

Draft: Do not cite or reproduce without author's permission

Intergenerational Influences of Wealth in Mexico¹

Florencia Torche

Department of Sociology, New York University and
Center for the Study of Wealth and Inequality, Columbia University
(florencia.torche@nyu.edu)

&

Seymour Spilerman

Center for the Study of Wealth and Inequality, Columbia University
(ss50@columbia.edu)

Prepared to be presented at the RC28 Meeting Social Inequality and Mobility in the Process of Social Transformation, Brno Czech Republic May 24-27 2007. The Mexican Social Mobility Survey used in this article was funded by the Fundacion Esru (<http://www.fundacionesru.org>).

Intergenerational Influences of Wealth in Mexico

Abstract:

Using the 2006 Mexican Social Mobility Survey, this research evaluates the influence of parental wealth on several outcomes of adult children, including educational attainment, consumption level, asset holdings, home ownership, and value of residence. Two mechanisms of parental influence on economic wellbeing are explored: an indirect effect mediated by parental investment in human capital, and the direct transfer of resources. Three main findings emerge from the analysis. First, parental wealth is a strong determinant of educational attainment, net of the standard indicators of advantage regularly used in stratification research, and the influence of wealth is stronger among the most disadvantaged children (those with low cultural capital, and residing in non-urban areas). Second, the mechanism of parental influence on adult children's economic wellbeing differs depending on the outcome: In the case of consumption level, the influence is largely indirect, mediated by parental investment in offspring's human capital, while the opposite is true for children's asset holdings, where a direct transfer of resources predominates. Third, while access to homeownership is only weakly stratified by parent's and children's resources, the value of the acquired home is significantly affected by parental wealth. These patterns of influence are similar to those found in Chile (Spilerman and Torche 2004, Torche and Spilerman 2006) and they highlight the critical impact of parental wealth in less developed countries.

Intergenerational Influences of Wealth in Mexico.

1. Introduction. This paper explores the association between parental wealth and adult children's economic wellbeing in Mexico. Wealth, as a dimension of inequality, has been neglected by stratification researchers, who have tended to focus primarily on labor market resources and rewards, particularly human capital and occupational earnings. However, wealth has attractive properties that distinguish it from earnings. The income flow generated by wealth does not require a tradeoff with leisure, and it does not decline with unemployment or illness, and in times of economic need, the wealth principal, as well as the income flow, can be consumed (Spilerman 2004, Keister 2000). While the utility of a consumption item is tied to its use value in goods or services, the value of an asset item extends to its role in "consumption storage", smoothing family expenditures over times of income variability.

One dimension of wellbeing for which family wealth may be critical is children's educational attainment. Aside from direct financial costs of schooling, parental wealth levels may be critical to afford the opportunity cost of education, and to provide extracurricular activities such as computers or tutoring (Conley 1999, 2001). Empirical research on the influence of parental wealth is, however, scarce. A seminal study by Rumberger (1983) finds significant wealth effects on children's education, but does not include parental income so it is unable to estimate the net influence of parental assets. Hill and Duncan (1987) find that income from assets has positive effect on educational attainment of daughters but not of sons, while Axinn et al. (1997) and Conley (2001) find significant but modest wealth effects on overall educational attainment, and, in particular, on the transition to post-secondary education. In sum, these studies indicate that wealth does have a positive influence on the educational attainments of offspring, but the effect does not appear to be large.

The role of parental wealth may be stronger in the developing world. Where income is low and employment intermittent, household savings rather than income are often the source for ongoing, regular payments such as for tuition and other schooling expenditures. It therefore may be

household assets, more than income, which is responsible for continuous enrollment in school in the developing world, particularly in the higher, non compulsory grades. The influence of family wealth on children's educational attainment should be particularly strong in contexts where social insurance programs in the form of unemployment and disability protection are limited, and where credit markets are weak, exacerbating a family's vulnerability to economic crisis. As Flug, Spilimbergo, and Wachetenheim (1996) demonstrate, the financial constraints of households explain most of the difference in secondary schooling across countries. Furthermore, a well documented survival strategy in response to economic crisis in Latin America and East Asia is to incorporate more family members--often older children-- into the labor market, resulting in high dropout rates in secondary and even in primary school (Moser 1998, Giorguli-Saucedo 2002, Binder 1999, Thomas et al. 2004). However, with the exception of Chile (Spilerman and Torche 2004), there are no studies evaluating the influence of parental wealth on children's educational success *net* of other parental resources. This is the first task we undertake in this paper for Mexican society.

