Microinsurance
Learning and
Knowledge

Microinsurance Lessons from History

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Table of Contents

I. Introduction 1

Life insurance 1
Property catastrophe insurance 2
Health insurance 2

II. Life insurance 3

The setting 3
The product and the problem 3
The solutions 4

Industrial Insurance 4
Fraternal insurance 5

Lessons for microinsurance 8

Product design 8
Distribution 9
Business model 9
Competition and program age 10

III. Property catastrophe insurance 11

Catastrophe insurance market economics 11
Catastrophe insurance market performance 11
Public interventions 12

Public insurance and reinsurance schemes 12
Joint underwriting associations, assigned risk plans, and similar schemes .. 12
Mitigation 12

Lessons for microinsurance 13

VI. Health insurance 15

Lessons for microinsurance 17

V. Concluding remarks 19

References 20

I. Introduction

On a number of fronts, microinsurance providers wrestle with substantial challenges in delivering financial protection to the poor. The industry's progress has been encouraging, but it is still young, growth remains uneven, and very significant challenges remain. Designing appropriate insurance products, marketing methods, distribution schemes and regulatory policies to fit the particular circumstances and needs of the poor in developing countries has come with a host of challenges. While the problems may be challenging, not all of them are new. Insurance markets in developed countries have faced similar problems in the past and continue to confront many of these issues in the present day. In some cases, private insurance markets have been able to overcome these challenges, and in others, the challenges have led to gaps in coverage where government plays an important role. This paper discusses some aspects of the record of life, property catastrophe and health insurance markets in developed countries that are particularly relevant to microinsurance and the lessons arising from their challenges and successes.

It is important to acknowledge the limitations of, as well as the potential rewards in, such an exercise. On one hand, some experiences of the United States or other rich countries may not be transferable to the developing world: cultural, geographic, and other societal differences could obviously favor different approaches and produce different outcomes. On the other hand, history often provides useful lessons for the present. Moreover, as we discuss below, patterns have been observed in the evolution of insurance markets in developed countries that suggest that there are issues likely to resurface in the context of microinsurance. To the extent that we can draw meaningful lessons from the experience, it will help us1) develop a better sense about what approaches are likely to succeed, and 2) set realistic expectations about what constitutes success.

The lessons vary by market. Below we summarize lessons learned for the life insurance, property catastrophe and health insurance markets.

Life insurance

In the life insurance market, there are various examples of successful approaches to serving low and middle-income households. The experience of the United States in the late 19th and early 20th century is particularly illuminating. Here, the story was largely about private innovation bringing life insurance to the masses. Key points of the United States experience are the following:

1. Life insurance was modified significantly to meet the needs and means of low income families. Changes included smaller contract values, installment financing, and the replacement of whole life features with term insurance features.
2. Distribution methods also underwent significant modification for low income families. Successful models varied from “high touch” agency marketing (industrial life insurance) to affinity group marketing (fraternal life insurance).
3. Economies of scope were frequently exploited. Companies serving low income market segments often either marketed similar products to middle class and rich families or other services to low income families. Scale of operations ranged from tiny local companies to national giants which ranked among the largest insurers in the United States.

4. Questions were raised about the value of the insurance to the consumer. Critics questioned the high cost of industrial insurance, as well as the unsound condition of some fraternal life insurers.
5. Growth was rapid and organic. Private enterprises found ways to reach low-income people with insurance with little encouragement from government, although nonprofit institutions (fraternal orders) played a key role. Industrial life insurance and fraternal life insurance together accounted for the majority of life insurance in force in the United States within less than 3 decades of their introduction. Moreover, much of the operational infrastructure was built over the same time horizon, as many of the companies taking part in the growth were *de novo* formations.
6. While fraternal and industrial insurers flourished for a time, their market shares diminished dramatically when private competitors with alternative distribution models entered the market and when public programs and policy changes aimed at assisting lower income families emerged.

Property catastrophe insurance

The story of property catastrophe coverage in developed countries is mainly one of the crucial role that government often needs to play. Key points of the international experience include:

1. Voluntary purchase of property catastrophe coverage is often spotty in developed countries, even among wealthy households. Households that are not compelled to buy coverage often opt to forego coverage.
2. Compulsion to buy coverage varies across markets. In some cases, households are required to carry catastrophe coverage by law. In other circumstances, the compulsion may be indirect: for example, banks may require catastrophe coverage as a pre-condition for lending.
3. Many countries have significant levels of government intervention in the market, and the intervention takes a variety of forms. Sometimes the government acts as a primary underwriter or as a reinsurer of primary insurance companies, while in other cases it organizes risk pools underwritten by the industry.
4. Distribution is typically left in the hands of private industry, even in cases where the government is the underwriter of risk.
5. Take-up rates vary significantly across markets according to the levels of compulsion and enforcement, as well as the nature of government intervention.

Health insurance

1. Health care for low income families in developed countries is typically provided through a subsidized government insurance program or a national health service.
2. The role of private health insurance varies across developed countries. In a few, it provides primary coverage for those outside of the public system. In others, it supplements public insurance by covering gaps.
3. In the United States, group employment-based insurance is the norm, while individual policies are less common. Healthcare reform in the United States has focused on mandatory cover for individuals using group delivery mechanisms with heavy government subsidy for the poor.
4. In almost all developed countries, the main buyers of private health insurance are higher income people.

II. Life insurance

The setting

Although life insurance existed in United States even in colonial times,[3] the birth of the industry is usually traced to the 1840's. Starting with the Mutual of New York in 1843, life insurance companies grew rapidly, with the industry reaching nearly USD 2 billion of insurance in force by 1870, which amounted to more than a quarter of gross national product (GNP) at the time.

