnerability and better health. Section 3 concludes with pointers on what to look for in Brief 2 of this series.

## 1. MICROINSURANCE VALUE AND THE THEORY OF CHANGE

The financial diaries of *Portfolios of the poor* emphasized the importance of cash flow management and the degree to which low-income households struggle to manage cash flow, when faced with uncertain and uneven income. In the event of a shock, these daily struggles are intensified, and the tools at hand “offer protection that is too often fragile or incomplete” (Collins et al., 2010, p. 66). By helping low-income families to better withstand certain financial shocks, effective insurance tools have the potential to preserve the income, assets and savings that households need to weather the uncertainty of their daily lives, as well as other substantial shocks that they may face in the future.

### 1.1. What do we mean by client value?

Client value represents the added value provided by microinsurance, in comparison with other available risk coping mechanisms. Value may be direct or indirect, and can be realized when claims are made, or as a result of changed behaviour brought about by owning an insurance policy and trusting that it will be honoured (Magnoni and Zimmerman, 2011). Client value is distinct from the benefit that may accrue at a broader community or market level (see Box 1). In this brief, the focus is on individual client value. It may take the form of financial value, or service value when claims are made. Or it may take the form of expected value, through behavioural incentives and peace of mind before, or in the absence of claims. In order to show value from microinsurance, a chain must be established, from insurance coverage to the impacts of value.

### 1.2. The theory of change

Impact is proven value. Impact captures whether or not microinsurance improves the well-being of low-income households. While our ultimate concern is the final impact of microinsurance, it is important to consider the intermediate steps in order to understand when, how, and why impact happens. “As impact is

multi-faceted and manifests itself in different ways, we need to be aware of each intervention’s myriad potential effects and their relationships to each other” (Radermacher et al., 2012). Understanding the sequence will help practitioners and policy-makers to identify factors (e.g. specific product or process features) that contribute to a particular impact.

The theory of change, outlined in Figure 1, shows the causal pathway through which products and services can result in value. It includes four stages: inputs, outputs, outcomes and impacts.

### 1.3. Exploring the causal links

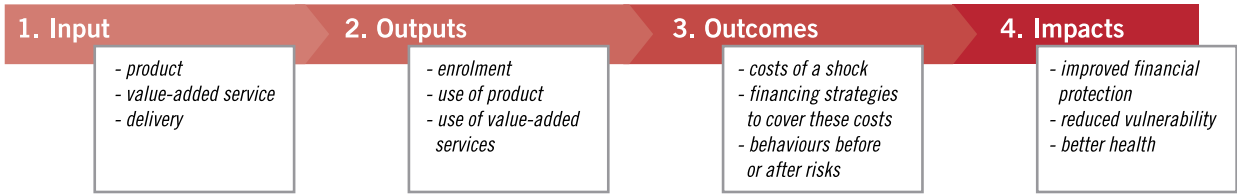
Microinsurance has the potential to improve client well-being through the three broad impacts of providing financial protection, reducing vulnerability and improving health. However, the chain leading from insurance to impact can take many different paths. Exploring how inputs ultimately lead to impact is crucial in order to understand whether and how particular components of products are valuable, and to design better products and services for low-income households. While it is often difficult to show the complete causal chain from inputs to impacts with a single study, the chain can be pieced together by exa-

#### BOX 1 SOCIAL VALUE OF MICROINSURANCE

In addition to the direct and indirect value it may provide to clients, microinsurance may have social value, in the form of market or economic development. Studies have demonstrated a causal link between the development of the insurance industry in general and overall national economic development. By mobilizing savings, insurers are an important source of long-term investment capital for initiatives such as infrastructural improvements, and can stimulate the development of debt and equity markets (Brainard, 2008).

The potential adverse effects of insurance should also be noted, especially for the uninsured. In some cases, insurance can drive up costs, meaning that segments of the population which do not have insurance may be faced with higher service charges and poorer access to services. There is also evidence that formal risk sharing programmes (such as insurance and government transfers) can crowd out private transfers, possibly weakening the role of social networks in coping with risk (Dercon and Krishnan, 2003; Attanasio and Rios-Rull, 2000; Hintz, 2010). Hence, it is possible that certain populations will become even more vulnerable as a result of microinsurance, especially those who are excluded from the insurance market.