From the perspective of children's economic wellbeing, educational attainment is however not an end in itself, but rather a means that will produce the income stream necessary to afford a particular standard of living. Therefore, after studying the impact of parental assets on children's education, we investigate the mechanisms of parental influence on the adult children's standard of living. Parents can contribute to their children's wellbeing indirectly by investing in the amount and quality of education, which in turn yields labor market returns. Alternatively, parents can help their offspring through a direct, unmediated transfer of resources in the form of inter-vivos financial assistance and inheritances. The mechanism chosen by parents may reasonably vary depending on the dimension of offspring's wellbeing. In this paper we distinguish two dimensions of economic wellbeing of adult offspring -- consumption level and asset holdings. While the former identifies everyday expenses, the latter refers to a stock of accumulated resources.

Previous research in Chile (Spilerman and Torche 2004, Torche and Spilerman 2006) suggests that parental wealth has a significant effect on both dimensions, but the mechanisms of influence are

different. The impact on consumption level is almost entirely indirect, mediated by parental investment in children's education and labor market earnings. In contrast, the influence on asset ownership is mostly direct, suggesting an unmediated transfer of resources. Distinguishing between these mechanisms has important policy implications. If promoting asset-building in the population is a policy objective, the findings suggests it is not enough to foster the development of human capital, and that policies directly targeted towards asset accumulation -- such as individual development accounts with government's added matching funds (Sherraden 1991, 2001) -- may be necessary. To address these questions in Mexican society, this paper is organized as follows: Section 2 describes Mexican context, section 3 introduces the data, variables and methods, section 4 presents the analysis and section 5 discusses the main conclusions of the analysis.

2. The Mexican Context. Mexico is a middle-income country with a current per capita income of \$7,310, which compares with an average of \$4,008 in Latin America, and \$43,740 in the US (World Bank 2006). Mexico has experienced a significant economic transformation over the last few decades. Import-substitutive industrialization led to substantial industrial development and economic growth from the 1940s to the late 1960s, a period known as the "Mexican miracle" (Middlebrook and Zepeda 2003). This growth model started to show its limitations in the 1970s, and in the early 1980s the Mexican economy experienced a severe recession which led to a dramatic drop in output and real wages, an increase in poverty, and the expansion of small-scale unprotected "informal" economic activities (Lustig 1998, Boltvinik 2003, Salas and Zepeda 2003). Since the 1980s, the country has implemented extensive trade liberalization and privatization of enterprises and of the social safety net, resulting in intermittent growth, and persistent economic fluctuation --with a major downturn in 1995, known as the "devaluation crisis" (Middlebrook and Zepeda 2003, Vega and De la Mora 2003). Driven by a growing college premium, income inequality rose in the second half of the 1980s and has stabilized during the 1990s (Cragg and Epelbaum 1996, Lopez-Acevedo 2006). Given the lack of unemployment and other social insurance for the large majority of the population, and the

privatization of the social safety net and reduced access to social services, these trends have been accompanied by widespread vulnerability of Mexican families (Laurell 2003, Solis and Villagomez 1999, Salas and Zepeda 2003).

2.1. Education in Mexico: The Mexican educational system is divided into compulsory primary and lower secondary (comprising 6 years of primary and 3 of lower secondary education), 3 years of upper secondary school, and higher education. Governance is centralized at the national level with the Secretaria de Educacion (SEP) setting curriculum, selecting textbooks, hiring and firing personnel, and setting salary schedules. Public schools serve 87% of students. Although Mexico decentralized its basic education system to its 32 states in 1992, the reform was administrative and did not reduce decision-making centralization. The key problems facing the Mexican educational system are insufficient enrollment and a high dropout rate beyond primary school, insufficient supply of secondary schools, especially in rural areas, and low achievement (Santibanez 2005). The distribution of educational spending focuses overwhelmingly on higher education, to the detriment of primary and secondary schooling. The ratio of spending per student at the tertiary level compared to spending at the primary level exceeded 500 percent in 1994, and it was the highest among OECD countries (OECD 1998: 97).