The industry's subsequent growth was spectacular but uneven. Life insurance in the mid-19th century was mainly a product for wealthier households. The question of how to bring life insurance to the masses had been recognized as a policy issue for some time. In 1870, however, there was little evidence of any substantial purchase of whole life insurance by lower income households in the United States.

This situation changed dramatically over the last three decades of the 19th century. The 1870's featured two key innovations aimed at the working class market – industrial life insurance and fraternal life insurance. Both were successful – so successful that together they accounted for over half of the life insurance in force in the United States by 1900.

The product and the problem

Whole life insurance was the key product driver in the 1840's. Whole life insurance combined mortality protection with a savings product: if the insured did not die before a pre-specified age, the face value of the policy was paid to the policyholder. Premiums were paid annually by the policyholder over the course of the lifetime or for a certain number of years, after which the policy was considered to be "paid up," with the only remaining uncertainty concerning the timing of the delivery of the face value.

Such a product involved a great deal of foresight and commitment on the part of the buyer. Indeed, a major insight of the 1840's "revolutionaries" was that persuasion would have to play a key role in marketing the product, and the innovation of the agency marketing system was arguably the single most important contributor to the success of the industry in the 19th century. Yet, despite the spectacular success of life insurance agents in persuasion, neither the product nor the approach to selling it was well-suited to the needs of lower income families.

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The combination of mortality protection with retirement saving made for an expensive policy. While this may have been well suited for those with retirement plans or bequest motives, the savings component added unnecessary expense for those whose main concern was financing burial. In addition, policyholders whose commitment faltered were faced with significant uncertainties with respect to recovering value from the policy. Nonforfeiture laws were uncommon in 1870, and

[3] The Presbyterian Ministers Fund, which provided insurance to Protestant ministers and their families, was formed in 1759.

contracts were often mum on the subject. Many who could no longer afford the premiums received nothing when their policies lapsed.[4]

Premium financing was also problematic for those of modest means, as annual premiums were typically required in a lump sum, which was challenging for those on tight budgets. An early attempt to address this by offering weekly installment premiums, delivered by mail to the company's home office, was not successful – perhaps because of the relatively subdued role of the selling agent.

Evidently, a different marketing approach, as well as a different product, was needed.

The solutions

Industrial Insurance

Though a similar contract, industrial insurance distinguished itself from typical whole life insurance in several respects, all of which were important modifications designed for the working class market.

First, the contract sizes tended to be much smaller. Second, premium payment was on a weekly, rather than an annual basis. Finally, there was an extremely high level of interaction between the agent and the insured. Specifically, after selling the policy, the agent typically collected premiums by going to the home of the insured.

Small contract sizes addressed the affordability issue for lower income families and also aligned more closely with their insurance needs, such as providing for funeral expenses. The weekly financing allowed cash- and credit-constrained consumers to access the insurance market without a relatively large lump sum for an annual premium payment. The close personal connection with the agent was essential for developing trust and understanding of the product.

Industrial insurance required a unique type of distribution system which involved door-to-door selling and weekly hand collection of premiums.

Pioneers of industrial life insurance were typically joint stock (for profit) companies at the time of their inception. Although there were some companies that specialized exclusively in industrial life insurance, it was common for industrial life insurance to be combined with other types of life insurance in the same company. In particular, giants of industrial life insurance like Prudential Life and Metropolitan Life had other types of life and disability insurance business, including larger contracts.[5] Combining industrial insurance with other types of insurance allowed the carriers to exploit economies of scope, although, as noted above, industrial insurance required a unique type of distribution system which involved door-to-door selling and weekly hand collection of premiums.

[4] Nonforfeiture laws required companies to award partial benefits to those allowing their whole life contracts to lapse. The first appeared in Massachusetts in 1861, but the ability to surrender the contract for cash was not a mandatory feature of the contract until Massachusetts passed an expanded nonforfeiture law in 1880 (Stalson (1942), p.319).

[5] Prudential started as a company focused on industrial insurance, while Metropolitan started in the standard market and expanded into industrial insurance as the opportunity became apparent. However, both of these companies could credit industrial insurance as being the main driver of their size by the turn of the century. For example, more than 75% of Metropolitan's insurance in force in 1904 was industrial (James (1947), p. 139).

Scale of industrial insurance companies varied. Prudential and Metropolitan were national companies which – when all business was considered – were among the largest in the United States. On the other hand, some companies were provincial or even local in nature. Some industrial specialists operated exclusively in a single state, a phenomenon encouraged to some degree by state regulation of insurance (including state-specific licensing requirements) and the relaxed standards applied to industrial specialists in some jurisdictions.

The apparent high cost of distribution in industrial insurance prompted questions about its value to consumers. This skepticism about the value proposition has dogged industrial insurance since its inception and produced criticisms similar to those leveled at other financial markets for the poor. Specifically, critics question the overall benefit to policyholders when premiums must reflect such high costs of distribution and marketing. A New York Insurance Department report on the subject released in 1938 was cited by critics as evidence of the high cost relative to ordinary insurance, although subsequent analysis found the differentials to be less pronounced after other factors were considered (Belth and Leverett, Jr., 1965).

Industrial insurance enjoyed strong growth throughout the late 19th century and into the 20th century. As can be seen in **Figure 1** below, it was approaching 20% of total insurance in force in the United States by the 1930's. It continues in various forms today, though at less than 1% of the total market in 2000, its imprint is small relative to that of its heyday.

Little formal research has been done on the reasons for its decline, but there are several likely factors. New products and marketing methods gained popularity over the course of the 20th century. Specifically, group insurance and various forms of term insurance provided working families with easy and relatively inexpensive access to the life insurance market. In addition, survivorship benefits provided by private and public pension programs may have lessened demand for industrial insurance.

