

Matching Arrangements in Mexico, Colombia and Peru

Joint Workshop of the World Bank and the Research Institute for Policies on Pensions and Aging, Tokyo

Washington DC, June 6-7, 2011

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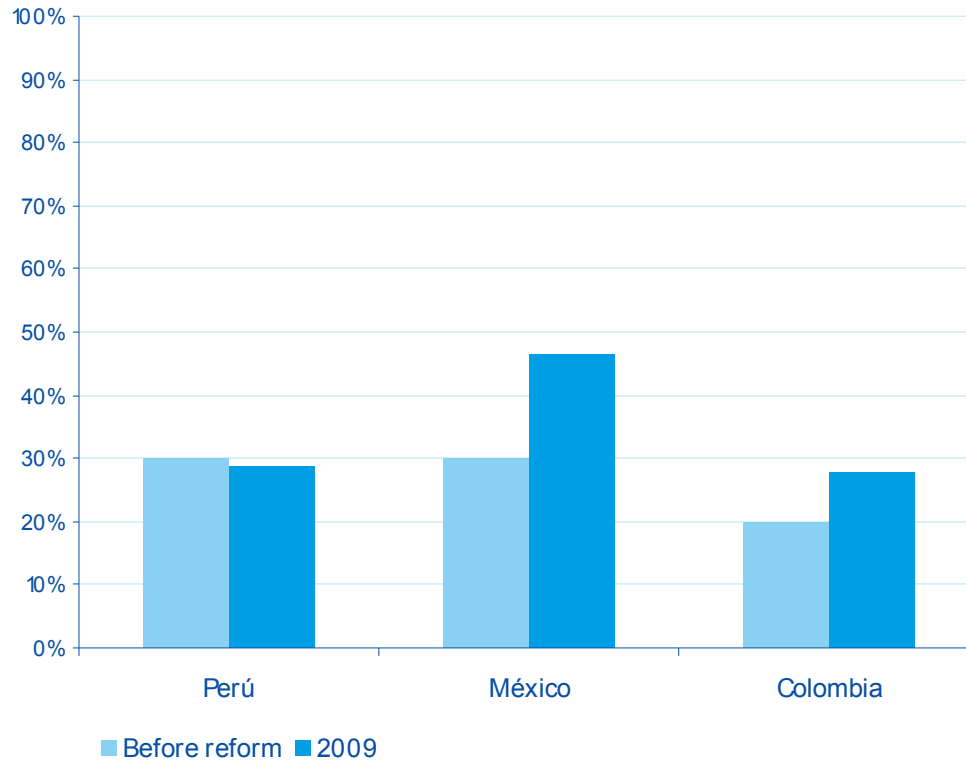
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Section 1

The reforms have had a relative impact on increasing coverage

Affiliates as a percentage of EAP

Source: BBVA, Lago (1998), Arenas de Mesa (2000)



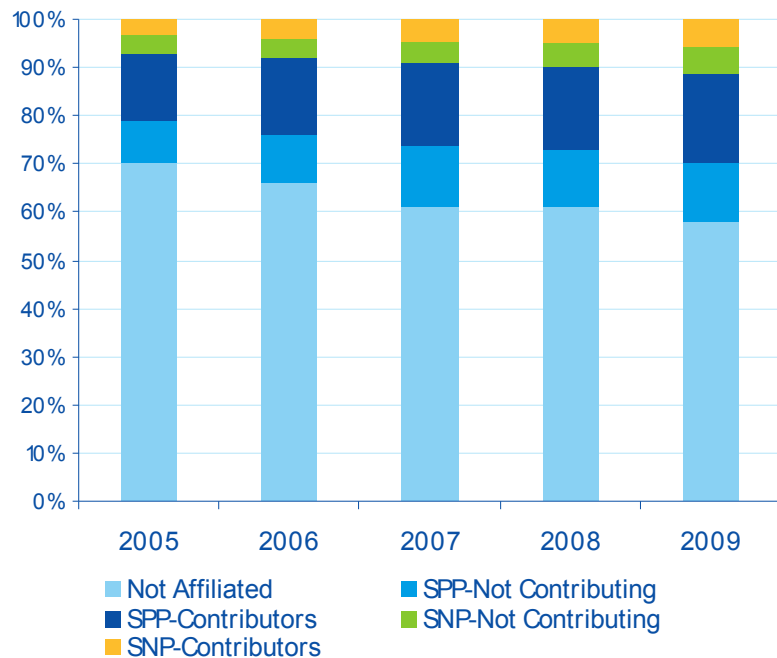
Section 1

Pension systems in Latam

Pension systems in Latam have failed to adapt to the characteristics of the labor market

