Public Disclosure Authorized

Public Disclosure Authorized

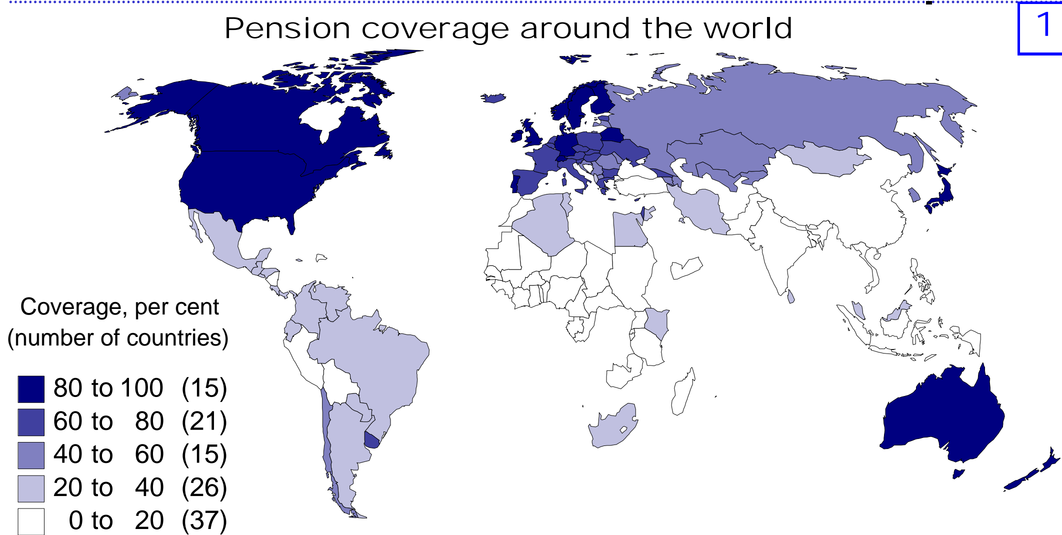
33392

Coverage

The scope of protection in retirement income systems

The coverage of old-age protection systems is a central concern in developing countries. While most countries mandate that workers make contributions to a retirement-savings plan of some kind, fewer than ten per cent comply in South Asia and Sub-Saharan Africa. Coverage is less then 30 per cent in most of East Asia, around 30-40 per cent in middle-income Latin American countries. It reaches an average of 60 per cent in the transition economies of Eastern Europe and the former Soviet Union. In contrast, higher-income OECD countries manage to cover 80 per cent or more of their workforce. The map (chart 1) shows the global pattern.

Pension coverage around the world 1



Note: 'missing' countries indicate data unavailable. Source: ILO, World Bank

The definition applied here does not distinguish between those workers that evade the scheme and those that are not legally required to participate. Also, the ratio of contributors to the labor force masks potential differences in terms of dormant accounts (those with accrued pension rights but not currently contributing) and in the proportion of worker's income actually covered which can vary significantly across schemes.

However defined, it does appear that economic development is the major determinant of coverage. Indeed, the level of income per capita is an excellent predictor of coverage rates. In contrast, there is no empirical evidence to suggest that the nature of the pension scheme itself has more than marginal impact on the likelihood that individuals will participate. This supports the hypothesis that broader forces are at work and that participation in pension schemes must be viewed in the context of underlying factors that determine the size of the informal sector. For example, many developing countries are characterized by large scale subsistence agriculture that is essentially outside of the government's tax net. What drives the informal sector is likely to drive pension coverage.

This briefing is part of the World Bank's Pension Reform Primer: a comprehensive, up-to-date resource for people designing and implementing pension reforms around the world. For more information, please contact Social Protection, Human Development Network, World Bank, 1818 H Street NW, Washington, D.C. 20433; telephone +1 202 458 5267; fax +1 202 614 0471; e-mail socialprotection@worldbank.org. All Pension Reform Primer material is available on the internet at www.worldbank.org/pensions

Incentives toward informality

In many countries, the non-agricultural labor force is dominated by small firms and self-employed individuals who generally do not pay taxes nor comply with other government regulations. Understanding the phenomenon of informal sector activity is important towards explaining observed coverage rates in pension schemes.