**FIGURE 1 THEORY OF CHANGE**



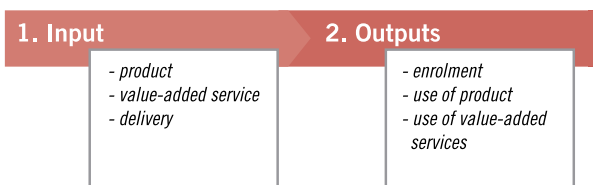
**Inputs.** Inputs are the underlying insurance products and services, as well as the delivery of those products and services, to low-income clients. Inputs include product features such as breadth of coverage, simplicity of design, and price, as well as value-added services (such as preventive health workshops for health insurance or repatriation of a body in the case of funeral insurance) provided by a product. Inputs also include features related to the delivery of products and services to clients, such as delivery channels used and efforts directed at marketing and product education.

**Outputs.** Outputs are the number of low-income clients covered by microinsurance products, covering both take-up and retention. Outputs include use of products: filing claims, receiving benefits and using value-added services.

**Outcomes.** Outcomes relate to what happens after a client buys and uses an insurance product. They include changed behaviours in anticipation of risk (such as increases in productive investment by farmers who are covered by agricultural insurance), as well as changed behaviours when a shock occurs (such as willingness to seek care sooner in the event of illness). Outcomes of microinsurance also include the costs incurred by clients when a shock occurs and the financing tools that they use to cover those costs.

**Impacts.** Impacts are the actual changes to client welfare that result from microinsurance. In this brief, the focus is on impacts that occur across three main dimensions, which together form the core of client value: improved financial protection, reduced vulnerability and better health.

mining evidence from multiple studies that each show one or more of the links described below. Practical experience can provide context and validate the lessons learned through these studies. Sections 2 and 3 of this brief draw from a wide variety of work – including academic and client math studies of microinsurance and risk – so as to build up the chain of evidence from microinsurance to its impact.<sup>2</sup>



The first step towards achieving impact of insurance is to ensure that the “inputs” of product features and delivery translate into coverage and use of microinsurance among low-income people. While

the importance of this step is clear, the challenges of low demand and retention of products remain widespread. Many factors influence a low-income person’s decision to buy microinsurance. These “determinants of demand” include a prospective client’s perception of value, personal characteristics such as age and risk profile, and the trust prospective clients have in the product and provider. Demand is also influenced by psychological factors that can prevent even those who might perceive value in a product from enrolling.<sup>3</sup>

Enrolment is the crucial first step toward value, but being insured does not in itself ensure that low-income clients will receive value from a microinsurance product. They must also be able to use the product by filing a claim and receiving a benefit when an insured event happens. For this to happen, clients must understand their coverage and the related processes and have the ability to navigate those processes effectively.<sup>4</sup>

2 Client Math is a methodology developed by the MILK project that uses surveys of insured and uninsured people who have suffered a financial “shock” to understand the full costs of the shock, how those costs were financed, and the role insurance played for those who were covered. For more information, see the introduction letter to the series.

3 MILK’s Brief #7 (McCord et al., 2012) and the Facility’s Microinsurance Paper #20 (Matul et al., 2013) explore these demand influences in more detail.

4 Brief 2 of this series, Improving client value, discusses how insurers can better design and adapt products and processes to improve take-up, use and retention.



## 2. Outputs

- enrolment
- use of product
- use of value-added services

## 3. Outcomes

- costs of a shock
- financing strategies to cover these costs
- behaviours before or after risks

The next step in the theory of change is the link between coverage and use of microinsurance products and “outcomes” – effects on the behaviour and financial lives of clients. The bulk of research on microinsurance focuses on this very important step, showing, for example, that insurance coverage leads low-income households to spend less when a shock occurs or induces them to change the way they prepare for shocks.