Mexico experienced significant educational expansion throughout the 20th century (REFS), but this expansion slowed during the economic crisis of the 1980s. In addition to lowering real wages and expanding poverty, the crisis led to a significant decline in educational spending with government expenditures falling by 40% in real terms between 1981 and 1989 (Reimers 1991, Binder 1998). Driven by the dire macroeconomic conditions, enrollment rates stagnated (Binder 1999, Behrman, Duryea and Szekely 1999) and intergenerational educational mobility decelerated (Binder and Woodruff 2002).

The few studies on the association between parental resources and children's educational outcomes in Mexico show that educational attainment is heavily determined by parental

characteristics. Binder (1998) finds that father's and mother's education have strong effects, but, interestingly, parental permanent income (proxied by consumption spending) does not have a significant net influence¹. Binder and Woodruff (2002) and Giorguli-Saucedo (2002) also found a significant impact of parental education, family structure, father's occupation, sibship size, and rural residence; Parker et al. (2003) highlight the significant influence of parents' indigenous status. To date, there is no empirical analysis of the parental wealth effect on children's educational outcomes.

2.2. Wealth in Mexico: There are no available estimates of the wealth distribution for Mexico, but low per capita income and high income inequality suggest a high wealth concentration, which likely means that a large proportion of the population has very modest wealth holdings. To put the wealth holdings of the Mexican population in context, we present in Table 1 information on the ownership of several asset types and the distribution of ownership by household income level in Mexico and the U.S. Data on Mexico was obtained from the 2006 Mexican Social Mobility Survey (MSMS), and for the US, from the 2004 Survey of Consumer Finances (SCF).

Table 1 about here

The asset types considered are financial assets (stock, bonds and mutual funds), non-residential real estate, residential property, business equity, vehicle ownership and primary residence. We lack estimates of the financial value of these assets in Mexican households, or of the proportion of the total household portfolio accounted for by them; in the U.S. according to the SCF they comprise 76.6% of total family wealth² (Bucks et al. 2006). We do, however, have data for the two countries on the rate of ownership of each asset type and on their distributions by income level.

¹ The author speculated that this lack of influence may be due to measurement error associated to imputation in the top of the income distribution.

² Omitted from the wealth estimates are CDs, retirement accounts, the cash value of life insurance, managed assets, and other (non-specified) financial and material assets. These categories are omitted from the U.S. data because they lack a counterpart in the Mexican survey.

From table 1 it is evident that financial holdings (stocks, bonds, mutual funds) are the scarcest asset in Mexico, with ownership by only 1.8 percent of households, as opposed to 15 percent, 16.7 percent and 20.7 percent for mutual funds, saving bonds, and stock, respectively in the U.S.³ The Mexican ownership rate ranges from almost zero for the first three quintiles to some 8 percent in the highest category. Note that while the increase in the rate is fairly linear in the U.S., in Mexico there is a sharp gap between the top decile and the rest of the income categories. This gap is consistent with the pattern of economic inequality in Latin America, which is characterized by high concentration in the very top percentiles (Inter-American Development Bank 1999, Portes and Hoffman 2003). Negligible ownership rates for the large majority of the population reflect limited access to financial institutions, which expresses itself in the low prevalence of other financial products: Ownership of checking and saving accounts reaches only 7.1 and 10.5 percent in Mexico, which compare, respectively, with 89 and 47 percent in the U.S.

Real estate ownership (land, farm commercial and rental property, and other types of nonresidential property) averages 8 percent in the U.S. Given the relevance of land ownership in Mexican society, until recently largely rural, we distinguish ownership of land from other non-residential property and find disparate patterns. A substantial 20 percent of Mexican households own land, and the ownership pattern is U-shaped, with those at the top and bottom of the income distribution displaying higher rates. This is largely a result of an agrarian reform that followed the Mexican Revolution, which transferred land from the haciendas to peasants, creating a system of communal ownership known as *ejido* (Cardoso and Helwege 1992). Other real estate is, however, very scarce in Mexico, averaging only 2.4 percent and showing sharp concentration in the wealthiest decile. Residential property is also scarce in Mexico, with an average ownership rate of 1.4 percent, much lower than the U.S.'s 14.5 percent; and the distribution pattern is similar to that of financial assets and real estate (excluding land): significant concentration and a wide gap between the highest

³ Since ownership of these assets will overlap, the combined ownership rate is less than the sum of the three items. The lower bound, assuming perfect overlap, is 20.7 percent in the U.S., significantly higher than 1.8 percent in Mexico).

decile and the other income categories.

