Work, retirement or transfers: Association between income sources and self-rated economic situation among Latin American elderly.

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Abstract:

Self-rated economic situation has been studied rarely in developing countries. Social Security systems have been useful in protecting elderly against deleterious financial changes at the end of life, but in several developing countries, Social Security coverage is rather low. We compare two countries with different degrees of coverage in retirement pension and health insurance benefits: Costa Rica (relatively high) and Mexico (lower coverage). We argue that labor and informal family transfers would be more relevant for rating one's own economic situation in contexts of low Social Security coverage (Mexico) than in relatively high coverage (Costa Rica). We use data from the first waves of two studies about aging: CRELES (2004-2006), and MHAS (2001-2002). We do find evidence for this hypothesis, although labor income has a significant effect among Costa Rican women and among Mexican men, only. The effect of transfers is significant only among Mexicans in determining self-rated economic situation.

Introduction:

In socio-economic research, older persons are considered as a vulnerable group because health problems may limit their capacity to work in economic activities and may increase the need of spending in health services. Quantitative studies often use "objective" measures of economic well-being: poverty based on Unsatisfied Basic Needs or poverty line, wealth, or income levels, etc. Recent surveys about aging have included a question about how respondents perceive their own health. In this way, it might be possible to study the relative importance of objective measures on a clearly subjective one.

The main goal of the article is to study the relationship between subjective perception of own economic situation and objective measures of economic well-being: sources of income, home ownership, education level, and informal family transfers. The analysis might show which elements are more important in defining this kind of perceptions. We compare two countries with different Social Security systems: Mexico and Costa Rica. We

hypothesize that in Mexico working status and labor income are more important than in Costa Rica in constructing perceptions of economic situation because formal retirement pension coverage is higher than in Mexico.

Background

Historically, the elderly was considered a population vulnerable of transitioning towards poverty given that older persons might have on average more difficulties in recovering from income losses due to sickness-related absenteeism at work or to health care spending (Hurd, 1989; Gratton, 1996). Nonetheless, in several countries, especially from the more developed world, seniors have achieved on average better socio-economic status (SES) through wealth accumulation, therefore improving their economic well-being. Current elderly people belong to cohorts that progressed during the post-World War II economic boom. These generations enjoyed the expansion of Social Security benefits during the second half of the 20th century. In the United States (U.S.A.), the introduction of Social Security and public health insurance (Medicaid and Medicare) allowed American seniors to be more protected against catastrophic health expenditure. In North America and Western Europe, elderly people have become an influential political group for promoting or adversing public policies that might affect them (Angel & Angel 1997, Gratton 1996, Hurd 1989, Preston 1984, Smeeding and Smith 1998).

Nevertheless, according to Gin & Arber (1991), the vision of older persons as a wealthy, powerful and selfish force hides possible inequalities by income, gender, or social class. These authors have studied how women at advanced ages in the United Kingdom (U.K.) may face clear economic disadvantages due to persistent inequalities in labor income and in retirement pension plans, because women have to withdraw themselves temporarily from the workforce more often than men because of maternal leaves. Meyer (1990) arrives to the same conclusion for the U.S. after analyzng social welfare laws. In the same country, Smeeding and Smith (1998) show that, even though the proportion of poor people is smaller among people aged 65 or more than among younger adults, the elderly are more likely of being classified as “nearly poor”; therefore, the poverty prevalence would rise more among seniors than among their younger peers if the poverty line were to increase 25%. Ross,

Danziger & Smolensky (1987) and Holden, Burkhauser & Feaster (1988) show how transitions to reiterment or to widowhood reduce need-adjusted income and increase the probability of transitting towards poverty. Income received during the period previous to retirement has a strong effect on the probability of becoming poor (Holden, Burkhauser & Feaster, 1988). African-American, Hispanic, and women living alone seem to be the groups with more disadvantages among the American older population, because they have smaller chances of accumulating savings and assets, and of paying additional costs for health care services, among other factors (Angel & Angel, 1997). However, it is worth noticing that Social Security benefits have had an important redistributive effect because these benefits constitute one of the main sources of income and wealth at these ages (Smeeding & Smith, 1998).