## 3. Outcomes

- costs of a shock
- financing strategies to cover these costs
- behaviours before or after risks

## 4. Impacts

- improved financial protection
- reduced vulnerability
- better health

Relatively few studies cover the last step, linking microinsurance coverage directly to the impacts of financial protection, reduced vulnerability and better health. One reason for this gap is that impact is more difficult and expensive to measure and often takes longer to occur. However, we can draw from other fields of research, including that related to microinsurance product design, for a better understanding of how the outcomes of microinsurance coverage can be expected to impact clients, even though it may not be possible to directly prove those impacts. For example, in the area of health impacts, we can draw from the extensive health literature that links certain changes in healthcare seeking behaviour to positive health impacts.

### 1.4. What to expect from microinsurance

Microinsurance is only one option in the wide and complex array of financial and other risk coping tools available to low-income households. As such, it cannot be considered in isolation. To understand the value of microinsurance, we must understand the role it plays in the context of, and in comparison with these other tools. Microinsurance is most valuable where it complements other tools that are effective in managing risk and coping with shocks, and where it replaces tools that are more burdensome or less effective. It is rarely, if ever, sufficient to cover the full cost of a shock, but can nonetheless play an important supportive role. *Portfolios of the poor* rightly observed

that “[s]ingle solutions [to coping with risk] are rarely comprehensive, but they don’t need to be so in order to be useful” (Collins et al., 2010, p. 67).

Though microinsurance products are intended to respond to the risk management needs of low-income people, they may not be appropriate for, or accessible to, all low-income people. While microinsurance products offering comprehensive coverage may be more valuable than products providing more limited benefits, there is often a trade-off between benefits and the cost of premiums. High cost limits access to products, especially for those in the lowest income groups. When considering value, therefore, it is important to be mindful of who is obtaining value from microinsurance, who is excluded and how those who are excluded might be assisted in coping with the risks that they face (by microinsurance or by some other tool).

## 2. EVIDENCE OF VALUE IN MICROINSURANCE

This section summarizes evidence of the value of microinsurance, focusing on outcomes and impacts related to financial protection, reduced vulnerability and better health.

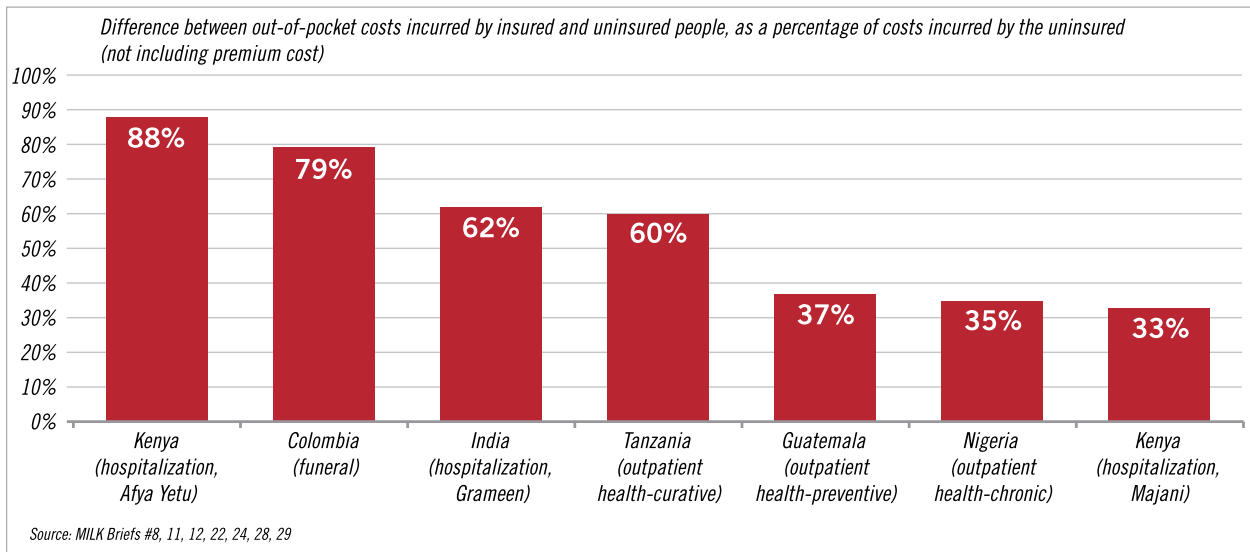
### 2.1. Value through financial protection