Peru: Employed workers according to Pension status

Source: Carpio-Salazar (2010)



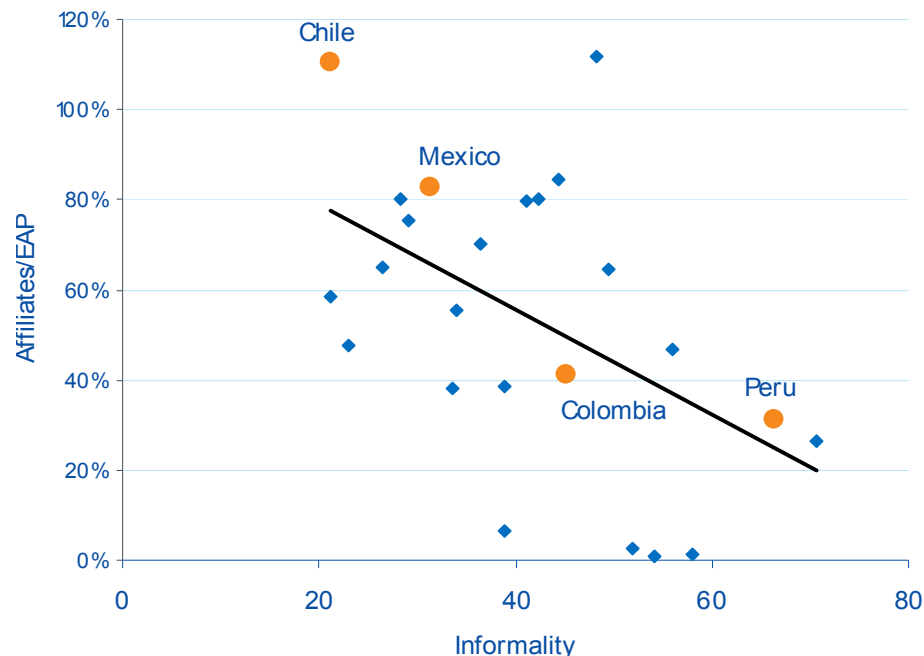
- The pension systems (public and private) have had difficulties increasing coverage in the region.
- The fundamental problem lies in the characteristics of employment in these countries, in contrast with the situation in developed countries:
 - Seasonal Employment
 - Informality
 - Low income
- Steep growth has created subtle improvements

Section 1

Pension systems have relied on the inertia of formality

Informality and Affiliates by EAP

Source: ILO, FIAP (2007)



- The countries have had difficulties in making the state-society relationship effective, thus various schemes have collapsed. Taxes and contributions.
- The problem is also complex, because it includes aspects of mobility between the formal and informal sectors (Jüttint and De la Iglesia, 2009; Maloney, 2010).
- That said, the challenge is to jump from a pension association – wage labor, to a system that takes into account emerging countries realities (informality).

Section 1

The contribution density problem

Colombia: Percentage of total affiliates by group of contribution density and income

Source: BBVA Research



- The problem of the labor market is reflected in the low levels of participation of affiliates in the system.
- In the case of Colombia, there is a high proportion (approximately 40%) of groups C1 and D1 with contribution densities lower than 27.3% and 3.7% and with income lower than minimum wage.
- The presense of these groups (low density-low income), reflects the limited success of the system in terms of coverage.

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Section 2

Coverage

In terms of coverage, certain types of MDC may be relevant

Table title

Source: BBVA Research

| | Matching Type I | Matching Type II |
|-----------------|---|---|
| Worker (W) | X | X |
| Employer (E) | X | (X) |
| Government (G) | | X |
| Type of Pension | <p>a. Pension plans (DB and DC) where the sponser is the company. They can be voluntary by both parties or required by law. Normally designed for large and formal companies, however, in Latam development is very limited</p> | <p>a. Mandatory DB, Financed or not : Cross Subsidy or Gvt Subsidy</p> <p>b. Mandatory MDC with government subsidies or cross subsidies in order to complete a minimum pension, subject to conditions (Matching Ex Post or Pseudo Matching).</p> <p>c. "voluntary" MDC with individual contribution, cash or virtual, ex before the account</p> |



Section 2

Increase savings, can this expand coverage?