In most Latin American countries, poverty prevalence is higher at older ages than at younger ages. According to del Pópolo (2001) and Huenchuán (2009), this advantage might be explained by the fact that these cohorts experienced the post-ware conomic boom, which allowed them to accumulate wealth, and hard macroeconomic times (the world-wide effects of the 1929 Great Depression), making them to have more frugal habits of savings and consumption. Additionally, in Latin America, the prevalence of poverty at old ages is smaller in countries at more advanced stages of the Demographic Transition. Nonetheless, some groups are worse-off than others. Poverty is more common in rural zones than in urban areas; among women than among men, and especially, in multigenerational households rather than in one- or two-generation households. Social Security coverage in the region is not as widespread as in the industrialized world, and the coverage proportion is highly variable across countries.

These conditions describe the situation of Mexico, which was classified as part of the group of high poverty prevalence (del Popolo, 2001); however, the poverty rate has been diminishing since 1996, and at least until 2006 (Huenchuán, 2009). In Mexico, becoming seniors is associated with financial deterioration because the access to employment is limited for them. They are also at higher risk of being expelled from the labor market, through mandatory retirement or layoffs. In general, Mexican elderly are more likely to find a more difficult market while seeking a job because of age or education level (Montes de Oca, 1996). Vulnerability is stronger among rural or informal workers, and the unemployed, because they are less likely to be entitled to Social Security benefits (Ham-Chande, 1996; Wong & Espinoza, 2002). A relatively small proportion of senior citizens are covered by Social Security (retirement) or health insurance: only 27% of women and 31% of men at advanced

ages did have a retirement pension in 1996 (Wong & Parker, 1999, in Gomes y Montes de Oca, 2002). Nevertheless, the Mexican Social Security system has been increasing its coverage during the first decade of the 21st century (Huenchuán, 2009). With the same dataset used in this article, Wong & Espinoza (2002) show that for people who were 60 years old or older, informal family transfers were the main source of income; retirement pensions represented only 10% of total income. The median income for an older Mexican in 2001 was 1150 Mexican pesos (US$130) per month, only 10 pesos short of the minimum salary. Regarding capital formation, most elderly Mexicans owned a house (76%), and this is the main component of total wealth (60%). The median total welth was 90250 Mexican pesos (US$10,000).

On the contrary, Costa Rica is one of the few Latin American countries (with Dominican Republic, El Salvador and Honduras) in which the poverty rate is higher among older persons than among younger citizens (del Popolo, 2001; Huenchuan, 2009), regardless of whether poverty is measured based on the poverty line or via expenditure (Fernandez & Robles, 2009). According to Fernandez and Robles, poverty among Costa Rican elderly is highly associated with household composition: poor elderly households have fewer income earners, and more children than other households (including non-poor elderly households). Based on the last Household Surveys about Income and Expenditure in Costa Rica (in 2004), 19% of elderly (mostly women) were earning no income at all. The mean total income for Costa Ricans aged 60 or more was 202 thousand colones (approximately US$400), 21% less than the income of people aged 30 to 59. Additionally, older women's mean income was only 63% older men's income (Mendez et al, 2006). Like in Mexico, home ownership is the most valuable asset among them. Despite their higher poverty prevalence and lower mean income, the Costa Rican elderly population has one of the highest Social Security coverage in the region (Brenes-Camacho, 2009). Retirees from formal sector jobs are entitled to a public retirement pension. A non-contribution pension is given to destitute seniors, who are also entitled to free health insurance. The public health insurance does not require co-payments, therefore out-of-pocket health expenditure is considerably low among the elderly.

Data sources

In this analysis, we compare Costa Rican and Mexican elderly. Data sources are two nationally representative surveys about aging: CRELES (Costa Rican Study of Longevity and Healthy Aging) and MHAS (the Mexican Health and Aging Study).