Fraternal insurance

Fraternal life insurance represented a more radical, and at least for a time even more successful modification of the traditional approach to life insurance. Fraternal life insurance was sold by fraternal orders, which were associations organized along ethnic, religious, or occupational lines. The fraternal orders operated on a "lodge system" in which local chapters (a.k.a. "lodges") were under the ultimate authority of a supreme lodge or governing body. Fraternal life insurance departed from the mainstream in two key areas.

First, the basis of the typical fraternal contract was different. Whole life insurance was predicated on the collection of premiums in advance of benefits, long-term commitment and the accumulation of reserves for the benefit of the policyholder. As noted above, the product was expensive, and the reserves often disappeared if the contract lapsed. Hence, the rallying cry of fraternal insurance in the early years was: "Keep your reserve in your pocket!" This statement was literally true for many fraternal orders in the early days, which offered contracts based on the principle of assessment. In its simplest form, when a member died, surviving members were obligated to contribute to meet the death benefit promised to the beneficiary of the deceased. A member could stay insured as long as he or she liked, so long as assessments were paid.[6] Fraternal insurance migrated away from this "assessment

[6] See Kip (1953)

insurance" approach to require advance payment of premiums as the industry matured and regulations changed.

Second, the distribution of fraternal insurance was accomplished through the infrastructure of the lodges through which the fraternal order did business. Access to life insurance was just one of the benefits of fraternal membership, which offered social networking opportunities as well as other forms of mutual aid, including disability insurance (e.g. sick or accident benefits provided to the families of incapacitated workers). Indeed, the man regarded by many as the pioneer of fraternal life insurance, John Jordan Upchurch, had added the life insurance feature as an "afterthought" to the Ancient Order of United Workmen, and the feature was not immediately utilized.

The growth of fraternal insurance was stunning. By the turn of the century, fraternal life insurance accounted for the majority of all life insurance in the United States, much of which was underwritten in orders founded not even three decades before.

As was the case with industrial insurance, the scale of fraternal insurance organizations varied considerably. The largest insurers, such as the Woodmen of the World, rivaled the largest traditional insurance companies in terms of size. Others were quite small: examples include fraternals whose business was confined to a single employment related group (for example, policeman and firefighters) within a single city.

Fraternal orders large and small owed their success in part to a widespread regulatory exemption that persisted until the turn of the century. While this exemption evidently facilitated growth, some observers questioned whether fraternal insurance was serving the interests of the policyholders. Unlike industrial insurance, the questions did not concern cost since fraternal insurance was clearly much cheaper than alternatives. Instead, the questions concerned solvency: critics complained that fraternal insurers were violating actuarial laws of gravity in ways that unsuspecting policyholders did not understand. Specifically, the fraternals would not be able to meet their obligations without painful financial adjustments to rates or coverage.

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In truth, fraternal insurance was not necessarily incompatible with actuarial principles, but operating methods varied widely in this unregulated space. For example, some orders eschewed actuarial pricing of risks, choosing instead to appeal to egalitarian principles by requiring equal charges from all members, regardless of age or health. Such orders were especially vulnerable to the financial difficulties that appeared when membership growth stalled or adverse selection took hold.

Regulatory change started with the "Force Bill" of 1900, which required minimum rates based on a specified mortality table. Although this bill was adopted by few states, it was a harbinger of things to come, as new legislation introduced in 1910 (known as the New York Conference Bill) ultimately spread to many states. The New York Conference Bill specified minimum rates

as well as solvency tests for fraternal insurers. The wave of regulation in the early 1900's was motivated partly by failures in the fraternal sector, as a number of orders encountered financial difficulties around the turn of the century.

Regulation was only one of the headwinds facing fraternal insurance in the early 1900's. Fraternal orders were in the business of providing financial security – in the forms of life, health, and disability insurance – to legions of working class families. Over the course of the first half of the 20th century, powerful new competitors emerged. First, states began to enact comprehensive workmen's compensation legislation, beginning in 1911 in Wisconsin, which usurped the fraternal order's role as the primary disability insurance provider to working families. This trend spread rapidly: By 1920, 80% of the population of the United States population was covered by workmen's compensation laws. This continued in the 1930's with the rise of the welfare state in the form of the Social Security Act of 1935, which granted public pensions and disability benefits to workers and their survivors. Competition also emerged in the private sector. Fraternals aggregated members based on religion, ethnicity, or sometimes merely status as workers. It was also possible, however, to aggregate membership for insurance purposes on the basis of place of employment, and this method of aggregation, which spread in the early part of the 20th century, had the added advantage over purely affinity based marketing of offering a single source from which to collect monthly premiums for many individuals. Group marketing methods of life, health and disability insurance were introduced in 1912, and group annuities appeared as enablers of private employer pensions.

All of these influences and more contributed to a decline in the importance of fraternalism as the 20th century progressed. This manifested in declining membership and declining insurance market share. By 1920, fraternal life insurance accounted for only 20% of total life insurance in force. By 1930, this figure had fallen to 10%. Today, fraternal insurers account for about 1% of insurance in force in the United States.