With an ownership rate of 13 percent in Mexico and 12 percent in the U.S., business is equally prevalent in both countries. Furthermore, the distribution of this asset is slightly more even in Mexico. While we cannot examine the value of business equity with the Mexican data, the high prevalence of small and informal enterprises –peddler stands and home front stores— suggests that the value of business equity is quite modest for most households that report this asset.

In contrast, the rate of vehicle ownership is much lower in Mexico--45 percent versus 86 percent in the U.S. Moreover, the distributions across income groups are strikingly different, especially at the low end of the scale. In the U.S., there is little variation beyond the second quintile, suggesting that by this income level most families who wish to own are able to purchase a vehicle; rendering car ownership a lifestyle choice. In Mexico, in contrast, there is a monotonic increase across income levels, suggesting a strong financial constraint on vehicle ownership.

The most interesting difference between the countries concerns primary residences. While the average rate is virtually identical--70 percent in Mexico, 69 percent in the U.S.--the distributions across income categories are quite disparate. In the U.S., the trend is one of a linear increase with income level, beginning with an ownership rate of some 40% for the lowest category. This income gradient is also found in most industrialized countries (Kurtz and Blossfeld 2004). In contrast, homeownership in Mexico is hardly sensitive to income level, with ownership rates around 70 percent and only a moderate spike at 78 percent for the highest income decile, and somewhat lower rates in the middle income segments.

The weak association between home ownership and income is characteristic of most Latin American countries (Torche and Spilerman 2007), and it is exacerbated in Mexico given the weakness of the rental market, which results in one of the largest rent-to-income rates in the world (World Bank 1993). High homeownership rates is partly a result of high public expenditures in housing provision: about 1 percent of the GDP is spent on housing subsidies, but they largely benefit the

middle classes rather than the poor (De Ferranti 2004: 201). Among the poor, high homeownership is most likely associated with informal tenure of modest, sometimes makeshift, residences. Indeed, it is estimated that between one-fourth and one-third of urban home owners lack formal title (Angel 2000, Fay and Wallentein 2005: 92), and this proportion could be as high as one-half in poor urban neighborhoods (de Ferranti 2004: 201). Lack of title reduces the ability of households to rent or use the residence as collateral, thus affecting the potentially beneficial effects of homeownership.

There are three conclusions from this section. First, the proportion of households that own some of the noted assets is lower in Mexico than in the U.S. for most but not all asset categories, and wealth ownership is not confined solely to the Mexican elite. Indeed, land and business ownership is more widespread in Mexico, although the monetary value held in these items may be very low for most holders. Second, the distribution of most assets across income groups is very unequal, characterized by a substantial gap between the top income segment and the rest of society. Third, the distribution of home ownership departs from the pattern of the other asset types and is strikingly different from the ownership pattern in the U.S., in that even the very poor have a high rate of access to residence ownership.

3. Data and Analytical Strategy: In this paper we investigate the contribution of parental asset holdings to children's living standards, with particular consideration of the transmission mechanism-- indirect, via parental investments in education or direct transfers of resources. Data come from the 2006 Mexican Social Mobility Survey (MSMS). The MSMS is a probability, stratified, multistage survey of Mexican households. The sample is representative of the national population, including urban and rural areas. The sampling frame is based on a roster of AGEBS (Areas Geoestadísticas Básicas-- Geostatistical Basic Areas) for urban areas, and a roster of rural localities (localidades rurales) for rural areas. The PSUs are municipalities, except for the metropolitan areas of Mexico City, Guadalajara and Monterrey, where they are AGEBS/rural localities. PSUs were stratified by size and socio-economic status, and selected with probability proportional to size. SSU are AGEBS/localities,

TSU are blocks or groups of adjacent households in urban areas, from which households were randomly selected. Respondents within the 25-64 age range were selected at random, and no replacement of household or respondent was allowed. Up to 4 visits to each household were conducted, in order to contact the selected respondent. The sample frame used information provided by the Instituto Nacional de Estadística, Geografía e Informática (INEGI), based on projections from the 2000 Census. The sample size is 7,288 and the response rate excluding households without respondents 25-64 was 88.9 percent. Fieldwork was conducted in October-November 2006.