- Yes, if the scheme incorporates the correct incentives
- Recognition that obligations are an “incentive” that does not fully function (enforcement problems)
- Incentive to complement the regular flow of payment.
- A scheme that involves a direct and effective contribution to an individual’s account if they are also contributing.
- What other incentives can be added to matching? Is money the only incentive?
- The opportunity cost of the pension versus other needs
- To not disincentivize the contribution of those already in the system

A matching scheme should be a centripetal force that draws in informal sectors to participate in formal pension schemes

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Experience in the region with MDC schemes and State support ...

- Colombia, Mexico and Peru present similar structural problems (high informality, high poverty rates and high structural unemployment) associated with low coverage
- The high population without coverage and the fiscal limits impedes the development of universal non-contributory programs and the ensuring of macroeconomic stability. The ministries of finance, are very aware of the political risks to establishing this type of program in intemporal terms
- Some programs have been established which could be called matching contributions, with state support, but targeted at workers that already are contributing to the system and require a supplement or subsidy to reach a certain pension level

Section 3

Experience in the region with MDC schemes and State support

- The above are “Ex Post” matching schemes, ie there is a commitment of the state or of a fund for certain contributions to supplement the pension if certain requirements are met (months of contribution, contribution rates on a percentage of the base salary)
- These Ex Post schemes, in this sense, have a limited effect on expanding coverage.
- The experience with ex ante MDC schemes is recent. There is a law not yet implemented in Peru, bills not approved in Mexico in 2006, and recent developments in Colombia
- Fiscal resources?

Section 3

Relevant Mexican Experiences

Financial Scheme in New Pensions System ISSSTE vs IMSS

Source: BBVA Bancomer

| Financial scheme | IMSS | ISSSTE |
|---|--------------|-----------------|
| Contributions | 6.5% SBC | 11.3% SBC |
| Social Contribution | 5.5% SMGVDF* | 5.5% SMGVDF |
| Solidarity Savings (cofinanced by the State) | nd | 3.25 x 1 peso** |
| Guarenteed Pension | 1 SM | 2 SM |

Fixed amount since 2009, up to 15 Sminimum

** Limit at 6.5% of SBC

SMGVDF General Minimum Wage in the Federal District

- Social Contribution, targeted at both types of workers covered by the IMSS and the ISSSTE-DC, is an automatic and mandatory concept associated with the DC scheme
- The Saving Solidarity is targeted towards workers that contribute to the ISSSTE-DC to voluntarily complement their savings with state support
- Incentive MAROP
- Private Group Pension plans. Very small.

Section 3

Mexico – Social Contribution

Social Contribution by Base Salary

Source: Official Journal of the Federation on May 26, 2009

| Base Salary of the employee's contribution | Social Contribution |
|--|---------------------|
| 1 Minimum Salary | \$3.87077 |
| 1.01 to 4 Minimum Salaries | \$3.70949 |
| 4.01 to 7 Minimum Salaries | \$3.54820 |
| 10.01 to 15.0 Minimum Salaries | \$3.22564 |

Social Contribution in Mexico

- The Social Contribution scheme is targeted at workers who contribute to the mandatory DC (IMSS) and the ISSTEDC scheme
- Targeted at those who contribute lower than 15 SMin (before reaching the benefit of 24 SM). It could be more focused
- Because it is directed at workers already in the obligatory system, the expected effect is to prevent the “stopping of contributions” and to increase savings
- This is hardly attractive for those who are not yet a part of the system
- Depending on the contribution density, the replacement rate could increase between 3 and 15 points

Section 3

Mexico – The Saving Solidarity in the ISSSTE

Financial Scheme in New Pensions System ISSSTE vs IMSS

Source: BBVA Bancomer

| Financial Scheme | IMSS | ISSSTE |
|--|------|----------------|
| Solidarity Savings (Co-financed by the State) | nd | 3.25 x 1 peso* |

* Limit at 6.5% of SBC

The Saving Solidarity in the ISSSTE Mexico

- Savings created in 2007 by the ISSSTE law for those in the system of individual accounts encourages the participation of individual accounts by improving their pension
- The beneficiary may contribute up to 2% of their base salary
- For each peso saved, the Agencies and Entities will deposit 3.25 pesos, with a maximum of 6.5% of the base salary
- For individuals with a high contribution density, this can increase their replacement rate by more than 20 points

Section 3

México- The Pensions Project: Opportunities (MAROP)

