

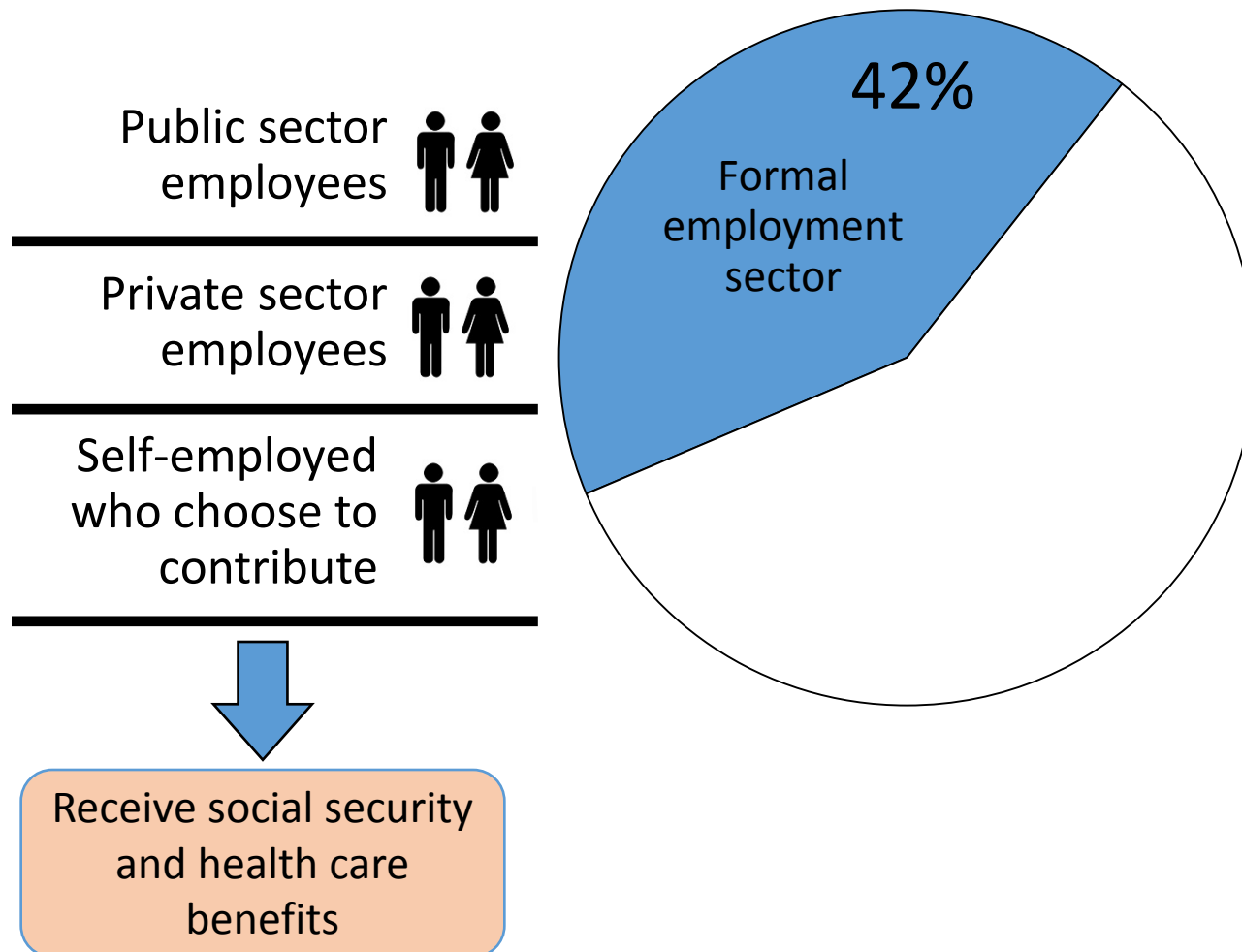
*Alleviating Poverty for
Older Adults: Findings
from a
Noncontributory
Pension Program in
Mexico*