Figure 1 Fraternal, Industrial, and Group Share of Life Insurance in Force in U.S. Companies, 1870-1970

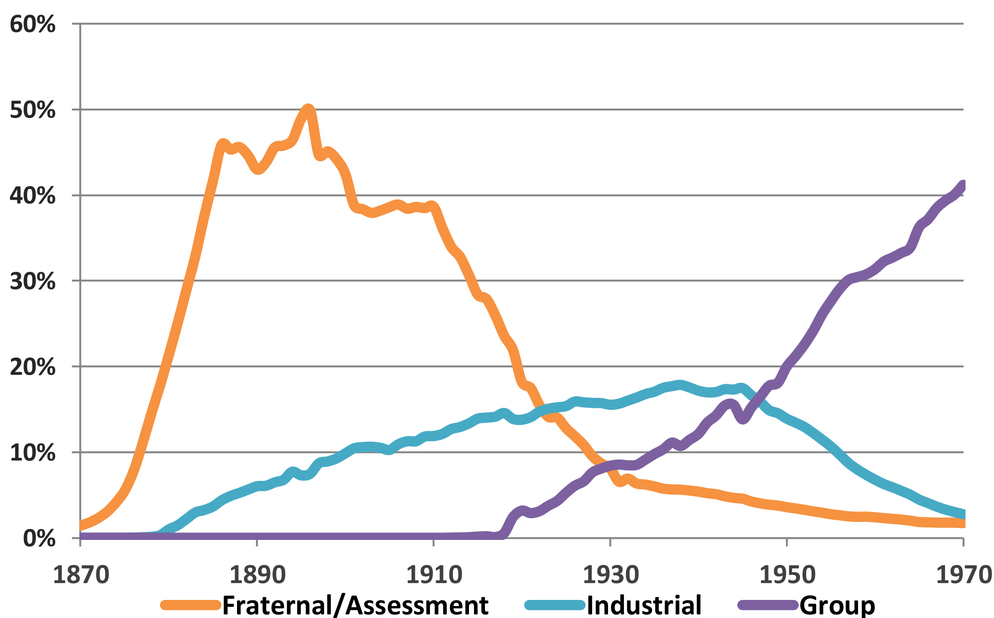


Figure 1, above, tracks the development of fraternal insurance, industrial insurance, and group insurance over the 1870-1970 period.[7] A few of the themes touched on above are illustrated well. First, insurance for working families[8] was by no means a fringe market; it was a huge part of the overall life insurance market within just two decades of its inception. Second, obsolescence in the case of fraternal insurance, as well as the rise of group insurance, are both evident in the record after 1910. The decline of industrial insurance is also evident after 1940.

Lessons for microinsurance

The historical experience with industrial and fraternal life insurance has a number of parallels with microinsurance today, and it may shed light on a number of open questions concerning approaches to private provision.

Product design

The main life insurance product of the 19th century was whole life insurance, which served a dual role as a mortality insurance product and as a savings/wealth accumulation product. The latter feature pushed the cost of the product beyond the means of most low income families, necessitating changes to the product before it could serve this market. Changes came in the form of lower contract values in the case of industrial insurance and a more radical overhaul in the case of fraternal insurance, where the savings feature was often dropped entirely. A further innovation for industrial life insurance was weekly installment payments, as opposed to the lump annual sum typically required in a whole life contract, making the product affordable for the poor.

Lessons from Traditional Life Insurance

Problem: *Traditional life insurance products in the United States were too expensive and not well-suited to the needs of low-income families*

Response:

- Industrial insurers offered smaller and more appropriate policies with accessible payment structures
- Commercial insurance companies and fraternal orders found new ways to reach low-income clients through high-touch distribution and servicing
- Over time industrial and fraternal insurers lost market share as commercial insurers as innovative distribution models entered the market and public programs emerged

Implications for Microinsurance:

- Products must be appropriate for low-income clients (not just small)
- Installment payments can make products more accessible
- New distribution channels and methods are often needed to serve low-income clients

These themes have close parallels in microinsurance. Many have argued that microinsurance products cannot simply be "down-sized" or low premium traditional products: where products

[7] The figure is based on data from Stalson (1942) Appendices 18-24 and the ACLIs Life Insurance Fact Book for 1961 and 1971. Stalson's data covers 1870-1937, while the Fact Book is used for the rest. Exponential interpolation is used for the 1870-1879, 1881-1884, 1938-1939, 1941-1944, 1946-1949, 1951-1954, 1956-1957, and 1961-1964 periods for fraternal insurance, based on the growth rate observed in the surrounding years. Similar methods are used to produce figures for group insurance in 1913-1914 and fraternal insurance in 1898. The Fact Book data includes Canadian fraternal insurance, but this distortion appears to have non-material impact.

[8] It should be noted here that fraternal insurance was not exclusively dedicated to lower income individuals. The average contract size was well below the figures in the ordinary market but well above those in the industrial market: the protection and value offered was sufficient to attract consumers from higher income brackets (Kip (1953)).

are designed specifically for the poor they have been most successful. Like the working-class families in the United States who were excluded from the traditional insurance markets, microinsurance consumers in low-income countries may often be best served by more limited coverage that focuses on the most immediate needs following a death. MILK's Client Math studies of life insurance confirm this finding: beneficiaries tend to spend a large proportion of the insurance benefit on funeral-related costs. Providing such targeted, accessible, and appropriate coverage can pay off from a business case perspective. In the Philippines, for example, MILK found that Mutual Benefit Associations, whose products are designed solely to provide insurance for the poor, outperformed commercial carriers entering these markets, even when those carriers reduced their prices below prevailing market rates (Koven, McCord, Wipf, & Zimmerman, September 2012). Installment financing has also been found to be important in microinsurance contexts. For example, Colombian insurers have had great success in reaching low-income clients with funeral microinsurance products distributed through utility companies, which allow clients to pay premiums monthly with their utility bills (Koven & Martin, April 2013). Credit-linked microinsurance takes a similar approach, by allowing clients to spread out payment of their insurance premiums through their loan cycles.

Distribution

Industrial insurance and fraternal insurance both involved radical departures from the distribution method used for whole life insurance. In the case of industrial insurance, the agent made weekly appearances at the door of the insured to collect the premium. This led to rapid growth although skeptics feared that consumers were paying far too much for industrial life insurance, with its high distribution costs, and feared that they were being exploited by aggressive salesmen. Fraternal insurance, on the other hand, relied on distribution through affinity groups with common ethnic, religious or trade based ties. Fraternal insurance was also criticized, with concerns that the consumer did not fully understand the risks in product, and that the insurance companies were not being operated competently.