- Support Mechanism for Retirement Opportunities (Marop). On March 27, 2006 this decree was issued, subject to SAR
- So that 7.1 million people save. The intention was that this population achieves monthly savings of 20 to 50 pesos a month from financial transfers (the budget approved in 2006 for the food program amounted to 250 million pesos) received in the respect of food aid
- The principal requirements. Being a part of the Human Development and Opportunity Program and being between the age of 30 and 69
- Monetary support. For each peso deposited in the individual accounts, the federal executive would provide the other
- The projections. It was estimated that if someone saved 50 pesos every 30 days for 35 years, they would have a pension of one-thousand pesos a month, available at the age of 70 years old or in the case of death it would be delivered to the beneficiary. The decree was repealed in 2006 because it was felt that it meant a reduction in disposable income for beneficiaries, representing a negative effect on the current welfare of families in poverty

Section 3

Mexico – Group Plans

Group Plans

- Registered CONSAR plans
- 60% defined benefit, 13% defined contribution, 27% mixed
- More than 1 million workers are covered
- The companies alone contribute 44% and the employees and the companies combined contribute 52%

Number of Plans

Source: Turner 2010, Consar 2010

| Concept | 2010 |
|------------------|-------------|
| Registered plans | 1.832 |
| Amount of Funds | 376,515 mdp |
| Amount / GDP | 3.00% |

Section 3

Colombia-Relevant Experience

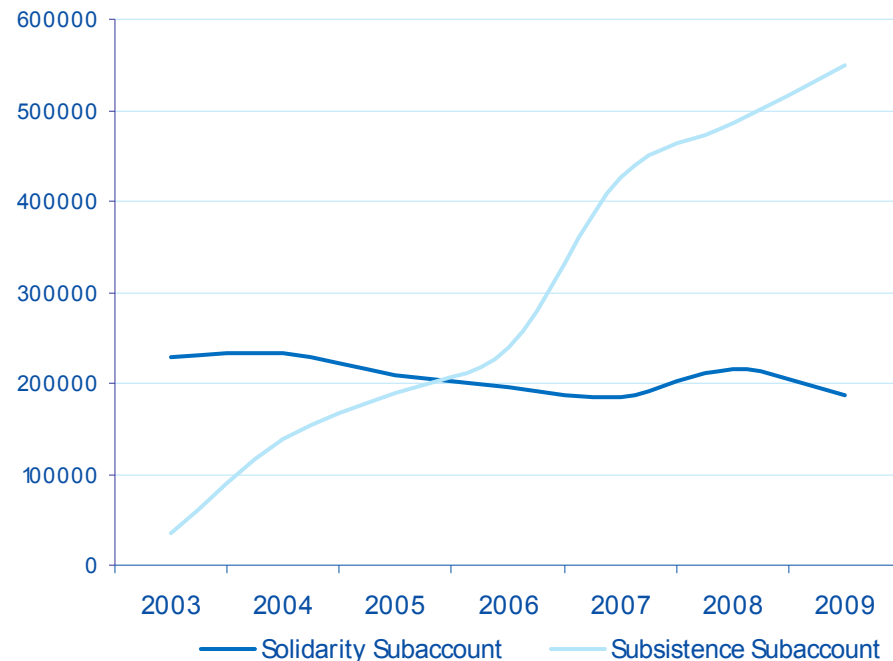
- Two matching schemes and an incentive for those outside the system. The requirement is to already be contributing to the pensions system.
- Solidarity Pension Fund-Solidarity Subaccount for RAIS and RPM, Intended to subsidize the pension of certain groups who contribute to the system and have problems obtaining a pension
- The Minimum Guarantee Pension Fund, formed by the contributions from the wages of those in the individual capitalization system and serves to supplement the minimum pensions of those who run out of funds
- Recent incentives. Periodic Economic Benefits - BEPs

Section 3

Colombia- Solidarity Pension Fund

Evolution of the Number of Beneficiaries of FSP

Source: National Planning Department, Conpes Social 105 (2007).



Solidarity Pension Fund-Solidarity Subaccount for RAIS and RPM

- 1% additional contribution of wages of those in the RAIS y RPM
- Objective is to supplement the contributions of pension system affiliates who are not able to continue contributing in their entirety
- Within the target population of this subaccount, there are affiliates with low contribution densities, for example rural workers, the disabled and community mothers, among others
- Initially they have to have been contributing to the RAIS or RPM and meet the requirements for contribution

Section 3

Colombia- The Minimum Pension Guarantee Fund

The Minimum Pension Guarantee Fund in the RAIS

- An additional 1.5% of wages contributed by those in the RAIS y RPM.
- The objective is to supplement a pension when an individual's funds are exhausted.
- Contribution for at least 1150 weeks