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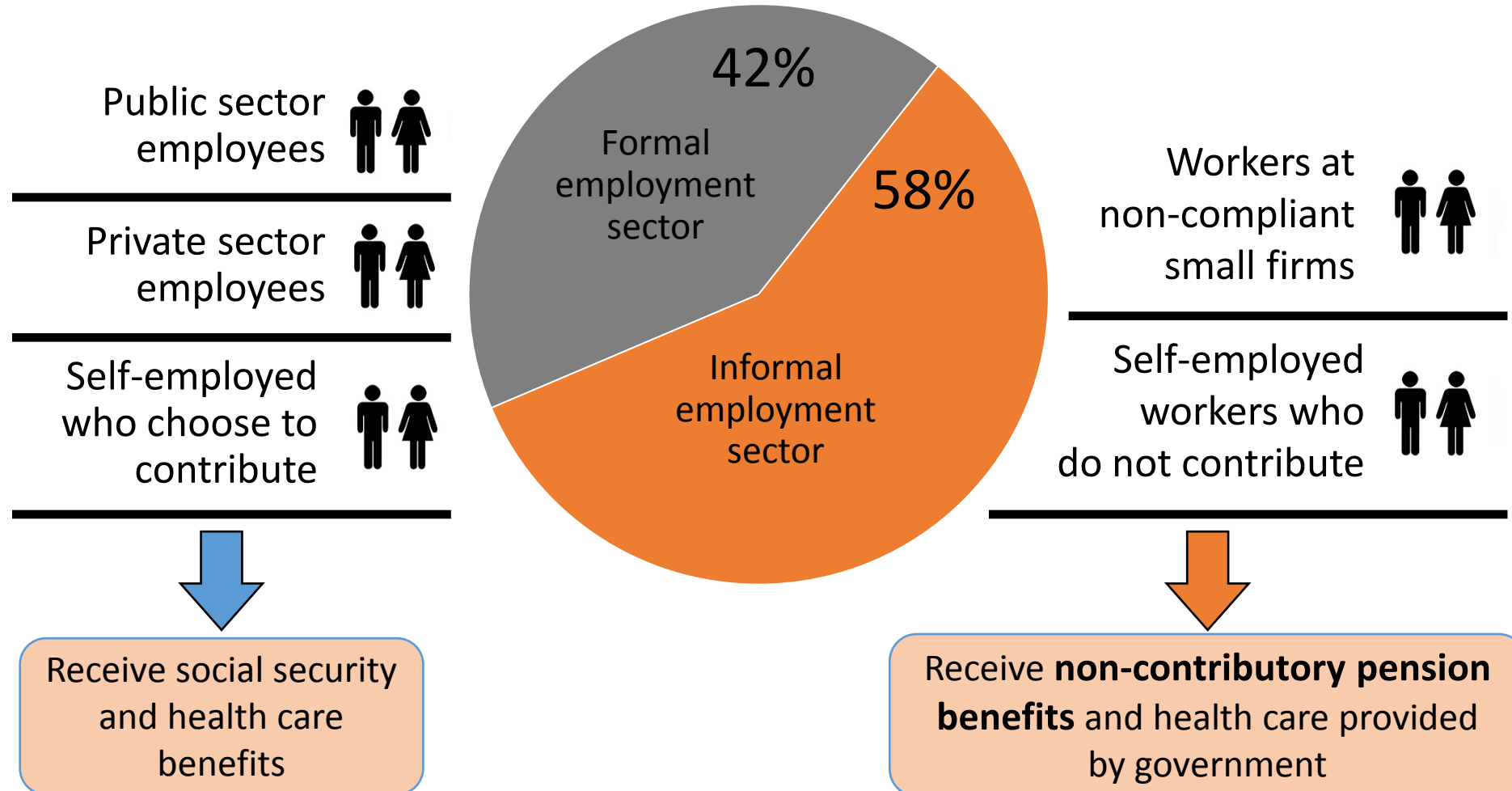
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There Are No Universal Social Security Benefits in Mexico



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Many Countries Have Implemented Non-Contributory Social Security Programs



Argentina
Bangladesh
Bolivia
Botswana
Brazil
Brunei
Chile
Costa Rica
India
Kenya
Lesotho

Maldives
Mauritius
Mexico
Mozambique
Namibia
Nepal
Philippines
South Africa
Swaziland
Thailand
Uruguay

Previous studies show that programs reduce poverty and inequality

[Lund, 1993; Ardington and Lund, 1995; Case and Deaton, 1998; Delgado and Cardoso, 2000; Schwarzer and Querino, 2002; Lund, 2002; Barrientos, 2003]

Designing and Implementing a Non-contributory Pension Program

- \$550 pesos per month (\$78 USD PPP) to adults age 70+ in Yucatan, Mexico
- Impact of the program on health, nutrition, and well-being of recipients
- Analyzed different implementation designs of the program
 - Method of payment (cash or debit card)
 - Frequency of payment (monthly or bimonthly)
- Funded by the National Institute on Aging (NIA) and the Government of the State of Yucatan

Contributions of This Study

- Previous studies are not experimental
 - Use household information to compare beneficiaries with non-beneficiaries and as claiming benefits is a choice, this introduces sample selection problems
 - Focused on household/other family members (not program beneficiaries)
- Causality runs both ways between socioeconomic status and health
- Cash transfers raise policy concerns
 - What is the impact of the program on the health and well-being of the older population?