The dependent variable is the self-perception of economic situation. In CRELES, the question about self-rated economic situation is written in the following way: "How would you rate your current economic situation?": Excellent, Very good, good, fair, and bad. In MHAS, the wording of the question is the same, and the possible answers are good or bad. In both surveys, we recode the variables into dichotomous variables: 1=fair or bad; 0: Excellent, Very good, good. This means that the main dependent variable is to report fair or bad economic situation.

The covariates refer to "objective measures" of economic well-being. It is important to clarify that the measures in CRELES are not necessarily comparable to the measures in MHAS, because the latter used a more detailed battery of questions to measure economic variables (Wong & Espinoza, 2000) that can record negative income (business losses, from the subtraction of gains minus costs).

The selected explanatory variables are:

- Work (binary variable) and labor income.
- Retired (binary variable) and pension income.
- Marital status (operationalized as a series of dummy variables that refer to widowhood, separation/divorce, and singlehood), and spouse's income.
- Informal family transfers (binary variable) and amount of transfer Money.
- Home ownership (binary variable).
- A series of binary variables referrring to assets, house appliances, or house services:
    - For Costa Rica: having a separate room for cooking, cooking with gas or electricity, having potable water in the house, having toilet inside the house, refrigerator, television, telephone, washing machine and vehicle.
    - For Mexico: cooking with gas or electricity, having water available inside the house, having toilet inside the house, refrigerator, television, telephone, washing machine, water heater, and radio.
- Other covariates are: age, years of schooling, and living in urban areas (in Mexico, this jeans living in more urban areas).

- We added self-rated health as a covariate in order to analyze whether health conditions are related to economic situation, net of the effect of "objective" SES measures.

We used logistic regression models, and a significance level of 0.05. All estimates are weighted by the inverse of the selection probability.

Results

The total sample for Costa Ricans in this article is 2492 (1152 men and 1340 women), alter excluding missing values in explanatory variables. The sample is reduced from a total number of 2820 respondents mainly because only direct interviewees (non-proxy interviews) answered the question about self-rated ecomomic situation. In Mexico, the analyzed subsample amounts to 4534 persons: 1646 men and 2888 women. In MHAS, self-rated economic situation is answered only by non-proxy respondents, too.

In Costa Rica, 62% of men and 56% of women reported to have a "fair" or "bad" economic situation. In Mexico, the figures are higher: 80% of men and 83% of women. Based on these figures, it is difficult to establish whether the differences are due to specific economic conditions that differentiate Mexico from Costa Rica, or whether they are due to cultural differences when answering closed-answer questions about one's own economic situation. The hypothesis about cultural differences might be likely, given that the proportion of people reporting bad health (at the end of Table 1) is lower in Costa Rica (45% among men, 50% among women) than in Mexico (64% men, 73% women), using a similar scale. Sex differentials are difficult to explain at this point of the analysis, although regression models might help to shed light on the patterns of association.

Regarding sociodemographic characteristics, mean ages are very similar across populations (close to 70). Costa Rican seniors have on average from 1.5 to 2 more years of schooling, the mean years of schooling are below 6 (years to finish elementary school) for both populations. The marital status distribution is different between the two countries. In Mexico there is a higher percentage of widows and widowers, and a smaller proportion of

married or cohabiting people. The higher widowhood prevalence might be related to the higher life expectancy at advanced ages among Costa Ricans.

The prevalence of working status, retirement, and family transfers are important determinants of SES among older adults. Costa Rican males are more likely to be working than Mexican males, but female economic activity is more common among Mexican women than among Costa Ricans. There are important differences by sex and country in retirement pensions: higher among men than among women; higher among Costa Ricans than among Mexicans. On the other hand, Mexican seniors are more likely of receiving informal transfers.

The amount of money earned through work, pensions, or transfers is not comparable across surveys, not only because of currency issues, but also because the way income was measured by each survey. It is worth noticing, however, that income distributions are very skewed, with a great proportion of people earning small amounts of money.