Requirements to access the solidarity subaccount of FSP

Source: National Planning Department CONPES 3605 of September 2009

| Population Group | Conditions | | Benefits | |
|---|---|----------------|----------------------------|--------------|
| | Age | Previous Weeks | Length of subsidy (weekly) | % of subsidy |
| • SELF-EMPLOYED OF THE RURAL AND URBAN SECTOR | RPMPD > 35 years and < 55 years RAIS > 35 years and < 58 years | 250 | 650 | 75% |
| • COUNCILORS (MPIOs CATEGORIES 4,5 y 6) | RPMPD > 55 years RAIS > 58 years | 500 | 500 | 75% |
| • DISABLED WORKERS | NONE | 500 | 750 | 95% |
| • COMMUNITY MOTHERS | NONE | NONE | 750 | 80% |
| • UNEMPLOYED | RPMPD >55 years RAIS > 58 years | 500 | 650 | 70% |

Section 3

Colombia- Periodic Economic Benefits Incentive

- Law 1328 of 2009 and other legislations, which have not yet been instituted, is at the present declaratory in nature (without specific standards)
- It is understood to be voluntary in nature. Provides benefits by the government to incentivize the participation of certain groups who are not in the condition to save
- It is stipulated that these benefits go to a long term savings program that gives loans to the current elderly and may be less than a pension (by law = 1 minimum salary)
- It gives space to the employer who voluntarily contributes to savings in the long term and can then be allocated to the BEPs
- No mechanisms of savings have been established nor other other elements related to amounts and requirements for operation

Section 3

Peru – The Social Pension System for Microenterprises I

- Law Mype. In September 2008, the Law for the Promotion of Competitiveness, Development and Formalization of Micro and Small Businesses and the Access to Decent Work (Law Mype) were issued. These were a part of a package of legislation issued by the government to implement the TLC with the United States
- Social Pension System (SPS). Within the Law Mype, the Social Pension System (SPS) was created. It establishes that workers and drivers who provide services for microenterprises and who are not yet affiliated with the pension system, may opt for the SPS
- Target Population. Microenterprises are considered to be between 1 and 10 workers with annual profits lower than 150 tax units (equivalent to S/.540 thousand, approximately USD186 thousand). There are around 3 million people that work in this group (this would be more or less universal who could enter under this SPS scheme, although it would have to subtract those who are already affiliates of other schemes)

Section 3

Peru – The Social Pension System for Microenterprises II

- The SPS is voluntary and co-financed by the state. The monthly contributions of the affiliate could be up to a maximum of 4% of the minimum living wage (ie the maximum contribution would be about S/.24 or USD \$9 a month) on the basis of 12 contributions a year. The state contribution would equal the minimum monthly contributions that are effectively contributed by the affiliate
- The SPS operates as an individual capitalization system and can be administered by a private financing entity. This entity, however, is not defined; it could be a bank, a pension company, an insurance company. A pension would be entitled to persons over 65 years and who have at least 300 contributions
- Progress to date. Although the SPS is already regulated, it is not yet implemented; moreover, the requirements of the pension fund administrators have not yet been defined
- Potential Population to date. According to the Ministry of Production at the end of the first semester, there were 150 thousand micro and small enterprises enrolled in the new Mypes scheme. Assuming that on average they have 3 workers and all could benefit from SPS, more or less that is 500 thousand potential affiliates (remember that affiliation to this system is optional, and only if the worker chooses to participate)

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Peru Case: Exercise two pension schemes: 1 sol and 2 sols a day with state supplements

Structure of the scheme:

- A contribution of 1 Sol daily for workers who earn less than 500 soles a month and a contribution of 2 Sols a day for those who receive more than 500 a month.
- The State guarantees a % of the minimum pension according to the years of contribution (a minimum of 15 years).
- One should be at least 65 years old to have access to the pension.
- Target population of around 8 million (60% of the EAP)

Workers according to coverage and income*

Source: Permanent Employment Survey 2005. Ministry of Work. Development: BBVA

| | Number of workers (millions) | Average Income (S/.) |
|---------------------------------------|------------------------------|----------------------|
| Covered Workers ¹ | 4.7 | 1,371 |
| Workers without Coverage ² | 8.2 | 605 |
| Income lower than S/. 500 a month | 4.0 | 416 |
| Income between S/.500 and S/.800 | 3.6 | 641 |
| Income over S/.800 ³ | 0.6 | 1,591 |