Program Was Phased into 3 Yucatan Towns with Populations of 20,000+



- Experiment 1 (2008)
 - Treatment: Valladolid
 - Control: Motul
- Experiment 2 (2009)
 - Randomized treatment and control: Merida
- Experiment 3 (2010)
 - Randomized treatment and control: Merida

Evaluation Study Is Called Escuchar, or “Listen”

- Baseline survey for treatment and control groups before the intervention
- Follow-up interviews approx. every six months
- Data collection includes in-person interviews, biomarkers, and anthropometric measurements
- Community level surveys: prices, community infrastructure, economic activity, and macro shocks



ESCUCHAR

**Evaluación Socioeconómica y
de Salud de la Población de la
Tercera Edad**

Treatment and Control Groups Were Surveyed Before and After at 6 to 24 Months

- Computer Assisted Interviewing (CAPI)
- All the questions are translated into Spanish and Mayan
- Bilingual interviewers (Spanish and Mayan)
- So far we have conducted census of 65,553 households
- Interviewed in 16,195 households
- Visited 1,987 grocery stores and other establishments



Questionnaire adapted from MHAS and HRS

- Household and personal income, wealth, food and durables expenditure, OOP health expenditures, health care utilization, life satisfaction, labor supply, cognitive abilities, family transfers, self reported health status, and objective health measures including:

Anthropometric

- Height
- Weight
- Waist circumference
- Arm circumference
- Arm length
- Height to the knee

Biomarkers

- Blood pressure
- Pulmonary capacity
- Grip strength
- Balance test
- Walking speed
- Blood test for Anemia
- Dried Blood Spot: HbA1c, CRP, and Triglycerides

Results So Far Suggest that Noncontributory Pensions Improve Well Being

- Food Availability
 - Improvement in food availability
 - Reduction in the incidence of hunger spells
- Health Care Utilization
 - Increase in doctor visits (22.1%)
 - Increase in the number of visits to doctor (27.1%)
 - Improvement in medication access (33.3%)
- Health outcomes
 - Improvements in cognitive abilities (memory: immediate recall 15.0%, delayed recall 34.6%)
 - Improvement in lung function (8.1%)
 - Reduction in the incidence of low hemoglobin levels (anemia) (10.2%)
- Income Sources
 - Reduction in work for pay (27.2%)
 - Family Transfers: there is a reduction in family transfers, but there is not a complete crowding out (51.3%)