The MSMS contains detailed information on respondent's social background, characteristics of the parental household, migration history, ethnicity, educational attainment, occupational attainment, income, and wealth, as well as household assets and living standards. For married/cohabitating respondents, complete information on spouse's background, education, and occupation was also collected. Thus, in contrast to most surveys -- which contain information only on one (usually male) respondent -- the MSMS permits a consideration of the characteristics of both members of the couple.

Variables and Methods: We investigate the net effect of parental wealth on five offspring outcomes -- educational attainment, consumption level, wealth holdings, homeownership and home value. The unit of analysis for the study of educational attainment is the individual, and this preliminary study is restricted to males. For all other dependent variables, the unit of analysis is the married/cohabiting couple, and we therefore limit our sample to households where there is currently a co-resident couple. Our findings therefore apply to this household type which, according to the 2000 Mexican Census, represents 75.3 percent of all Mexican households.

Measuring the monetary value of household's wealth holdings poses difficulties associated with limited knowledge, refusal, and misreporting by the respondent. The problem is particularly serious in Latin America where fear of crime and taxation may exacerbate respondents' uncooperativeness. Given these constraints, our strategy is to inquire about the ownership of

different kinds of assets (but not their monetary value): Financial assets (stocks, bonds, mutual funds, savings accounts), business equity, land, other real estate, residential property, and cars, and to create an index combining these asset types. In order to assign appropriate weights to these indicators we use a factor analysis for categorical indicators. The asset index is constructed as the first factor, which is the linear combination that captures the largest amount of information that is common to all the variables. This approach has been validated by Filmer and Pritchett (1999, 2001), Sahn and Stifel (2003), and McKenzie (2005), although these authors include a wide variety of indicators (ranging from consumer durables to source of drinking water), and use the index as a general measure household living standards, which intermingles wealth, consumption expenditures, and income. Our approach, in contrast, is to restrict the indicators to wealth items, providing a cleaner measure of household wealth.

By the same token, consumption level is measured using the first factor in a factor analysis of 12 measures of household services and consumer durables: inside toilet, stove, electricity, hot water, refrigerator, washer, telephone, cellular phone, TV, cable, computer, and hired housekeeper. In order to explore access to home ownership, we construct a variable measuring waiting time to ownership since marriage/ beginning of cohabitation. Note that this variable includes more information than a simple indicator for current homeownership. Finally, given the limitations of homeowners' reports of the value of their home, which included many instances of refusal or lack of knowledge, we used an evaluation of the residence monetary worth conducted by the interviewer. This provides an ordinal scale, distinguishing low (52% of the sample), middle (44%) and high (4%) residence value. Interviewers were trained to consider only the value of the residence, taking into account the housing unit and the neighborhood, but excluding other goods, such as furniture.

The key independent variable in this analysis is parental wealth. We measure parental wealth holdings when respondent and spouse/partner were in their adolescence. It is impossible to ask respondents about the value of parental asset holdings given limited knowledge about parental resources in past decades and fluctuations in the inflation rate. Consequently, for each set of parents,

we use the same strategy utilized to construct the household wealth index, combining seven of wealth indicators -- financial assets, business, land, other real estate, residential property, saving accounts, and cars -- using factor analysis. Note that parental homeownership is excluded from this index. In addition to the particular status of homeownership in Mexico --very high across the income gradient, which suggests a limited role as consumption storage device-- we introduce homeownership separately because much literature highlights the distinct effect of parental homeownership as an indicator of residential stability, quality of home environment, life satisfaction, homeowners' involvement in local affairs, and neighborhood effects rather than considering it a wealth item (Haurin, Parcel and Haurin 2002, Aaronson 2000, Harkness and Newman 2003, Green and White 1999)⁴.

Other independent variables in the model for educational attainment are father's and mother's years of schooling, and father's occupational status-- a proxy for family permanent income-- measured in terms of the International Socioeconomic Index ISEI (Ganzeboom et al. 1992). As an indicator of the cultural capital in the household, we use the number of books available when the respondent was growing up, coded into four ordered categories: No books, 1-2, about 10, 20 or more⁵. This variable has been shown to have a massive influence on children's educational attainment, comparatively greater than parental occupational status or education (Kelley et al. 2006).

We also include an indicator for those respondents who grew up in a city, to account for the differential availability of schools in urban and rural areas. Family structure is captured by two variables: A dichotomous measure distinguishing those growing up with both biological parents, and number of siblings, in order to account for potential resource dilution (Blake1989, Downey 1995). An indicator for indigenous status is also added, to account for significantly lower educational attainment

⁴ In contrast to respondent's home, we don't have an estimation of home value for the parental generation, hence only a dummy terms for parental homeownership is used.