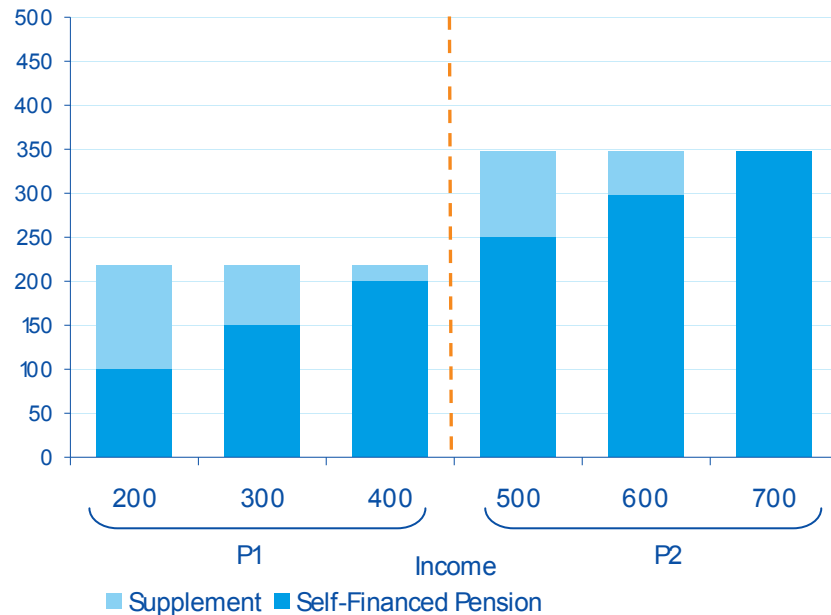
*Note: Corresponds to workers between 20 and 64 years old
 1/ Self-employed and employed that perform professional or technical activities.
 2/ Employees, employers, workers and home workers not included in 1/.
 3/ Consisting of self-employed and employers.

Section 4

Peru Case: Exercise two pension schemes: 1 sol and 2 sols a day with state supplements

Self-financed Pension and Guaranteed Pension (with 15 years of contribution)

Source: xxxx



Guaranteed Pensions by years of contribution (S/. y % of the minimum pension)

Source: xxxx

| Years | P1 | P2 |
|-------|-----------|------------|
| 15 | 218 (45%) | 348 (72%) |
| 16 | 230 (48%) | 373 (77%) |
| 17 | 242 (50%) | 398 (82%) |
| 18 | 256 (53%) | 425 (88%) |
| 19 | 270 (56%) | 450 (93%) |
| 20 | 289 (60%) | 484 (100%) |

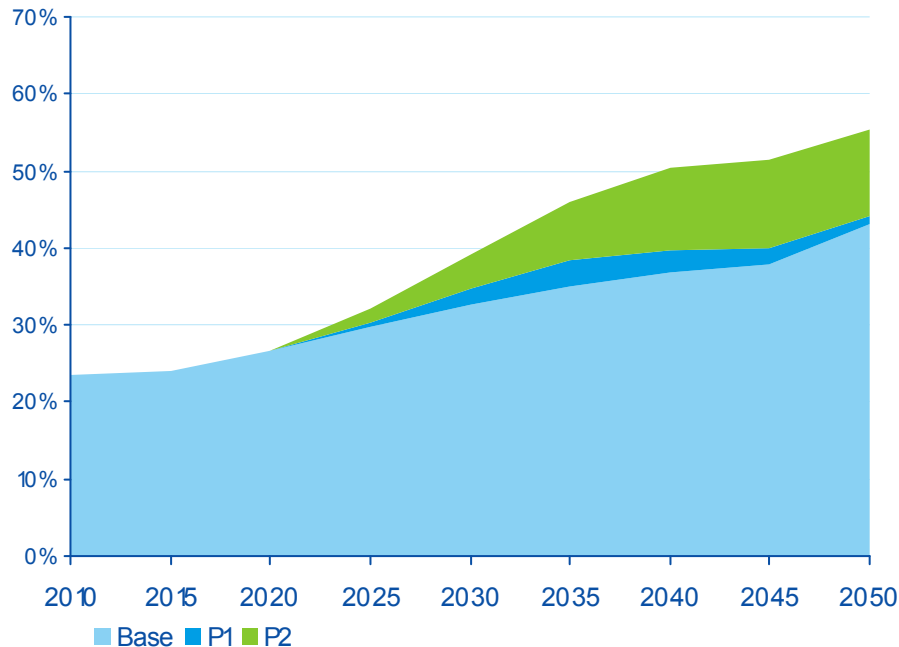
The supplement is higher for those with lower income. Approximately 50% for those with low income

Section 4

Peru Case: Exercise two pension schemes: 1 sol and 2 sols a day with state supplements