Difference-in-Differences of the Means

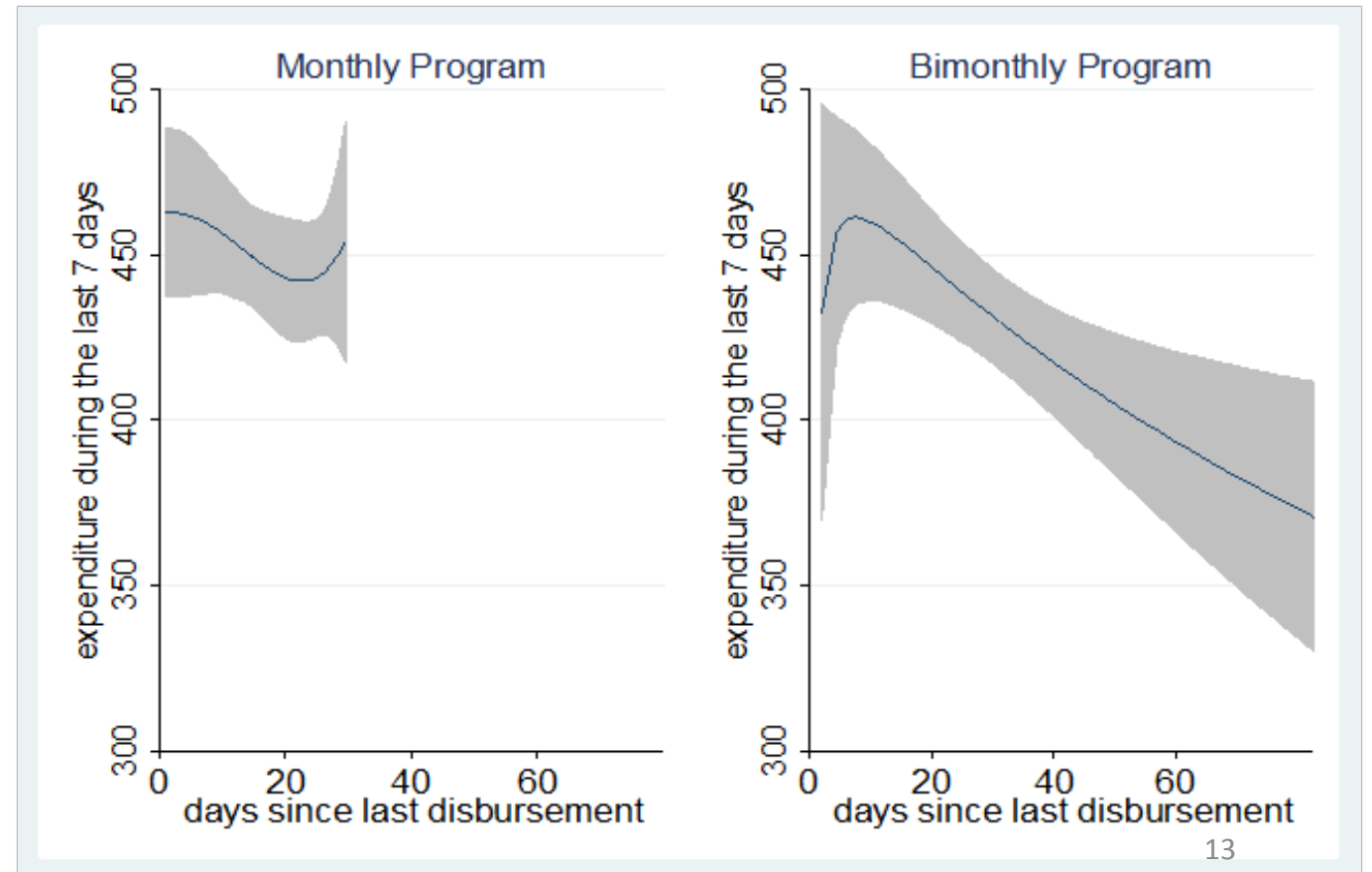
Variable	Treatment Baseline	Treatment Follow-up	Difference Treatment	Control Baseline	Control Follow-up	Difference Control	Diff-in-Diff of Means	Holm critical value by group
Food Availability								
Often run out of food last three months (never-always [1-4])	1.559	1.370	-0.189	1.446	1.429	-0.017	-0.172***	0.017
Often hungry (never-always [1-4])	1.408	1.168	-0.239	1.275	1.154	-0.121	-0.118***	0.025
Not eat all day (never-always [1-4])	1.253	1.065	-0.188	1.140	1.100	-0.040	-0.148***	0.050
Health Care Utilization								
Visited doctor (yes-no [1-0])	0.415	0.524	0.109	0.456	0.473	0.018	0.092***	0.017
Number of doctor visits	1.077	1.281	0.204	1.183	1.095	-0.089	0.293**	0.025
Bought no medicines since are too expensive (yes-no [1-0])	0.240	0.125	-0.115	0.177	0.142	-0.035	-0.08***	0.013
Health Outcomes								
Hemoglobin level is low	0.537	0.505	-0.033	0.542	0.565	0.022	-0.055*	0.025
Immediate recall (number of words)	2.772	3.056	0.284	2.772	2.639	-0.134	0.418***	0.010
Delayed recall (number of words)	2.652	3.382	0.729	2.759	2.568	-0.191	0.920***	0.013
Maximum peak expiratory flow (l/min)	233	265	32.100	249	262	13.100	19.100***	0.017
Income								
Work for pay last month (yes-no [1-0])	0.165	0.121	-0.045	0.148	0.148	0.000	-0.045**	0.010
Monthly family transfers (pesos)	298.000	242.000	-55.800	154.000	251.000	96.900	-153.000**	0.017
Number of observations	1,146	1,146		510	510			

Notes: *** indicates significance at 1%, ** indicates significance at 5%, and * indicates significance at 10% using p-value for regressions and Propensity Score Matching. These estimates are also significant using the Holm-Bonferroni correction for multiple hypotheses testing (last column).