Loayza reviewed the empirical work measuring the costs of operating in the formal sector. These costs could be grouped into two categories – the cost of entry and the recurrent costs required to stay formal. Several studies found that the costs in terms of time, registration fees and even bribes could be extremely high. One study of Latin America found that the cost of entry was on average ten percent of annual profits of the firm and the average time required for completing the process was almost one year.

Recurrent costs of maintaining formal sector status arose from taxes, regulations and bureaucratic requirements (i.e., “red tape”). Hernando De Soto’s pathbreaking study on the informal sector in Peru, *El Otro Sendero*, found that in a sample of 50 small firms, the cost of staying formal represent an average of 348 per cent of after tax profits. Some 22 per cent of this was due to taxes, 5 per cent to higher public utility rates and 73 per cent due to regulations, especially labor standards.

Regulations and taxes added an average of 20 per cent to labor costs in the same sample of Latin American countries. Another study in Thailand found that informal sector firms saved 13-22 per cent in labor costs by avoiding regulations.

The costs of formality are so large that it pays small firms to devote significant resources to evasion and to forfeit access to legal protection and regulated credit markets. Hiding from the authorities often also means sacrificing economies of scale which might otherwise have significantly increased returns to capital. In short, there are both private and social costs to informal sector activity, but assuming these decisions are rational, it suggests that the costs of moving into the formal sector are even higher.

Contributions or taxes?

Viewed through this lens, it becomes clear that coverage rates in contributory pension schemes may be driven by non-pension factors that lead to informal sector activity. This would help explain why the dearth of evidence linking coverage rates to pension scheme design.

Nevertheless, poor incentives in a pension scheme are likely to exacerbate the situation, especially when the deduction from wages earmarked to pay for pensions is large (see Figure 2) and when this deduction is viewed as more of a tax than a contribution.

Chart 2 shows that social insurance taxes add more than 30 percent on average to labor costs in the former socialist countries. As these countries moved toward a market economy, smaller firms proliferated while large state enterprises shed excess labor in the process of restructuring or privatization. The combination of a tax collection apparatus with little capacity to collect from small firms and high rates of taxation probably explains much of the decline in coverage observed in the region during the 1990s. Farmers have been an especially difficult category following the demise of collective agriculture in the region. After individual plots of land were distributed in the 1990s for example, only five percent of Albanian farmers continued to contribute to the system.

Social insurance/pension taxes 2

Coverage and pension-system types

Not all countries rely exclusively or even primarily on contributory pension schemes. Non-contributory schemes, financed by general revenues rather than earmarked taxes are important in a handful of countries including Australia, Canada, Mauritius South Africa and the Nordic Countries. In New Zealand, a universal flat pension is the only form of direct government intervention in this area.

Because these schemes do not link benefits to contributions, coverage is effectively, universal.

Where they play an important role, these schemes fall into two main categories:

- flat benefits to all above a certain age; and
- broad social-assistance that ensure that all people above a certain age reach a minimum standard of living.

A well designed non-contributory or 'basic' pension scheme should be considered if the purpose is to reduce poverty among the old and resources allow. (See the Primer note on 'basic pensions'.)

But most of the world still relies mainly on 'contributory' schemes. Historically, this outcome was probably driven by a second, more paternalistic motivation for government intervention – myopia. In addition to providing an absolute minimum level of income during old age, in most cases policymakers advocated replacement rate targets that prevented sharp relative declines in consumption at the end of one's life. Individuals were considered to be too myopic to save for their own old age or by other accounts, so farsighted that they might save less due to the presence of basic pension schemes funded by general revenues. Forced savings at levels that would 'replace' a significant fraction of pre-retirement income was considered necessary to smooth consumption over an individual's lifetime. Annuitization was required to make sure that one did not outlive these savings.

As a result, most countries emphasize schemes that link benefits to previous contributions. In funded defined-contribution plans, the link is immediately evident because the value of the pension depends directly on the accumulation of contributions and investment returns. In pay-as-you-go, public earnings-related plan, the link is less direct but may be quite strong nevertheless. Contributions are typically levied as a proportion of earnings. Benefits depend on some measure of pay and years of membership of the scheme. However, the relationship between contributions and benefits varies both across countries and across individuals within a country. This is because of rules, such as minimum number of years of membership, normal and early retirement ages, maximum pensions *etc.*

Some experts have argued that a shift from a defined-benefit to a defined-contribution system will, at the margin, encourage some workers to participate. This effect comes both from the closer link between contributions and benefits and from the potentially higher return earned by defined-contribution plans in the market than the implicit return that can be earned on pay-as-you-go defined-benefit schemes.