Old-age Coverage Projections

Source: xxxx



- The coverage exercise is based on an actuarial analysis with detailed information on the workers in the target group.
- Modeling a 12 percentage point increase in old-age coverage by 2050 (moderate projection)
- The implementation of P1 y P2 have a fiscal cost to present value of around 8.8% of GDP

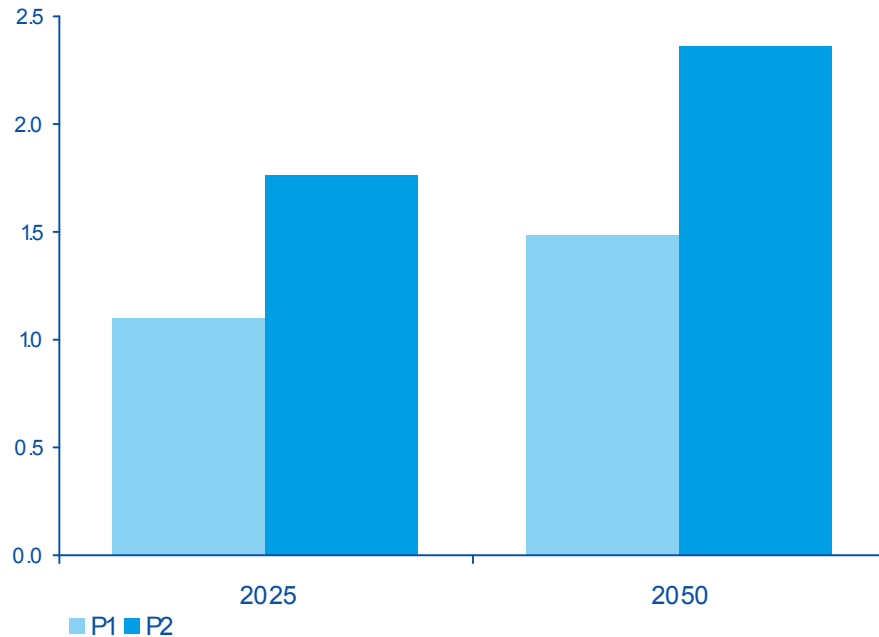
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Peru Case: Exercise two pension schemes: 1 sol and 2 sols a day with state supplements

Pension Plans P1 and P2

Respective to the minimum consumption basket

Source: xxxxx



The workers with income less than S/.800, that do not have pension coverage and thus choose to join the proposed plan (Pension for S/1 and Pension for S/2), would have a pension with a purchasing power between 1.5 and 2.5 times the minimum consumption basket

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Key factors that could help success

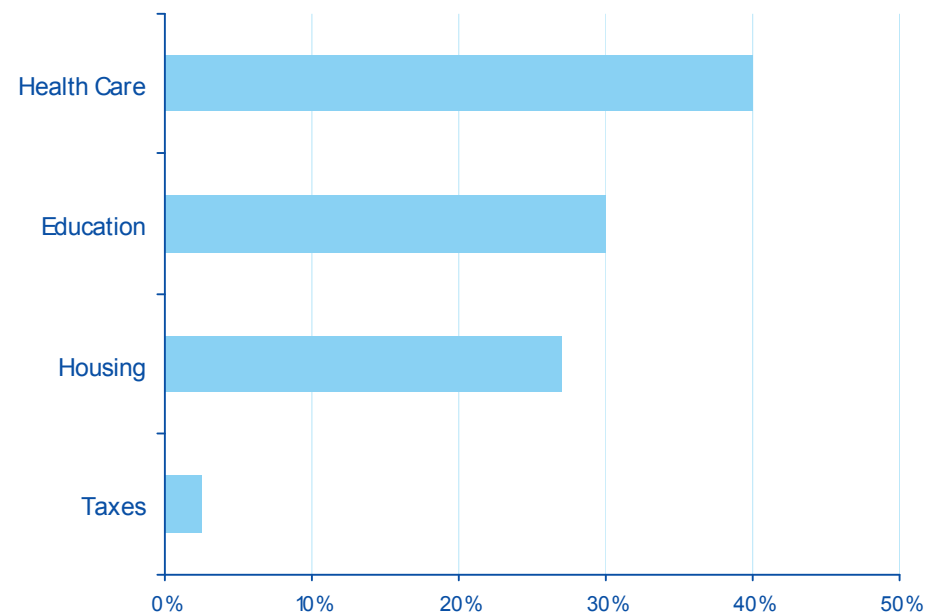
What is the incentive?