MHAS and CRELES inquired about different appliances and house characteristics in their respective housing questionnaire. In Costa Rica, most of the people report having these appliances; the asset with the smallest prevalence of ownership is a vehicle. In Mexico, there is more variability in the responses to the battery of questions. Some of the appliances or characteristics are present in most of elderly houses (a gas or electric kitchen, water available inside the house, toilet inside the house, television, and radio), while other assets are present in less than half of the houses: telephone and water heating. In Costa Rica, only 12% of seniors do not own a house; this proportion increases among Mexican men (25%) and especially among Mexican women (43%).

We expect to study the "objective" determinants of the subjective "self-rated" economic situation. We estimated different models for men and for women, for each country, assuming that the determinants of self-rated economic situation might vary across sex. Positive coefficients imply worse self-rated health, while a negative coefficient means a better perception. As mentioned before, we expect that labor and transfer income might be more relevant in Mexico than in Costa Rica, where pension money might be more important, given the higher Social Security coverage. In Costa Rica, labor income does not seem to have a significant effect on self-rated ecomomic situation among men, but it does among women; female workers are more likely to rate their economic situation as bad or fair, although the odds diminish as labor income grows. Given the estimated coefficients, the effect turns to zero when women earn 100 thousand colones per month (roughly US$200).

This interpretation might also be the result of endogeneity problems: women who feel being worse-off financially are the ones that need to work.

In Costa Rica, retirement pension money makes people view their conditions more optimistically, as having a telephone or a vehicle or owning a house. Spouse´s income is also highly associated with a better economic rating.

In Mexico (Table 3), conclusions are somewhat different. Neither age, nor zone, nor marital status significantly change the probabilities of reporting a bad financial situation. As in Costa Rica, years of schooling, retirement pension income, and transfers decrease the likelihood of reporting a bad economic situation. Labor income is not significantly associated with self-rated financial situation among women, but it is among men (each coefficient for the main and the quadratic term is not significant by itself, but the inclusion of both variables improve the likelihood). In Mexico, home ownership is not associated with a bad economic perception, but a gas or electric kitchen and water availability do among women only.

Finally, the last lines of Tables 2 and 3 show that reporting bad or fair health is strongly associated with reporting bad or fair economic situation.
(We will estimate a bivariate probit to parse out the direction of causality between self-rated health and self-rated economic situation).

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Tables and Figures

Table 1

People aged 60 or more: Economic and demographic characterstics, by sex. Costa Rica (2004-2006) and México (2000-2001).
(Averages and standard deviations for quantitative variables; % for binary variables).

	Costa Rica				México			
Characteristics	Males		Females		Males		Females	
(n)	**(1152)**		**(1340)**		**(1646)**		**(2888)**	
% with bad self-rated economic situation	**62.4**		**56.0**		**80.1**		**83.2**	
Age	70.1	(7.9)	70.8	(8.2)	70.6	(7.8)	69.6	(7.7)
Years of schooling	5.3	(4.3)	5.0	(4.0)	3.7	(4.7)	3.0	(3.9)
% urban	57.0		65.9		38.2		47.5	
% widowed	10.2		33.0		25.1		43.3	
% separated/divorced	8.7		13.0		12.5		12.0	
% single	4.3		11.2		4.8		6.8	
% in union (married or cohabiting)	76.8		43.0		57.6		37.9	
% working	49.3		9.4		33.9		12.6	
% with pension	57.8		51.9		28.8		17.6	
% receiving help from relatives	15.4		29.0		46.2		62.3	
Labor income	93.3	(313.6)	10.8	(63.2)	4024.7	(76864.3)	-65.7	(26483.2)
Pension income	62.5	(114.4)	39.8	(77.7)	973.0	(4454.5)	389.8	(1542.5)
Inf. transfer income	75.9	(619.5)	83.3	(282.2)	15857.7	(114116.2)	40583.2	(329954.9)
Spouse's income	31.0	(103.5)	46.2	(100.2)	1050.9	(12973.7)	998.0	(9227.7)
% non homeowners	12.2		13.3		24.4		27.4	
% with kitchen in separate room	96.0		96.9					
% cooking with gas/electricity	80.9		86.5		75.9		80.0	
% water available inside the house	-		-		65.2		67.9	
% potable water	97.2		97.4		-		-	
% toilet inside the house	94.7		96.3		57.6		61.7	
% refrigerator	92.3		95.3		67.7		74.8	
% television	95.4		97.0		81.9		86.3	
% telephone	79.1		81.0		39.6		48.1	
% washing machine	89.9		90.0		47.6		53.7	
% vehicle	33.2		27.5		-		-	
% water heater	-			-	37.9		44.0	
% radio		-		-	83.1		79.7	