But this effect may be overstated. Few pension schemes can offer returns comparable to alternative investments in a capital scarce environment (witness the high rates of return in micro-finance or to investment in education). And lower income households have especially high discount rates and liquidity needs. Finally, it would be inconsistent to argue that the same myopic individuals that had to be forced to save for old age, would turn around and assign a high value to distant payoffs from their pension scheme, regardless of whether that payoff came from a public DB scheme or a private DC scheme.

We conclude that any pension system that relies exclusively on contribution based schemes will experience incomplete coverage. Moreover, the levels of evasion will be strongly related to the size of the informal sector, itself a function of many other factors that may have little to do with pension provision. This sobering assessment suggests that coverage rates are likely to increase very slowly until underlying structural problems in the labor market and tax administration are improved. Ambitious plans to extend coverage should also take into account the perspective of potential participants who may behave very rationally in the face of onerous costs of formality.

Is expanding coverage always best?

The International Labor Organization (ILO) addresses the coverage issue in its series of conventions on social protection for old age. The 1967 convention (number 108) states that schemes should cover:

- 'all employees, including apprentices; or
- 'prescribed classes of the economically active population, constituting not less than 75 per cent of the whole economically active population' (where 'prescribed' means 'determined by…national laws or regulations'.

The convention permits the exclusion of casual workers (and others) and allows temporary limits to coverage to:

- 'prescribed classes of employees, constituting not less than 25 percent of all employees; or
- 'prescribed classes of employees in industrial undertakings, constituting not less than 50 per cent of all employees in industrial undertakings'.

The basis for these targets is not clear and it is unlikely that country-specific circumstances can be fully respected by such broad criteria. But generally, the message is that most countries should be trying to expand the coverage of their pension scheme.

Mr J.-V. Gruat, head of social security planning, development and standards at the ILO, presents four reasons for extending the scope of coverage of social protection:

- **Legal requirements**: 'In most States where the rule of law prevails, …basic legal instruments very commonly encompass the following two principles… non-discrimination; and relieve want, prevent destitution.' Together, it is argued, these justify the coverage expansion.
- **Social considerations**: '…when classes of the workforce remain excluded from forms of social protection they feel are essential to their well-being' then 'social cohesion becomes threatened' as people feel discriminated against. Other commentators see participation in pension schemes as an important part of the formalization of the labor force, which in turn should improve working conditions.
- **Economic aspects**: expanded coverage might aid labor mobility and flexibility by encouraging people to move out of state-owned enterprises that are restructuring or into smaller employers when previously this would have entailed the loss of pension coverage.
- **Financial resources**: new contributors will improve the finances of pay-as-you-go pension schemes in the short term, especially if coverage is extended to 'dynamic sectors of the economy, *e.g.*, those established in the suburbs of major cities, which primarily recruit young workers from the rural surplus labor force'.

This last rationale in our view, is seriously flawed. Expanding coverage to 'young workers from the rural surplus labor force' is likely to result in a regressive transfer from lower to higher income individuals. The last people to join the scheme are likely to get the worst deal when the Ponzi scheme finally comes to an end.

But the key point is the second, namely the need to provide social protection to workers that would otherwise be excluded and therefore would experience a loss of welfare. It is a message predicated on the view — in Mr Gruat's words — that 'there is a prominent interest from non-covered categories for this type [sickness, accident, old age, disability] of protective measures'. This leaves 'no other alternative…but to expand…the scope of coverage of existing schemes…failing which the social cohesion of the country as a whole may well be put into jeopardy.'

But while there is evidence of latent demand for group insurance – for example, the existence of thrift or mutual societies – there is little to suggest that vast numbers uncovered workers are anxious to participate in government-run schemes. Rather, evasion appears to be rampant. Workers choose to 'exclude' themselves. In addition to the costs of joining the formal sector mentioned above, a number of factors specific to the pension system itself could contribute to this attitude.

One obvious reason to stay out is poor governance. Contributors to the provident funds in Kenya, Uganda, Sri Lanka and Zambia received dismal returns over the last few decades and would have

done better with their money in bank deposits. Low income workers, who usually lack access to credit markets, could lose even more by participating in these schemes as they forfeited the chance to invest in land or tools or a vehicle.