These themes have parallels in microinsurance today. In a number of microinsurance markets the costs of distribution, rather than demand or competitive dynamics, appear to drive pricing (Koven, McCord, Wipf, & Zimmerman, September 2012). Commissions paid to distributors are generally unregulated, and although the cost to insurers is high there is concern that regulation will inhibit distribution (Koven & Martin, April 2013). Similar to fraternals, affinity based marketing has been utilized frequently in microinsurance, although the results have been mixed. Even in highly cohesive groups like MFIs, purely voluntary programs rarely work (Koven, Chandani, & Garand, September 2013). On the other hand, when coverage is mandatory there are concerns that clients may not want products, understand them, or be able to use them effectively.

Business model

Fraternal societies relied on affinity and their non-insurance products and services to develop institutional trust and loyalty. Additionally, fraternal life insurance was often packaged with other services, including other types of insurance in some cases, by fraternal orders. Industrial insurers also sold other types of products, though these were generally targeted at other consumer types. Multiple product lines may have allowed industrial insurers to exploit economies of scope and distribute the costs of corporate infrastructure over a larger base of consumers, thereby improving the economic viability of industrial insurance. This approach led to organic growth without any direct assistance from the government. State governments

also encouraged fraternal insurance for a time through regulatory exemptions in the last decades of the 19th century, although these were largely phased out by 1920.

Findings of MILK's business case work suggest that similar characterizations apply to microinsurance. Intermediaries focused exclusively on microinsurance struggle more to reach sustainability than organizations with mixed portfolios (Koven & McCord, January 2013). Third party (donor) subsidies, while useful, do not sustain microinsurance programs over the long haul, and such reliance is a disadvantage to community-based programs competing for business with larger commercial entities (Koven, Chandani, & Garand, September 2013). Affinity when tied to loan activity in MFIs appears to have limited effectiveness, while cooperative societies that are trade-based and have built in collection mechanisms fare better. In MILK's forthcoming brief on Kenya, for example, MILK has observed that health covers developed for tea farmers, where premium is remitted through tea leaf collection stations, has achieved high penetration rates. Also in Kenya, the cooperative insurer CIC has been active in creating bundled life and health products for the poor.

Competition and program age

The study of fraternal and industrial insurance demonstrates the full product life cycle from early challenges and successful adaptations to growth, maturity and ultimate decline. Although both exist today (albeit in different forms than a century ago), their role is greatly diminished relative to that of 1900, when they accounted for more than 50% of the insurance sold in the United States. There were many factors behind the decline. Mainstream insurance products and distribution methods adapted to serve lower income households, as term insurance and group marketing methods brought relatively cheap mortality protection within reach of working families. Public insurance programs such as Social Security, Medicare, and Medicaid also may have reduced the demand for private health, disability, and life insurance over the course of the 20th century. Similarly, the enactment of workers compensation laws provided working families with an additional layer of insurance protection not present in the 19th century. The deeper point here is that changes in public policy and the competitive landscape may have rendered once-viable solutions redundant.

Similar transitions have occurred in microinsurance. For example, private health microinsurance programs in India, which were "first movers" in the market, were subsequently overwhelmed by publically supported programs such as RSBY (Koven, Chandani, & Garand, September 2013). Likewise in Kenya, MILK's research reveals that private programs have gone through multiple product iterations trying to find the right formula for an offering that must compete with the National Hospital Insurance Fund, which increasingly has focused on the informal sector.

III. Property catastrophe insurance

Catastrophe insurance market economics

Economists have puzzled over low rates of catastrophe insurance purchase in a variety of contexts. Ginsberg et al. (1978) noted extremely low rates of purchase of flood insurance and earthquake insurance protection in the United States. A variety of explanations exist for the low rates of participation. On the demand side, behavioral-psychological factors are often stressed: for example, some argue that households systematically underestimate the risks associated with natural disasters.[9] Others argue that households anticipate government aid in the aftermath of disasters, and this reduces demand for private coverage. Still other scholars point to problems on the supply side of the market, emphasizing the problems of covariant risk associated with natural disasters. Such problems are argued to raise private production costs through a variety of possible mechanisms, leading to high prices relative to expected claims (see e.g. Froot (2001), who discusses these complications in the context of catastrophe reinsurance).

Catastrophe insurance market performance

Participation rates vary considerably across catastrophe insurance markets. In the United States, coverage varies substantially according to catastrophe type. Few households have earthquake insurance: even in high-risk areas such as California, only about 10% of households have coverage.[10] Flood insurance penetration varies according to risk level. About 50% of households in high risk areas carry flood insurance, while only 1% of those outside high risk areas are covered (Dixon et al., 2006). Windstorm insurance, on the other hand, is carried by a significant majority of households, especially in high-risk states such as Florida.

Coverage varies internationally as well. To take the example of earthquake insurance, coverage varied substantially in recent events. Swiss Re estimates that 4% of the economic losses associated with Turkey's 2011 Van earthquake were covered by insurance; the corresponding figure for the Japan's 2011 Tohoku earthquake and tsunami was 17%. In New Zealand's 2011 Christchurch earthquake, on the other hand, about 80% of the losses were covered by insurance (Swiss Re, 2012). Moving to flood insurance, more than 90% of households carry flood insurance in France and the U.K., while the figure for Germany is about 10% (Michel-Kerjan, 2011).