#### *Lower out-of-pocket spending, financial relief, and lower indirect costs*

One strong component of financial value comes in the form of **lower out-of-pocket spending** among the insured when a shock occurs. Where products are cashless (providing an in-kind benefit, such as healthcare or a funeral service, instead of a cash benefit), insurance often results in substantially lower out-of-pocket costs. In the case of health insurance, a number of academic studies demonstrate that cashless



**FIGURE 2 OUT-OF-POCKET COST SAVINGS FROM CASHLESS MICROINSURANCE**



microinsurance coverage reduces out-of-pocket health expenditure (De Bock and Ugarte Ontiveros, 2013; Pham and Pham, 2012; Dercon et al., 2012; Aggarwal, 2010; Sepehri et al., 2006; Jütting, 2004; Schneider and Diop, 2001; Ranson, 2001). Findings of lower out-of-pocket expenditures are echoed in Client Math studies of various types of cashless microinsurance products. In each of the Client Math studies of cashless products (health and funeral),<sup>5</sup> the insured spent less overall than the uninsured at the time of the shock (see Figure 2).

However, even in the case of cashless products, microinsurance very rarely covers all out-of-pocket costs, and in some cases can actually lead to higher spending. In a study of the Hygeia Community Health Care Plan product in Lagos, Nigeria, insured respondents with hypertension spent more, on average, on lifestyle changes such as healthier food than their uninsured counterparts – although the insured still had substantial cost savings overall (Budzyrna et al., MILK Brief 24).<sup>6</sup> In other cases, insurance can lead to greater total spending, especially where coverage is limited and/or where insurance encourages people to spend more by seeking care more often or at more expensive facilities. Lei and Lin (2009) did not find any significant impact on expenditures from China’s New Cooperative Medical Scheme. Smith and Sulzbach (2008) showed that community-based insurance did not result in lower delivery care expenditures for child-birth. Chankova et al. (2008) found that insurance led

to lower out-of-pocket spending for hospitalization, but not for curative outpatient care. In China, health insurance increased out-of-pocket spending (Wagstaff and Lindelow, 2008). The study suggests that this was because insurance encourages people to seek care when sick and to seek care from higher-level providers. In such cases, although cost savings may be lacking, health insurance often signals value through some other outcomes, such as healthier lifestyles or improved health behaviours and consumption spending.

However, higher spending does not *necessarily* translate into greater value. For example, in the case of funeral spending, it has been suggested that, rather than providing financial relief, insurance coverage, may lead families to simply buy a “bigger box” or otherwise spend more on non-essential elements of the funeral than they would have in the absence of insurance. This concern is confirmed by Case et al. (2008), which found that South African households receiving an insurance payout at the time of a death spent more on the funeral than those who did not. Hougaard and Chamberlain (2011) suggested otherwise, observing through qualitative research that funeral costs tended to be high, regardless of whether the deceased had funeral insurance and that people will “beg, steal or borrow” if necessary, in order to pay for a funeral. Evidence from Client Math is similarly mixed: the studies do not generally find large differences in spending, but the insured tend to spend slightly more on funerals than the uninsured.

When products are not cashless, but instead provide a cash payout after a claim has been submitted, clients often do not experience upfront out-of-pocket cost savings (except to the extent that insurance coverage

<sup>5</sup> MILK Briefs #8, 11, 12, 22, 24, 28, 29

<sup>6</sup> The insured spent on average US\$ 36 more on food over the course of 3 months than they did before changing their diet when they started treating their hypertension; the uninsured spent less than half that amount: US\$ 16 more than before the change.



includes discounted services). Such cash products, however, can result in **financial relief when the benefit is received**. This cash payout can be used to pay off debt incurred after the shock, rebuild depleted savings, invest in new assets or supplement income in cases where the shock has hampered earning capability. In Haiti, for example, more than half of the insurance payout made for flood damage was used to increase savings and asset holdings (mostly business related) that had been depleted after the flood (Magnoni and Budzyna, 2013, MILK Brief 15). In a study in Mexico, beneficiaries used a large portion of the life insurance payout benefits to pay for or finance funeral costs. However, the remaining benefits were primarily used to save, return to prior consumption levels, and replace the deceased's lost income (Poulton and Magnoni, 2013, MILK Brief 16).