A more subtle reason for avoidance would suggest an even greater degree of rationality. Workers may be instinctively aware of the well- documented, positive correlation between income and life expectancy which would greatly reduce the perceived value of longevity insurance for many. Others may realize that short vesting periods allow them to maximize the returns from the scheme after only a few years of contribution.

Finally, the subtle interaction between pension schemes and traditional family support systems should not be ignored. (The extensive literature on this topic is surveyed in a separate Primer Note). Theory suggests that much of the welfare gain from an annuity can be obtained within a family unit – kind of intrafamily pension scheme. In many societies, this family support system is more reliable than what the state currently has on offer.

New approaches to coverage

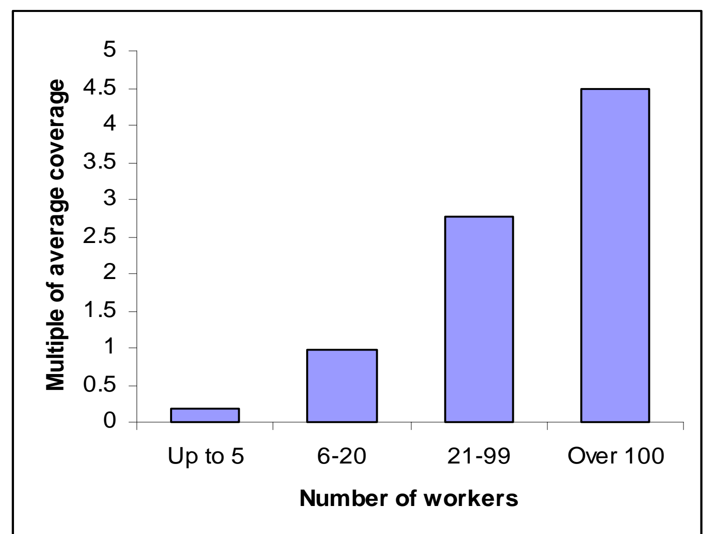
The preceding discussion suggests that coverage expansion should be viewed from the perspective of the participant. At the root of the problem is the excessive burden of joining the formal sector and this can only be addressed in the context of broader reforms. In addition, it is clear that forcing more workers to participate in a scheme that is unsustainable or provides very poor returns on investments is not good policy. These important caveats aside, there are some policies specific to pension design that may help increase participation.

The most direct approach is to subsidize coverage by providing a matching contribution to an individual account. This is done in the new, defined contribution scheme in Mexico and in the voluntary pension scheme in the Czech Republic. In Mexico, the government deposits a flat amount equivalent to about 2.2 percent of the average wage into individual defined contribution accounts. For low income workers, the match is quite significant. Such a policy could be expensive. But it may be a more effective use of limited resources than say, favorable tax treatment for voluntary pension contributions that cater to high income individuals.

Another strategy is to offer incentives to providers that expand coverage through their own efforts. In Bolivia, a five-year concession for two companies to manage the new pension system included an incentive to expand coverage. Coverage has risen over the period. But the incentives were geared towards gaining new affiliates and some worry that accounts may lay dormant once they are opened.

Perhaps the greatest challenge lies in convincing the self-employed to participate. Here a useful distinction can be made: on the one hand, there are doctors and lawyers whose incomes are high and who cannot afford to forego the benefits of being in the formal sector. The vast majority of the self-employed however, are individuals offering services such as vendors or casual labor. There are millions of such small-scale enterprises in developing countries. The fixed costs of registration in the formal sector can be prohibitive and monitoring them next to impossible. Figure 3 below shows the relationship between firm size and participation in the pension scheme for Peru based on household survey data in 1997. Firms with more than 100 employees are 4.5 times more likely than the average firm to participate, while micro-firms are only 0.2 percent as likely. This typical pattern is repeated across the world.

Coverage by firm size in Peru 3



Even in the United States, where tax compliance is high, more than half of the self-employed are thought to evade contributions to Social Security. The figures look much worse in other countries: in the first year that the self-employed and small firms were covered by law in Korea, only about one third declared any income. Recent figures reveal that only one in 20 self-employed contributed in Argentina and in Turkey, only one percent of the members of the special scheme for self-employed workers were making contributions.