What accounts for such diversity? A quick overview suggests that lenders' requirements and policy factors play significant roles. In the United States, for example, mortgage lenders typically require borrowers to carry windstorm insurance, but neither earthquake nor flood insurance is required (unless the property lies in a high-risk flood area, in which case federal law mandates flood insurance coverage). Lender requirements also may explain why flood insurance take up is so high in the U.K. Government policy on mortgage finance is thus an important determinant of catastrophe insurance purchases. Government imposed

[9] MILK Brief #7 explores the issue of risk perception and other demand-side factors in detail, drawing from both microinsurance and traditional insurance literature.
[10] Estimate based on the California Department of Insurance 2012 Earthquake Premium and Policy Count Data Call.

requirements also play a role: France is an example of a country that has made flood insurance coverage mandatory, as has Spain. In Germany, on the other hand, flood insurance is typically voluntary.

Public interventions

In many countries, the government intervenes in the catastrophe insurance market with subsidies, and in some cases even by acting as an underwriter of risk. Intervention comes in a variety of forms. Typically, however, the infrastructure of private distribution is left intact.

Public insurance and reinsurance schemes

Examples of these approaches include the National Flood Insurance Program (NFIP), the federal flood insurance scheme in the United States. The California Earthquake Authority (CEA), is a state-sponsored earthquake insurer in California. Citizens Property Insurance Corporation provides residential windstorm coverage in Florida. The Earthquake Commission (EQC) is a public entity providing natural disaster insurance in New Zealand. In Spain and France, where private property insurance policies are required to include catastrophe coverage, the government sets surcharges for the coverage which are then used to fund losses.

Joint underwriting associations, assigned risk plans, and similar schemes

A number of US states use joint underwriting associations (JUAs) and assigned risk plans to deal with the problem of difficult-to-insure risks, including those in areas threatened by natural disasters. Private insurers are required to participate in the state JUA, which is typically a pool of high-risk policies that did not find coverage in the private market. Assigned risk plans are similar, with private insurers are randomly assigned to those who could not find coverage elsewhere. Both types of plans typically involve rates that are set below actuarial values, so that the plans lose money that must be recovered from elsewhere.

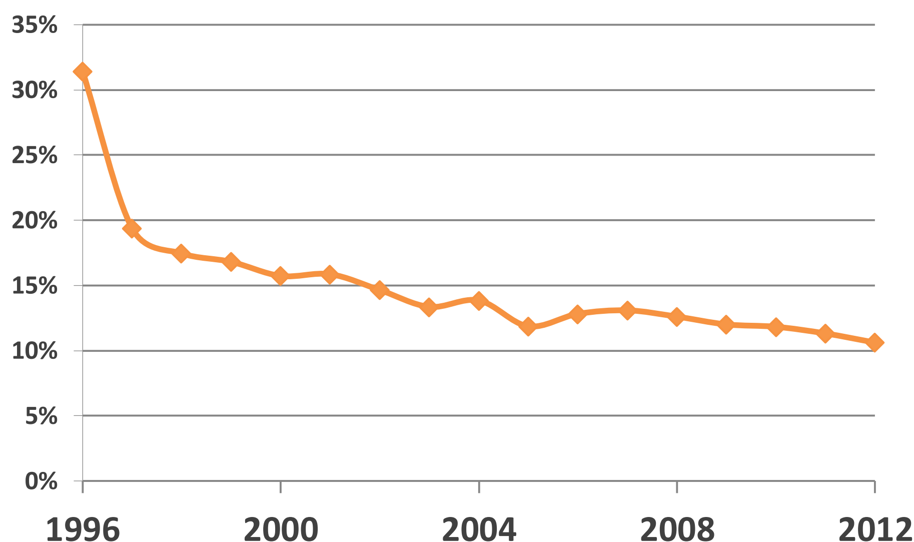
Mitigation

Government also plays an important role in disaster prevention and mitigation efforts. Building codes, zoning policy, flood mapping, and physical infrastructure such as levees are all key functions of the public sector, even if the insurance is provided by the private sector.

United States flood insurance, German flood insurance, and California earthquake insurance are all examples of property catastrophe markets where purchase is voluntary and participation rates are low, even in the face of substantial risk. Although public interventions are often enacted in response to the apparent dysfunction in the private markets, not all programs produce high participation. For example, the NFIP wrestled for years with the problem of low take up of voluntary insurance. The Federal Disaster Protection Act of 1973, which made flood insurance mandatory for federally related mortgages in high risk areas, was part of the attempt to boost participation; this effort yielded some success within these high risk areas, where take up is now 50%.

Another example is found in California: the CEA was instituted in 1996 in response to chaos in the homeowners' insurance market created by the 1994 Northridge Earthquake. In the year of the earthquake, over 30% of residential policies carried earthquake insurance (Roth, Jr., 1998), a figure that persisted until 1996. The creation of the CEA, however, was not associated with growth in penetration. To the contrary, purchase rates plummeted in the new regime,

leading to the situation of today, in which just 10% of the state's homes have earthquake protection (see **Figure 2** below). There are a number of reasons for the decline in coverage, but a large part of it can be attributed to the state's assumption of responsibility for contract design and pricing (which increased substantially in some areas) and to conflicting incentives for private distribution (since each carrier's share of post-event assessments depended on its share of earthquake insurance distributed).



California's experience illustrates two key points about catastrophe markets. First, people who are not forced to buy insurance (Californians are rarely required by their lenders to do so) often go without. Second, public programs do not necessarily lead to greater penetration. This is not to say that catastrophe insurance is not viable, only that the nature of the approach matters. When given strong incentives, households do purchase catastrophe insurance. "Incentives" can come in the form of government mandate (as in France and Spain) or indirectly through mortgage financing requirements (United States Windstorm). Public schemes of various types, often involving some significant degree of subsidization for exposed properties, are also associated with high penetration.