The **timing of the insurance payout** can strongly influence how it is used. Two Client Math studies of life and funeral microinsurance products in the Philippines provide a clear example of this. One product paid benefits on average eight days after death, and nearly all the payout was used to cover funeral related expenses. The other product involved substantial delays.<sup>7</sup> In some ways, this eroded its value, but it also enabled respondents to spend more than half the benefit on income replacement (compensating for the loss of a breadwinner's income) or productive investments aimed at generating additional income (Magnoni et al., 2012, MILK Brief 13 and Poulton et al., 2013, MILK Brief 27). While efficient claims settlement is generally a very important component of value, this study shows how the timing of payments can influence value, and that payments need not necessarily be made soon after a shock in order to provide value. The key is for providers to be transparent about the timing of payouts, setting clear expectations and keeping their promises to clients.

Microinsurance can also lead to **lower indirect costs, such as transaction or opportunity costs**. For exa-

mple, a Client Math study in Haiti found that by providing financial support after a flood, property insurance helped clients to replace lost inventory and may ultimately have helped them to minimize lost income and get back on their feet more quickly. Of the uninsured respondents who lost inventory, only 33 per cent replaced it in the aftermath of the storm, while 62 per cent of insured respondents who lost inventory replaced it. In Tanzania, a study found that the insured sought outpatient health treatment on average two days sooner after falling ill than the uninsured. This contributed to lower levels of lost income related to illness, with the insured losing an average of US\$ 7, compared with US\$ 11.57 in the case of the uninsured (Magnoni et al., 2013, MILK Brief 22). Nonetheless, indirect costs often account for a very substantial portion of the cost of some shocks, especially in the form of lost income, and especially for people who earn a daily wage, or work as small business owners. In a study in Karnataka, India, lost income accounted for an average of nearly 40 per cent of the cost of hospitalization for those who had insurance (Magnoni et al., 2012, MILK Brief 12).

### ***Lower reliance on burdensome strategies***

Microinsurance can also lead to **lower reliance on burdensome financing** strategies in the wake of a shock (De Bock and Ugarte Ontiveros, 2013). While the issue of what should be considered as burdensome is context-specific, and can vary (see Box 2), the sale of productive assets to finance a shock can be viewed as highly burdensome in nearly any context. Such sales are often inefficient in the short term, where assets are sold at a heavy discount due to time pressure, and where very large assets are sold to cover relatively limited costs, because nothing else is available. Client Math studies found that insurance coverage may have helped clients to avoid asset sales. Across the four studies of flood damage, only 3.8 per cent of the flood costs for the insured was covered by asset sales (compared with 22.8 per cent in the case of the uninsured).

A study in Kenya found that insured households were on average 22-36 percentage points less likely to draw down assets, thereby improving their ability to recover after a drought (Janzen and Carter, 2013). The study also found that insured households were on average 27-36 percentage points less likely to anticipate reducing meals than their uninsured counterparts, and that by improving food security during a drought, insured households were less dependent on food aid and other forms of assistance.

Microinsurance also helps protect human assets, by helping households to avoid drawing on them

<sup>7</sup> Benefits were split into a funeral assistance portion (paid on average 17 days after death) and a larger life insurance portion (paid on average 82 days after death).



unnecessarily. Some households respond to shocks by taking children out of school and putting them to work – a highly burdensome coping strategy that can greatly increase the household’s future vulnerability. By acting as a financial tool that covers some part of the cost of a shock, microinsurance can reduce households’ reliance on this particularly burdensome strategy. Landmann and Frolich (2013) found that extending accident and health insurance to all members of the household resulted in an approximately 10 per cent reduction in incidences of child labour. Chakrabarty (2012) found a similar result in Bangladesh, in the case of moderately poor

households. However, for the poorest households, insurance alone was not enough to reduce child labour; it had to be bundled with credit in order to have an effect on child labour incidence.