⁵ This variable excludes textbooks and other required reading materials, to avoid confounding the family voluntary investment in literary culture with school requirements that depend on the number of school-age children in the household. Note that the top category, which may appear as a low threshold in the industrialized world, comprises only 11 percent of the respondents in Mexico.

among Mexicans of indigenous descent (Parker et al. 2003). Finally, a second-polynomial formulation of age captures period effects associated with educational expansion, under the assumption that by age 25 Mexicans have completed their educational career and therefore age effects are irrelevant (an assumption supported for the Latin American case by Behrman et al. 1999).

The analysis of the couple's consumption level, wealth holdings, time to home ownership and home value includes the following measures of parental resources: parental wealth and home ownership, father's education and occupational status, and well as controls for age, indigenous status, and a set of dummies capturing rural status and population size of the couple's locality of residence⁶. The couple's socioeconomic resources are measured by the following indicators: Years of schooling of and occupational status of both partners (the 53 percent of cases where female partner was not employed was retained by means of an indicator variable for wife not employed). Controls were also introduced for age of husband at marriage/cohabitation and number of years in current union. These variables proxy two different processes: The accumulation of savings before marriage/cohabitation; and subsequent savings by the couple, respectively; we expect each to be a function of the pertinent temporal variable and we view each as adding to a couple's capacity to finance its living standard expenditures. The indicator for marriage captures higher stability or selection effects associated with marriage versus cohabitation. See appendix for variables' description.

Some of the parental variables have rates of missing data that approach 20%, and in models with several variables the proportion of observations with missing data can reach 30%. In order to retain these observations without introducing bias, a multiple imputation procedure was used (Rubin 1987). Five complete data sets were created using the imputation software Amelia (Honaker et al. 2002). The analysis was replicated with each data set; the parameter estimates and standard errors were then combined⁷.

Our analytic strategy to assess the two avenues of parental transmission -- investments in

⁶ This set of dummies controls for differential access to household services or goods. Indicators are included in the models but not presented to save space.

⁷ This approach provides unbiased estimates, assuming that the data are missing at random (MAR).

offspring's human capital and direct transfers of resources-- consists of estimating two models of the impact of parental resources on the couple's consumption level and asset holdings. The first model reports the total effect of the parental resource terms, as measured by the coefficients in a reduced form model. The second adds the schooling terms the couple, measures of their occupational status, and the control variables, and is intended to assess the extent to which the initial parental effects are diminished by these terms --an indication of indirect parental transmissions operating through investments in human capital.

Methods: We utilize OLS regression in the models predicting respondent's years of schooling, consumption level and wealth holdings. In order to measure the determinants of time to home ownership, we use a Cox proportional hazard model, with duration from marriage/cohabitation to the year of the first owned home as the clock of the process, and we right censor households that are not homeowners. The analysis of home values uses an ordinal logit formulation with a selection correction to account for the fact that residence value is observed only for current owners.

4. Parental effects and children outcomes:

4.1. Respondent's Education: We start by assessing the influence of parental resources on completed years of schooling. Results in Model 1, table 2 supports the relevance of parental resources and, in particular, of parental wealth, in offspring's human capital.

Table 2 about here

Each additional year of father's schooling results in an increase of .25 years of respondent's schooling; and each year of mother's schooling translates into a comparable .18 years increment. The influence of father's occupational status (a proxy for permanent income) is positive and small. Given that status is measured in the ISEI scale that lacks a concrete metric, we note that a one- standard

deviation difference --the difference, for instance, between a primary school teacher and a secretary, or between a farm worker and a carpenter-- results in a gain of .14 years of respondent's schooling. In comparison, a one-standard deviation change in father's and mother's schooling result, respectively, in a gain of .93 and .57 years of schooling.