Lessons for microinsurance

As we have seen, private, voluntary markets for catastrophic coverage in developed countries often yield low participation. Developing countries and low-income consumers face the same demand-side constraints as their higher-income counterparts. In fact, these constraints may be even more significant in the microinsurance market, where potential clients are more cash-constrained, less educated, and have access to less information about the risks they face and the products being sold to them.

High participation in property catastrophe insurance in developed country markets is usually encouraged by government intervention in the insurance market or through pressures from

[11] This figure is based on calculations using the California Department of Insurance's Earthquake Premium and Policy Count Data Call from 1996-2012.

the credit market (with the latter possibly being driven by government intervention as well). Any such government mandates, however, should be crafted in light of other government interventions in risk protection and disaster response. For instance, in Southern Thailand, households reported (McCord and Tatin-Jaleran, Forthcoming) that they receive relief after storms and in spite of the delays observed, they do not consider storms as major risk. If the government was to also require storm coverage on loans, it might face significant resistance unless the policy on relief was modified. It is clear that relief provided by government and risk transfers (by household, meso-level organization and regional or national public agencies) should be coordinated to maximize the protection offered to vulnerable populations.

There are, however, a number of challenges in developing countries that work against such coordination of government policy and private market development. Specifically, catastrophe losses are often exacerbated by inadequate prevention and monitoring infrastructure. For example, in the 2010 floods in Pakistan, losses were exacerbated by poorly maintained irrigation systems and land use changes; in the recent floods in Bangladesh, embankment breaches were frequent; in Thailand in 2011 there were delays and poor decision-making processes to divert excess water; in the Izmir Earthquake in Turkey as well as the 2010 floods in Pakistan, lax enforcement of construction codes was evident. With limited or unpredictable public prevention and mitigation efforts, it may be difficult for the private sector to provide catastrophe coverage.

International capital is currently playing an important role in catastrophic microinsurance coverage: all the catastrophic microinsurance programs MILK studied are collaborations between local and international stakeholders. In the Philippines, for example, a global reinsurer has facilitated the transfer of storm risk from local municipalities and cooperatives. The complexity of modeling these risks and the innovative product design required means that collaboration involving international players may often be ideal, though local expertise can significantly enhance these collaborations (as it does, for example, in flood insurance in Bangladesh). This role for reinsurers parallels the experience in parts of the developed world, where the global reinsurance industry is an essential partner in managing the underlying risks of natural disasters.

Lessons from Traditional Property Insurance

Problem: *Even wealthy households are often reluctant to purchase voluntary property catastrophe coverage*

Response:

- In some developed country contexts, people are required by law to carry catastrophe coverage; in others, indirect pressure (such as from lenders) compels coverage
- Government intervention in the market is significant
- Insurance coverage varies drastically by risk and context, and government involvement does not always increase coverage

Implications for Microinsurance:

- The same demand challenges exist in microinsurance markets, and are perhaps greater due to financial and informational constraints
- Government involvement in the market, by mandating private insurance coverage and/or by providing public risk protection or disaster relief, should be coordinated

VI. Health insurance

Health insurance stands out from other types of insurance in a number of ways, especially with respect to government involvement. Governments in developed countries are heavily involved in the financing and, in many cases, directly in the provision of health care. It is important to understand that, in many countries, the policy goals for health insurance coverage are far more ambitious than those for other markets: specifically, many view access to care as a basic entitlement rather than a privilege, so universal access is thus held as the ideal. It is immediately obvious that a complete reliance on free markets is not likely to conform with this ideal, so it is not surprising that government involvement is so widespread. Governments in all developed countries provide some type of health care or health insurance to at least some segments of their populations. The United States, for example, provides health insurance to the poor and to the elderly; a number of other countries have various forms of universal health care.

Nevertheless, private insurance often does play an important role in some countries, although the type and extent of this role varies considerably. Some flavor of the varying role of private health insurance can be gleaned from Table 1 below.

Table 1 Percentage of population covered by public and private insurance

Country	% of population covered		% share of total public spending	
	Public insurance	Private insurance	Private insurance	Out-of-pocket
Australia	100	44.9	7	19
Austria	99	31.9	7	19
Canada	100	65	11	16
Czech Republic	100	Negligible	0	9
Denmark	100	28	2	16
Finland	100	10	3	20
France	100	86	13	10
Germany	90.9	18.2	13	11
Hungary	100	Negligible	0	21
Iceland	100	Negligible	0	16
Ireland	100	43.8	8	14
Italy	100	15.6	1	23
Japan	100	Negligible	0	17
Luxembourg	99	2.4	2	8
Netherlands	75.6	92	15	9
New Zealand	100	35	6	15
Norway	100	Negligible	0	14
Slovak Republic	100	Negligible	0	11
Spain	99.8	13	4	24
Switzerland	100	80	11	33
United States	24.7	71.9	35	15

Source: OECD (2004): Tables 2.4, 2.6, 2.7. Data refer to the year 2000 for most countries.

In most countries, private health insurance accounts for a relatively small percentage of total health spending. The United States stands out in terms of its reliance on voluntary private health insurance, with 35% of total health spending. Part of this can be attributed to the

restricted scope of public system application in the United States relative to other developed countries: in the United States, only 25% of the population is covered by public insurance, while other rich countries feature public coverage of 90 to 100% of the population.