In some cases, formal borrowing may be viewed as a burdensome strategy, since debt can be costly, inefficient, and leave low-income people more vulnerable to future shocks. A number of academic studies have found that insurance can help clients to avoid borrowing when they experience a shock (Giné et al., 2008; Levine and Polimeni, 2012). Aggarwal’s (2010) investigation of India’s *Yeshasvini* scheme found that subscribers borrowed approximately 30 to 36 per cent less to finance surgery than their uninsured counterparts, and spent up to 74 per cent less from other sources, including personal incomes and savings. Similarly, an assessment of a Filipino typhoon rehousing scheme by Morsink et al. (2012) found that insurance coverage mitigated the extent to which policyholders pursued burdensome coping strategies that included selling assets and exhausting savings after typhoons damaged their homes.

## BOX 2 WHAT IS «BURDENSOME» FINANCING?

The consequences of a particular financing strategy, and as a result, the degree of burden or stress that it imposes on a low-income household, can vary by context. Drawing from literature on the poverty trap, Cohen and Sebstad (2005) and Morsink et al. (2011) propose a categorization of coping strategies based on the commitment of specific assets, the irreversibility of those financing choices and their implications for future economic activity and growth. This categorization refers to the stress or burden of various financing strategies in the medium and long term. The following are some common financing strategies, categorized according to the level of burden they typically impose at the time they are used, based both on literature and on our own experience.

Reduced spending	Low, where it involves spending on non-essentials, such as luxury food items. High, where it involves drastic and/or extended decreases in food intake to levels below what is nutritionally necessary, or taking children out of school.
Asset sales	High, where the assets sold are productive. Medium, for sales of consumption assets or pawning, where income-earning ability is not affected, but replacing them requires saving over a long period of time.
Savings	Medium, because while cash savings are fungible, it can be difficult and time-consuming to recover them when they are depleted.
Borrowing	Medium, because it can be costly and/or inefficient. High, if people are forced to default on loans, or if the loans come with high rates of interest.
Friends and family	Medium, to the extent that friends and family are viewed as a limited resource, and drawing on them once limits their availability in the future, or creates future obligations.

### Encouraging investment and production

Even before a shock occurs, microinsurance coverage can lead clients to make financial choices that will ultimately improve their well-being, particularly in the case of agriculture. In the absence of effective risk management tools, low-income households “pay” to manage these risks through more conservative investment choices. For example, households with less risk management capability tend to make conservative decisions about the crops they grow, devoting less land to high-yielding, but more risky rice varieties and castor in India (Morduch, 1995); more land to low-risk and low-return potatoes in Tanzania (Dercon, 1996); and less labour to price volatile coffee in Uganda (Hill, 2009). Risk can also make households reluctant to access credit markets, because they fear the consequences of being unable to repay. This in turn limits their ability to use costly inputs. In Ethiopia, for example, households that are less able to manage income risk are less likely to apply fertilizer available on credit (Dercon and Christiaensen, 2011).

A growing pool of evidence confirms that agricultural microinsurance does indeed help farmers to reduce costly risk mitigation, though the body of evidence is still limited. In India, Cole et al. (2011) provided free insurance to farmers, and found that insured farmers were more able to invest in cash crop production. In northern Ghana, Karlan et al. (2012) found that insured farmers increased expenditure on chemicals (mostly fertilizer) by 24 per cent, increased the area

of land cultivated by 17 per cent, and shifted a larger portion of their land to crops that were more sensitive to rainfall. Similarly, Chen et al. (2013) found that altering the timing of the premium payment not only led to greater demand, but also to greater investment amongst swine farmers in China.

## 2.2. Value through lower vulnerability in the medium and long term

Through the financial protection described above, microinsurance can lead to reduced vulnerability in the medium and long term. While the direct link of insurance coverage to reduced vulnerability is difficult to prove, because this change often takes a relatively long time to occur, the importance of supporting and preserving the many financial resources that low-income people may use has been well documented. The results outlined above highlight important examples of the value that microinsurance can have in reducing households' vulnerability through financial protection.