Many of the small firms or self-employed experience seasonal or transient labor market participation. They may have employers, but these contracts are of short duration and are not easily subsumed within a legal and administrative framework often designed for larger firms. Construction workers tend to fall into this category. Like the low income self-employed, it can be costly to keep track of their income at an individual level.

In some countries, the initial criteria recognized the difficulty of incorporating smaller firms into the system by setting a minimum firm size. In India, for example, the initial limit on the number of employees in firm that triggered legal coverage was 50. This was later reduced to 20 and recently there have been proposals to reduce it to 10. Statutory coverage expansion is unlikely to work by itself, however. Some countries have recognized the futility of mandates on the self-employed and have simply made participation voluntary. This is true for example in Chile, Colombia and Mexico.

Perhaps a more promising target for coverage expansion can be found in existing groups. Industry-wide schemes can reduce the transaction costs for individuals in the same sector. A study by the Superintendent for Private Pensions in Peru suggested working with non-governmental organizations (NGOs) to expand coverage in the pension scheme. A similar proposal has been made in India. Micro-finance institutions (MFIs) in particular, might facilitate the recordkeeping and transfer of monies, thereby reducing unit costs of the transactions.

Industry-wide schemes have been introduced in Hong Kong under the new Mandatory Provident Fund (MPF) system. These cover the transient workers in the construction and entertainment industries. The fund managers and recordkeeping agents are selected by the regulator based on strict criteria and competitive bidding.

Better service, lower costs

Group schemes may reduce transaction costs to a certain extent, but even small costs can constitute a major barrier for those with small amounts to save and accumulate. Providers may find lower income workers an expensive proposition. Branch offices in remote areas may be costly and individuals with limited financial sector experience may need extra attention. If fixed costs are high, it will simply not pay to market to small investors or even to groups whose members have low incomes.

One strategy for dealing with this problem has already been mentioned. Using the recordkeeping infrastructure of existing groups, like MFIs, could reduce costs, but would have to be accommodated within the legal and administrative framework. Another approach is to cross-subsidize smaller accounts. This can be done by prohibiting certain types of charges, such as flat fees, in such a way that providers cannot separate fixed and marginal costs when they charge customers.

There is another type of cost however, that rarely enters into the ongoing debate on this topic (see the Primer note entitled, 'Administrative Charges'). This is the time cost and even pecuniary costs involved in obtaining information and eventually benefits from institutions that provide pensions.

Even when explicit costs are low, service standards may not be adequate. India's Employee Provident Fund (EPF) for example, has not provided millions of its members with annual statements for several years. Individuals seeking to remove their funds in accordance with the law are frequently faced with a sea of bureaucracy or worse. Accounts may be lost upon the death of a worker with his family never receiving the balances. A letter from one disgruntled member illustrates the frustrations felt by members of a monopoly:

'Dear Sir (September 1984)

Kindly let me know the balance lying in my above account after transfer of my funds from A/C No. ##.

I very much regret to inform you that since 1972 (when I left Assam i.e., my previous employer XXX), I am trying to get my account position and statement of my funds without any effect from your side.

Initially, there was a confusion and your office had informed me that you had not received "K" form from your Calcutta office while the Regional Provident Fund Commissioner, West Bengal had informed that "K" Form was duly sent to you on 22.6.74 and 14.8.75 via their letter number TR/2099/WB/X/607 dated 19.11.75.

Under the circumstances, non-receipt of statement of account and non-confirmation of transfer of my fund from West Bengal to Assam by your office has put me in great trouble to withdraw my Provident Fund amount from your office. It is a pity that innumerable reminders from the side are evoking no response from you. In the absence of any communication from your side within 10 days on receipt of this letter shall constrain me to take legal action.

Would you kindly personally look into the matter and let me know why your office should take over 12 years to confirm such a simple matter.'

This particular individual finally did receive his provident account balance – 16 years later. The EPF, like many other public pension institutions around the world, is currently undergoing administrative reforms intended to improve service to members. However, in the absence of competitive pressures, past experience suggests that poor service, among other factors, will continue to dissuade potential contributors.

Systemic reform and coverage

In the past few years, more than twenty countries have replaced part or all of their publicly-managed DB schemes with private, individual funded accounts. Has this lead to higher coverage? Unfortunately, the answer remains obscured by limited experience, poor data and definitional problems that make comparisons over time or across countries difficult.