- Financial assistance can be an important element...but it could lose its impact if the problem of liquidity is significant to the target groups
- Other incentives not observed could be explored in order to reinforce the goal of obtaining an income in old age
- Studies like Cardoso & Leiva (2007) and Sources (2010) indicate that the probability that low income families' savings increases through these savings could allow in short term health coverage, housing and education
- Consider a type a bundling program (ie. Pensions + healthcare + access to housing credit) which could help incentivize matching

Persons not affiliated: Potential benefits

The benefits that could incentivize contribution could be in the following areas

Source: Fuentes (2010)



Section 5

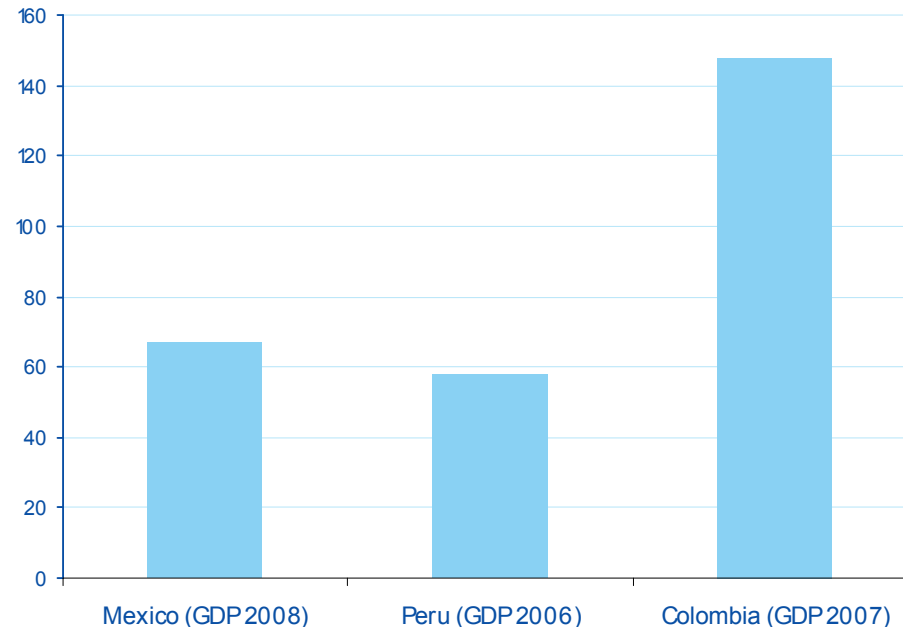
Key factors that could help success

The fiscal resources problem

- The problems of fiscal restraint are not minor in some countries
- This becomes a real limiting factor for financing programs with state support
- The challenge is also the existing programs and poorly targeted subsidies, and having to integrate them with programs that have a greater probability of success, such as the MDC

Projections of net present value of pension debt

Source: Albo et al (2007), National Provisional Office of Peru, Ministry of Social Security of Colombia, BBVA calculations



Section 5

Key factors that could help success

The problem of efficiency/inefficiency (there are resources to be reallocated and used in the MDC)

- The public system in various countries continue to promote higher replacement rates for higher-income groups
- For example, PAYGO pensions for higher income groups are greater than those obtained by a system of capitalization (with average rates of return significantly higher)
- Poorly targeted subsidies
- Similar situations in Mexico and Peru

Colombia: Replacement Rate of Private System (RAIS)

Source: BBVA calculations

| | Group | 2015 | 2030 | 2050 |
|--------------------------------|--------------------------|-------|-------|-------|
| More Income and More Density ↑ | A | 75.5% | 75.9 | 76.3% |
| | B | 68.0% | 70.7% | 72.9% |
| | C | 12.6% | 17.0% | 21.3% |
| | D | 2.6% | 2.7% | 3.7% |
| | Average Replacement Rate | 34.0% | 41.6% | 43.2% |

Colombia: Replacement Rate of PAYGO (RPM)

Source: BBVA calculations

| | Group | 2015 | 2030 | 2050 |
|--------------------------------|---------------------------------|--------------|--------------|--------------|
| More Income and More Density ↑ | <u>A</u> | <u>92.8%</u> | <u>94.0%</u> | <u>94.1%</u> |
| | <u>B</u> | <u>86.5%</u> | <u>87.3%</u> | <u>88.9%</u> |
| | <u>C</u> | <u>5.4%</u> | <u>7.7%</u> | <u>8.5%</u> |
| | <u>D</u> | <u>1.3%</u> | <u>1.6%</u> | <u>0.9%</u> |
| | <u>Average Replacement Rate</u> | <u>46.5%</u> | <u>47.4%</u> | <u>55.6%</u> |

Thank you

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