In addition to helping clients to avoid some of the most burdensome strategies, microinsurance can encourage the use of **better, more efficient financing** strategies after a shock has occurred. Firstly, by covering a substantial portion of the cost, microinsurance can reduce the number of different sources to which a low-income person must turn when faced with a shock. Across Client Math studies, insured people tended to turn to fewer financing strategies than the uninsured. Use of fewer financing strategies indicates a lower likelihood of resorting to the most difficult strategies. It can also lower the burden and stress of seeking out and managing many different sources of financing at an already difficult and stressful time. Insurance may also, in some cases, encourage the use of financing strategies that are difficult in the short term, but which are ultimately less costly in the long term. A study in Haiti found that after suffering serious flood damage, the insured were more likely to reduce spending in the short term, while waiting for their insurance payout, while the uninsured resorted quickly to more inefficient financing strategies, such as asset sales (Magnoni and Budzyna, 2013, MILK Brief 15).

By reducing the financial burden after an insured event and reducing reliance on some financing strategies after that shock, microinsurance can help to **preserve the household's access to those financing tools** in the future. For example, if savings are not depleted to pay for hospitalization, they remain available for future needs. Similarly, not needing to call on family or community networks may also help to preserve those networks as a future resource. Microinsurance can also preserve access to credit that can play a crucial role



in meeting a household's future needs. By helping to avoid excessive reliance on credit and the need to pay off outstanding loans after a shock, microinsurance can help clients to avoid unsustainable debt burdens. In a study in Colombia, a product's greatest value was in preserving access to credit after a flood: 66 per cent of that insurance benefit was used to repay debt (Magnoni and Poulton, 2013, MILK Brief 18). In a study of a credit-life insurance product in Cambodia, the write-off of one loan after a family member's death played a crucial role in allowing the household to manage the remaining outstanding debt that was not covered by insurance. The insured were able to service all of this debt, while the uninsured serviced only 69 per cent of it (Budzyna and Chandani, 2013, MILK Brief 20).

Microinsurance can also lead to lower vulnerability by **supporting household income** levels in several ways. First, it helps households to avoid the most burdensome strategies that diminish income-earning capacity, such as selling productive assets and taking children out of school. Second, it encourages productive investments in the absence of a shock, and these investments support the household's income. Finally, the improved health outcomes described below may indirectly help to preserve clients' ability to earn income, supporting household income and leaving them better equipped to weather future shocks.

## 2.3. Value through better health

Health microinsurance can have value in leading to better health outcomes, both by providing a tool to finance healthcare, and through some of the unique behavioural incentives that it creates.

### *Access*

By providing a tool to finance the cost of health services, insurance can facilitate **access to quality healthcare** among a population that would otherwise use lower cost, lower quality services or skip care



altogether. For example, in their evaluation of China's NCMS, Lei and Lin (2009) found that insured members used traditional Chinese folk doctors less frequently. Similarly, Wang et al. (2009) found that membership of China's Rural Mutual Health Care scheme reduced the probability by about two-thirds of people using self-medication when sick. Policyholders of Mali's Equity Initiative programmes sought modern care to treat fevers at 1.7 times the rate of their uninsured counterparts (Franco et al., 2008). Binagwaho et al. (2012) showed that children covered by health insurance in Rwanda were between 16 and 29 per cent more likely to receive treatment at a modern health facility or from trained personnel when sick, than those who were uninsured. Similarly, the Amsterdam Institute for International Development (AIID) found insurance to double the use of modern facilities and increase the use of private facilities by 150 per cent in Nigeria (Gustafsson-Wright et al., 2013). In a study in Karnataka, India, insured patients tended to be of lower socio-economic status than uninsured patients using the same private facilities, suggesting that without insurance, those clients would have been unlikely to access the same level of care (Magnoni et al., 2012, MILK Brief 12).

However, access to more expensive or different care does not necessarily imply access to higher quality care. Wagstaff and Lindelow (2008) discuss this concern in the context of China, where healthcare providers have financial incentives to favour high-tech care over basic care, which may lead some providers to over treat. The study also found that insurance increases the likelihood that clients will seek care from higher level (but not necessarily higher quality) facilities. Fitzpatrick et al. (2011), however, found evidence that social security health insurance in Nicaragua did not increase wasteful medical consumption: children who were insured but not sick at baseline reported fewer visits to all providers than those who were uninsured but not sick.