Results of the Impact of the Program depend on the frequency of the payment

- *Monthly Payments*: more effective in smoothing consumption
- *Bimonthly Payments*: expenditures on food and beverages significantly decreased near the end of the pay-cycle

Consumption Smoothing



Results So Far Suggest Monthly Payments May be More Effective

Monthly Payments

- Food Availability
 - Higher reduction in the frequency of running out of food and hungry
 - Less need for support from charities
- Health Care Utilization
 - Elderly are more prone to make doctor visits and to increase the number of visits

Bimonthly Payments

- Durable Goods
 - Higher ownership of durable goods (cell phones, bicycles)

Impact of Monthly Program (Valladolid) versus Bimonthly Program (Motul)

Variable Verbal scale (numeric codes)	Diff-in-Diff		
	On Means	Regressions	Propensity Score Matching
Food Availability			
Often run out of food (never-always [1-4])	-0.159 (0.045)**	-0.160 (0.051)***	-0.136 (0.048)***
Often hungry because cannot afford food (never-always [1-4])	-0.314 (0.093)**	-0.062 (0.085)	-0.292 (0.099)***
Not eat all day (never-always [1-4])	-0.320 (0.080)**	-0.043 (0.065)	-0.288 (0.077)***
Received food from charity (never-always [1-4])	-0.050 (0.019)**	-0.049 (0.021)**	-0.047 (0.019)***
Health Care Utilization			
Visited doctor	0.103 (0.032)**	0.103 (0.033)***	0.118 (0.033)***
Number of doctor visits	0.287 (0.145)*	0.280 (0.150)*	0.348 (0.153)**
Had a serious health problem but no doctor visits because of money	-0.095 (0.022)**	-0.095 (0.023)***	-0.092 (0.023)***
Durable Goods (Equipment and Investment)			
Owning Cellphone	-0.146 (0.024)**	-0.134 (0.027)***	-0.140 (0.025)***
Owning Bicycle	-0.070 (0.022)**	-0.070 (0.024)***	-0.082 (0.021)***

Notes: Standard Errors in parentheses.

*** indicates significance at 1%, ** indicates significance at 5%, and * indicates significance at 10% using p-value for regressions and Propensity Score Matching. These estimates are also significant using the Holm-Bonferroni correction for multiple hypotheses testing.

Results So Far Suggest Monthly Payments Reduce Transfers to/from family

Monthly Payments

- Transfers to/from the Elderly
 - Reduction in transfers from family
 - Reduction in transfers to family
- Family and Social Relationships
 - More satisfied with family relationships
 - Reduction in fear that someone will take their money
 - Reduction in the frequency of feeling abused

Bimonthly Payments

- Transfers to/from the Elderly
 - Increase in transfers to family

Impact of Monthly Program (Valladolid) versus Bimonthly Program (Motul)

Variable Verbal scale (numeric codes)	Diff-in-Diff		
	On Means	Regressions	Propensity Score Matching
Transfers to the Elder			
Receive Money	-0.058 (0.026)**	-0.056 (0.027)**	-0.047 (0.027)**
Total money received (MXN\$)	-151.163 (56.060)**	-151.163 (72.579)**	-148.629 (56.478)***
Total money given (MXN\$)	-19.949 (11.404)*	-19.949 (11.347)*	-17.151 (12.003)*
Family and Social Relationships			
Satisfied with relationship with family members (very dissatisfied – very satisfied [1-5])	0.082 (0.046)*	0.138 (0.046)**	0.082 (0.049)**
Satisfied with relationship with social contacts (very dissatisfied – very satisfied [1-5])	0.117 (0.045)**	0.112 (0.045)**	0.129 (0.047)***
How often do you feel abused? (never-always [1-4])	-0.076 (0.032)**	-0.070 (0.029)**	-0.086 (0.032)***
How often do you fear money will be taken by someone else? (never-always [1-4])	-0.089 (0.039)**	-0.081 (0.037)**	-0.087 (0.040)**

Notes: Standard Errors in parentheses.

*** indicates significance at 1%, ** indicates significance at 5%, and * indicates significance at 10% using p-value for regressions and Propensity Score Matching. These estimates are also significant using the Holm-Bonferroni correction for multiple hypotheses testing.

Concluding Remarks

- We find substantial beneficial effects of the program improving the wellbeing of elderly
- Implementation matters
 - Frequency of payments
 - The monthly program appears to be more effective
- Surveys on aging, health, and retirement are very important for the design and evaluation of public policies

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