In the United States more people (49%) receive health insurance from their employer than any from any other source; and only 5% buy health insurance individually.[12] Employment based health insurance in the United States became prominent beginning with World War II when wages were frozen but competition for workers among firms was high. The government allowed employers to provide benefits, including health insurance, as a form of tax-deductible compensation not subject to the wage freeze. The insurance industry jumped in and provided group cover to firms, which to this day is the predominant health cover in the United States.[13]

In most developed countries, private insurance often plays a supplementary role by filling the coverage gaps in the public system. There are a few exceptions where private insurance plays a significant role in the country as *primary* insurance to those who are, whether by choice or by law, not covered by the public system. In addition to its significant role in the United States, private insurance also plays a primary role for parts of the population in the Netherlands (28%) and Germany (9%) who either have "opted out" of the public system or are not entitled to benefits; a similar characterization, though on a lesser scale, applies to Belgium, Spain, and Austria.[14]

In most developed countries, private insurance often plays a supplementary role by filling the coverage gaps in the public system.

Distribution methods for private health insurance vary significantly across countries. The United States relies almost exclusively on group policies distributed through employers, which account for 94% of the total market for private health insurance. Group distribution for private insurance is important in other countries, notably in Canada and Sweden---where market share is also above 90%, but this is not universal. Individual policies dominate the private health insurance markets of Germany and Australia, and they play a significant role in other countries.[15]

Income level is an important determinant of private health insurance purchase. The differences can be striking. In Ireland, 70% of those in the highest income decile purchased private health insurance, as opposed to only 8% of those in lowest decile; in Spain, 30% of the highest income group had private health insurance, versus 2% in the lowest income group. In general, according to the OECD, "…in virtually all OECD countries, private health insurance is predominantly purchased by high income individuals" (OECD, 2004, page 59). Even in the United States, where public coverage of low income groups is perhaps the lowest among

[12] "State Health Facts – Health Coverage and Uninsured," The Henry J. Kaiser Family Foundation, 2011. (http://kff.org/state-category/health-coverage-uninsured).
[13] "History of Health Insurance Benefits," Employee Benefits Research Institute, March 2002. (http://www.ebri.org/publications/facts/index.cfm?fa=0302fact), accessed 9/27/13.
[14] See OECD (2004), Table 2.7.
[15] OECD (2004), Table 2.10.

developed countries, those in the higher income brackets are more than twice as likely to purchase private insurance as their counterparts in lower income brackets.[16]

It is interesting to note that the recent health care reform in the United States is focused mostly on the individual market, leaving the group health insurance market largely in place. In fact, the health exchanges central to the reform are meant to provide cover to individuals, and some very small employers, by using large group insurance principles, such as leveraged purchasing power with insurance companies that have been successfully employed in the group markets. These attributes are augmented by public-private partnership with insurers, significant public premium support (subsidy) and mandatory coverage.

Other determinants of private health insurance purchase include price, although the sensitivity of demand to price varies considerably across markets. Perceived quality of public health services and programs also appears to play a role, as does health status of the individual.

Lessons for microinsurance

We have seen that in developed countries health insurance is primarily provided by governments and to a lesser extent through private health insurance. (A major exception is the United States, where private employment-based insurance is the predominant model.) There are no examples in developed countries where private, individual health insurance is the predominant model. Where individual health insurance does exist in the developed world, it is primarily used to fill the gaps in public systems and is purchased mainly by the rich. All developed countries have found it necessary to form public health services or insurance programs to address the needs of the poor and others with limited access to health care.

These observations resonate strongly with those made by MILK in its study of health microinsurance in India. Some key lessons include:

- Experiences from the developed world suggest that it may be unreasonable to expect private, voluntary, unsubsidized health microinsurance play a large role in health coverage.

Lessons from Traditional Health Insurance

Problem: *Comprehensive health coverage is expensive; private, unsubsidized health insurance is typically not affordable for low-income people*

Response:

- ➔ In most developed countries, healthcare financing for low-income people is provided through government-subsidized insurance or other programs
- ➔ Private insurance fills in gaps in public coverage, and main buyers are typically the rich

Implications for Microinsurance:

- ➔ Microinsurers should cover gaps that are specific to low income needs even when there is government health care available.
- ➔ Expectations of massive commercial health microinsurance expansion of voluntary, unsubsidized products should be tempered with the reality of history.
- ➔ Public-Private Partnerships for health microinsurance may be necessary to provide significant access to the low income markets.

[16] OECD (2004), page 59 and Table 2.9.

- Government support through premium subsidies can help achieve scale (RSBY for example), but governments may have less capacity to play this role in developing countries than they do in OECD.
- In the absence of government capacity or willingness to provide this support, there may be a role for donor subsidy (such as the PharmAccess programs MILK studied in Tanzania and Nigeria).
- In parallel, there may still be a role for private, unsubsidized insurance that fills gaps left by the public sector and by donor-supported programs. For example, the product studied by MILK in Guatemala provides narrow coverage for women's healthcare, and the supplementary income protection that is suggested in several MILK papers might provide a valuable complement to government programs in India.

V. Concluding remarks

So what can we learn about delivering insurance to the poor in developing countries from the experience in the United States and other developed markets? What works? What's realistic?

In property catastrophe and individual health insurance, the experience of developed countries yields fodder for skepticism. We have little evidence of voluntary private programs reaching high penetration levels among low income groups, with the exception being property catastrophe insurance in cases where motivational leverage is being supplied from the credit sector. Even though catastrophe and health are very different risks, there is evidence that government entry and premium support in these markets is essential to cover populations broadly.

In life insurance, the story for voluntary markets is more promising. The example of the United States (as well as other countries) suggests that innovation in product design and distribution can result in significant penetration in low income sectors. Likewise, life microinsurance is by far the product that has reached significant scale most quickly. Clearly, as with industrial life, product design and distribution refinements are required and "down streaming" of traditional insurance simply doesn't work. And like the fraternals, grassroots business models may emerge to dominate the market, but these will certainly come under pressure over time from larger commercial players. Early movers can also expect inevitable changes and government policy, and even the most successful should be prepared to adapt to new competitive and market dynamics.

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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.