The number of books at home has a substantial impact⁸. An increase from zero books to 1-2 books at home results in a gain of .8 years of schooling, and a difference between zero books and 20 or more books generates a massive 2.4 years gain. Living in an urban area is associated, on average, with a gain of almost 1 year of schooling. This coefficient captures differential availability of schools in urban and rural communities, a well documented cleavage in Mexican society (Santibanez 2005, Garza 2003). Belonging to an indigenous group has a sizeable detrimental effect on educational attainment. On average, respondents of indigenous descent complete 1.3 fewer years of schooling net of family's socioeconomic resources. Given that this association is net of parental educational and economic resources, it points out to factors such as geographical isolation, language barriers, differential expectations, and discrimination. The coefficient associated with living with two biological parents is positive, but it fails to reach significance, which may be related with the fact that no distinction is made among different types of "nontraditional families". As previous research suggests, non-traditional families headed by a female, are not at a disadvantage when compared to two- biological parent families (Giorguli-Saucedo 2002). Number of siblings has an expected negative effect, pointing to increased demands on parental resources associated with sibship size. The combined coefficients for respondent's age and age square indicate that older Mexicans, on average, have less schooling, and that the decline in average schooling across age groups is concave, signaling slower gains in educational attainment for younger cohorts. This trend is consistent with the stagnation of educational expansion in recent decades as a result of the economic crisis in the 1980s, which affected the educational career of younger respondents.

⁸ Two formulations of this variable were tested A linear specification, and a set of dummies for each ordered category, accounting for non-linear effects, and the linear specification was chosen given its better fit (BIC_{linear}: -3242.2, BIC_{set dummies}: -3227.6).

Moving now to the central variable of interest, we note that parental wealth has a substantial positive influence on respondent's years of schooling completed, which is net of educational, cultural and economic resources of parents. A one-standard deviation change in the parental wealth index results in a gain of .31 years of respondent's schooling, much larger than the influence of our proxy for parental earnings. Although direct comparison is not possible, this effect appears larger than the one found in the U.S., supporting the contention that private wealth plays a substantial role in contexts defined by liquidity constraints for many households, economic instability and a weak safety net. Note also that home ownership has a significant positive influence on offspring's educational attainment: children of homeowners have, on average, .35 more years of schooling, a result that reproduces findings in the U.S. (Haurin, Parcel and Haurin 2001, Aronson 2000, Harkness and Newman 2003, Green and White 1999)⁹. Given that homeownership may comprise little financial value for many households in Mexico and that it is a rather illiquid asset which provides essential services to families, we speculate that this beneficial effect may be due to residential stability, quality of home environment, and increased school and neighborhood involvement among homeowners. It is interesting to note also the rather limited impact of parental earnings, proxied by father's occupational status, once wealth is controlled. This supports the contention about the critical role of parental asset holdings, and not only their income flow, in children's educational attainment¹⁰.

A further question is whether the beneficial influence of wealth varies depending on the level of parental control of other resources. If we conceive of educational attainment as doubly determined by financial resources on the one hand, and parental motivation and encouragement on the other, it is reasonable to hypothesize a non-additive effect of these two inputs. Wealth identifies financial

⁹ At the moment we do not control for potential selection bias due to differences between parents who choose to own versus other tenure arrangement.

¹⁰ To account for the fact that father's occupational status may be a limited proxy of parental permanent income, and therefore induce upward bias in the wealth coefficient, we estimated a model that includes father's social class using a 11-fold Goldthorpe classification (Erikson and Goldthorpe 1992: 37-47). This variable has also been claimed to be an excellent proxy for parental permanent income (Goldthorpe and McKnight 2006). After including the class variables, the coefficient associated with parental wealth remains virtually unchanged (results available from the authors upon request).

resources necessary to afford the direct and opportunity cost of education, particularly in times of income fluctuation. Parental motivation is captured by the number of books in the household, under the assumption that this variable is a powerful indicator of the value attached to education and parental interest in promoting learning and exposure to scholarly culture among children.

In order to test for a non-additive effect between those two dimensions, model 2 in table 2 includes an interaction term between parental wealth and number of books at home. Results are clear. The coefficient associated with the interaction term is negative and highly significant, indicating that the beneficial influence of wealth decreases as the number of books at home increases. Accordingly, a 1-standard deviation increase in wealth results in a gain of .4 years of schooling if there are no books at home, but this gain declines to .31 years if there are about 10 books, and only .19 years for 20 or more books. Thus, while books in the parental home and parental wealth contribute to years of schooling, the effect of each decreases in the presence of high values of the other. A large number of books (signaling abundant parental motivation) is especially important when wealth is low and, conversely, parental assets turn critical when books are few. This finding suggests that motivation and asset holdings are “fungible” resources and that family wealth is most consequential for educational retention when the motivation associated with cultural capital is scarce.