### **Utilization of healthcare services**

Microinsurance can also encourage **greater utilization of healthcare services** (Radermacher et al., 2012). Polonsky et al. (2009) found that members of nine Oxfam operated Armenian schemes visited health facilities 3.5 times more often than uninsured persons. In the case of CARE Foundation in India, access to community health workers incentivized more frequent visits to these workers, leading to earlier identification of illnesses and more timely referrals to hospital (Mahal et al., 2013). In addition to its health benefits, such early treatment can also minimize the total cost

of treatment. The CARE Foundation study found that insured members spent fewer days in hospital, and incurred lower out-of-pocket expenses for hospitalization. Empirical data from several schemes with similar free or discounted outpatient services indicates that providing this access leads to lower use of inpatient services, resulting in cost savings. An evaluation of Swayam Shikshan Prayog (SSP) in India found that proximity to outpatient clinics was associated with lower hospitalization rates. Villages with a clinic had hospitalization rates that were about 50 per cent lower than those of villages whose nearest clinic was 2 km away (Pott and Holtz, 2013).

However, this increase in utilization is generally limited to use of those services covered by insurance. If not covered, preventive or follow-up care is often skipped. In a study of Grameen Koota's hospitalization insurance in India, readmission was recommended by the doctor for 30 per cent of insured and 14 per cent of uninsured, but only 23 per cent of those for whom readmission was recommended were actually readmitted. However, when doctors recommended follow-up visits, which were included in the insurance coverage, insured patients were more likely to attend them (33 per cent, compared with 14 per cent of uninsured) (Magnoni et al., 2012, MILK Brief 12). Similarly, in a review of schemes in Ghana, Mali and Senegal, Smith and Sulzbach (2008) found that membership most effectively influenced maternal health-seeking behaviour when the applicable services were covered as benefits.

Microinsurance coverage may also lead clients to **seek care sooner** after falling ill. In a study in Tanzania, insured patients waited on average of three days between feeling ill and visiting a clinic to receive outpatient care, while the uninsured waited an average of five days (Magnoni et al., 2013, MILK Brief 22). However, Levine and Polimeni found that the SKY microhealth programme in Cambodia did not encourage insured people to seek care more rapidly or reduce the chances of forgoing care. The mixed result could possibly be explained by differences in accessibility to the healthcare services themselves. This is explored in greater detail in Brief 2 of this series.

### **Health outcomes**

Finally, improvements in health-seeking behaviour and quality of care brought about by insurance coverage can translate into **better health outcomes** (Wagstaff and Pradhan, 2005; Aggarwal, 2010; Dror et al., 2005; Hamid et al., 2010; Wang et al., 2009). However, evidence of improvements in health as a direct result of microinsurance coverage is limited,

and other studies have failed to find improvements in health outcomes (e.g., Fitzpatrick and Thornton, 2011). This lack of evidence is at least partly due to the difficulty of measuring health status and the relatively long timeframe over which these changes occur. A study in Kenya, conducted over two years, showed that even though health-seeking behaviour changed, health outcomes were not significantly different between control and treatment groups (Dercon et al., 2012). While health outcomes are difficult to prove, they may often be inferred from the outputs described above, combined with other research linking those outputs (seeking care sooner, more often, and at better facilities) to improved health outcomes in other contexts. For example, Amexo et al. (2004) found that delayed treatment and self-diagnosis of malaria led to poorer health outcomes among low-income people. This finding, combined with studies of microinsurance showing that it increases utilization of healthcare facilities and incentivizes early treatment, provides strong suggestive evidence that microinsurance coverage can lead to such positive health outcomes.

### 3. CONCLUSION

There can be value from microinsurance, but that value is as limited and imperfect as the microinsurance products themselves. Microinsurance coverage has positive impacts of financial protection, reduced vulnerability and improved health, but it does not always have all these impacts, and it generates them in varying degrees. Even the most valuable microinsurance products play only a limited role in coping with risk. Given the many other tools available to low-income households, this limited role seems to be the one that microinsurance is best suited to play.

However, these limitations lead to important trade-offs in product design. For practitioners, the obvious next question is which product and process features produce the greatest value? The question is discussed in Brief 2 of this series. Improving inputs and outputs will improve impact, so understanding the effect of specific product and process innovations is critical. This can help practitioners to understand which clients benefit from which innovations, as well as how and to what extent they benefit, guiding the choices they make to help maximize client value.

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