For example, Chilean pension experts Rodrigo Acuña and Augusto Iglesias cite an increase in coverage in Chile between 1982 and 1997 from 53 to 70 percent of the labor force. Others note that pre-reform coverage (in the 1970s) was even higher and that many AFP affiliates do not contribute regularly. But another researcher, Claudio Chamorro, explains most of the discrepancy between contributors and affiliates as a result of the growing population of 'affiliates' who are actually pensioners and the fact that certain important groups such as the self employed are not required to contribute. Among those legally required to participate, compliance was close to 95 percent.

Coverage in Argentina has been falling for several decades. In their 2002 study, Argentine researchers Jorge Colina, Lucas Ronconi and Mariano Tommasi used household survey data to test for the presence of a structural change in coverage due to the introduction of the new, private pension scheme in 1994. The study provided econometric evidence that the "costs associated with the labor code, collective bargaining and social security have a negative impact on coverage, especially for those workers with low productivity." However, they could not identify any statistically significant impact on coverage due to the introduction of the new private pension scheme. The concluded that this reform appears to have had no impact or at most an impact much less important than other factors unrelated to the design of the pension system.

While there is general agreement that incentives to participate in publicly-mandated pension schemes can be improved through better design, there is little empirical evidence to suggest that these are crucial determinants of formal sector participation. Many other factors ranging from rigidities in the labor market code, minimum wage rules, transaction costs associated with labor registration and even confidence in government institutions are likely to be just as important. Thus, applied in isolation, systemic pension reform is not likely to lead to a significant increase in coverage.

Further reading

Acuna R. and Iglesias, A. (2001) 'Chile's pension reform after 20 years', World Bank Pension reform primer working paper, forthcoming.

Colina, J., L. Ronconi and M. Tommasi (2002) 'Problemas para la expansión del grado de cobertura en el sistema reformado de pensiones Argentino', Centro de Estudios para el Desarrollo Institutional (CEDI).

Chamorro-Carrizo, Claudio (1992), "La cobertura del sistema de pensiones Chileno", Tesis de Grado No. 107, Pontifica Universidad Catolica de Chile.

Corsetti, G., and Schmidt-Hebbel, K. (1994), 'An endogenous growth model of social security and the size of the informal sector', Policy Research Working Paper no. 1471, World Bank.

Cuesta, J., Holzmann, R. and Packard, T. (2000), 'Extending coverage in multi-pillar pension systems: constraints and hypotheses, preliminary evidence and future research agenda', Social Protection Discussion Paper no. 0002, World Bank.

De Soto, H. (1989), 'The Other Path', Harper and Row, New York.

Gruat, J.-V. and Thompson, K. (1996), 'Extending coverage under basic pension schemes: general and Chinese considerations', Issues in Social Protection Discussion Paper no. 4, International Labor Organization, Geneva.

International Labor Organization (1967), *Invalidity, Old-Age and Survivors' Benefits Convention* (no. 108), Geneva.

James, E. (1999), 'Coverage under old-age security programs and the uninsured: what are the issues?' Policy Research Working Paper no. 2163, World Bank

Loayza, N. (1997), 'The economics of the informal sector: a simple model and some empirical evidence from Latin America', Policy Research Working paper #1727, World Bank.

Superintendencia de Administradoras Privadas de Fondos de Pensiones (1999), "Ampliacion de la cobertura provisional en el SPP", Estudios previsionales, No.1, Lima Peru.

Van Ginneken, W. (1999), 'Social security for the informal sector: a new challenge for the developing countries', ISSA Review.

Conclusions and recommendations

- Coverage rates track income levels closely and evasion is largely driven by the high cost of joining the formal sector
- Pension scheme design can exacerbate the evasion problem when "contributions" are large and perceived as taxes
- A poorly designed and managed scheme should be reformed prior to attempts to expand its coverage
- Extending financial solvency of a pay-as-you-go scheme is not a good rationale for expanding coverage
- A safety net can help cover the inevitable gaps in a contributory scheme
- Defined contribution schemes tend to provide better incentives for coverage,
- but the positive impact of scheme design on coverage rates should not be overstated as there is little evidence to support these claims to date
- creative approaches to expanding coverage include direct matching contributions for low income workers
- and finding ways to reduce transaction costs by harnessing existing groups and pooling individuals where possible