% with fair/bad self-rated health	45.0	49.9	64.1	72.5

Nota: In Costa Rica, income is presented in thousands colones, while n Mexico, it is presented in Mexican pesos. Means and standard deviations are computed with respect to the whole population, rather than just among income earners.

Table 2.
Costa Rica: People aged 60 and over. Coefficients for the logistic regression of fair/bad self-rated economic situation on several variables, controlling for sex (2004-2006).

	Men		Women	
Characteristics	Coef	p-value	Coef	p-value
Age	-0.0198		-0.0369	***
Years of schooling	-0.3451		0.1366	
Urban	-0.0766	*	-0.0469	
Widowed	-0.8450	**	-0.5008	
Separated/divorced	-0.6070		-0.2598	
Single	-0.5339		-1.1067	***
Working	-0.1509		1.8044	**
Labor income	0.0002		-0.0176	**
Having a pension	-0.0470		0.2408	
Retirement pension income	-0.0024	*	-0.0076	**
Spouse's income	-0.0114	***	-0.0073	***
Receiving transfers	-0.0004		0.1103	
Transfer income	-0.0001		-0.0007	
with kitchen in separate room	-0.1891		-0.2793	
cooking with gas/electricity	-0.2616		-0.2128	
potable water	0.4278		1.0883	*
toilet inside the house	0.3241		0.5503	
refrigerator	-0.3242		-0.4630	
television	0.0691		0.3026	
telephone	-0.6641	*	-0.4828	*
washing machine	-0.2937		-0.5212	
vehicle	-0.4059	*	-0.7510	***
Non-home owner	0.7433	*	0.5858	*
Fair/bad self-rated health	1.1282	***	0.9471	***

Note: *: p<0.05, **: p<0.01, ***: p<0.001

Table 3.
Mexico: People aged 60 and over. Coefficients for the logistic regression of fair/bad self-rated economic situation on several variables, controlling for sex (2000-2001).

	Men		Women	
Características	Coef	prob asoc	Coef	prob asoc
Age	-0.0193		-0.0047	
Years of schooling	0.4434		0.3897	
Urban	-0.0855	*	-0.0806	**
Widowed	-0.5650		0.0770	
Separated/divorced	0.2657		0.2334	
Single	-0.5454		0.4524	
Working	-0.4546		0.1540	
Labor income	-0.0031		0.0027	
Squared labor income divided by 1000	0.0006		-0.0129	
Having a pension	0.2691		-0.0019	
Retirement pension income	-0.4834	***	-0.2190	**
Spouse's income	0.0075		-0.0025	
Receiving transfers	-0.0427		0.2356	
Transfer income (square root)	-0.0488	*	-0.0365	**
Non-home owner	0.0955		0.0056	
water available inside the house	0.1548		0.6025	*
toilet inside the house	-0.5837		-0.3843	
television	0.6655		-0.0342	
refrigerator	-0.6039		-0.0240	
refrigerator	-0.0754		-0.3317	
telephone	0.5163		-0.1304	
water heater	-0.5205		-0.1519	
radio	-0.0725		-0.2560	
cooking with gas/electricity	-0.0272		-0.9420	*
Fair/bad self-rated health	0.9213	***	1.1338	***

Nota: *: p<0.05, **: p<0.01, ***: p<0.001