By the same token, we reason that parental wealth should matter more for those children growing up in rural environments where access to credit markets is limited, and indirect costs of education are higher given limited supply of schooling. An interaction between wealth and urban residence assesses this hypothesis in model 3 of table 1. The coefficient of the interaction term is negative and significant, indicating that the relevance of wealth decreases for those respondents who grew up in a city. Indeed, a 1-standard deviation increase in parental wealth results in a gain of .53 years of schooling for respondents who grew up in non-urban areas, but only a .19 years increase if the respondent grew up in a city.

In sum, this analysis of the determinants of educational attainment in Mexico shows the critical relevance of parental wealth, net of parental cultural and economic resources, family structure, indigenous background and rural residence, and it highlights that wealth matters most for families that face disadvantages in other domains, such as low cultural capital or rural isolation.

Note also that parental wealth can affect educational attainment through the direct and opportunity costs of maintaining a child in school, or through residence in poor neighborhoods, where schools are distant or unavailable. Since we lack a refined measure of school accessibility in different communities at the time the respondents were in their student years, we risk confounding this reason for low attendance with the parental burden of keeping a child in school, which is the focus of our study. At one level the distinction in the underlying cause of low attendance is irrelevant; both mechanisms refer to parental resources. But the distinction is relevant if one seeks to ameliorate the problem, in that a different solution is suggested in each case. Where low rates of attendance are due to a lack of educational facilities, the construction of schools is recommended; where the problem stems from the parental burden of supporting a dependent child, the response should include reducing family's liquidity constraints, as implemented in the Oportunidades (former Progresa) program (Alarcon 2003).

4.2. Parental Wealth and Consumption Level: In order to explore intergenerational influences on adult children's wellbeing, we reduce the sample to those households headed by a married/cohabiting couple. The total influence of parental resources on the couple's consumption level is presented in model 1 of table 3.

Table 3 about here

This model indicates that father's education and occupational status are positive and significant for both sets of parents, whereas parental homeownership plays a negligible role. Of particular relevance, both parental wealth terms have a significant impact on the couple's

consumption level, which is net of other indicators of parental advantage. To obtain an indication of the magnitude of these effects, note that for male partner's father, a one-standard deviation in schooling [approximately 4 years of schooling] results in a .21 standard-deviation gain in consumption level by the couple, while a standard deviation increase in father's occupational status and parental wealth generate, respectively a .05 and .17 standard deviation increase. The comparable figures for the influence of wife parents' resources are .11, .04 and .11 standard deviations. In sum, parental wealth has a substantial influence on the standard of living the couple is able to maintain.

In the second model we add measures of the couple's human capital and permanent income, along with controls. Both the years of marriage and the male partner's age at marriage have positive effects --the former is 1.6 times the latter-- signaling the relevance of resource accumulation before and, especially, after marriage. Married, as opposed to cohabiting couples, are able to afford a significantly higher consumption level. As expected, both male and female partner's schooling and occupational status have significant positive effects on the couple's ability to sustain a higher level of consumption. A principal concern of this study, however, is whether the influence of parental resources is direct or mediated by parental investment in children's human capital. We address this question by evaluating the change in the coefficients associated with parental resources in moving from model 1 to model 2.

The changes are indeed large: Parental education and the occupational status of the female partner become insignificant, while for male partner they remain significant, though smaller in magnitude by 45 and 92 percent, respectively. The parental wealth terms also drop by 33 percent for the male partner and 42 percent for the female partner. This indicates that a substantial component of the parental influence on adult children's consumption level is *indirect*, mediated by investment in offspring's human capital, which in turn translates into higher labor market earnings and greater consumption capacity.

4.3. Parental wealth and asset holdings. In order to ascertain the path of influence of parental wealth on the couple's current asset holdings we follow a strategy analogous to the examination of consumption level. Model 1 in table 4 presents the total effects of parental resources and the model 2 adds the couple's socioeconomic resources, permitting an evaluation of the effect of the parental terms net of the couple's human capital and earnings.

Table 4 about here

Model 1 indicates that parental education and occupational status have limited impact -- insignificant in the case of the female partner's father, substantively small in the case of male partner's. In contrast, parental wealth has considerable influence --a one- standard deviation increase in husband parents' wealth results in a .233 standard-deviation gain in couple's asset holdings. This compares with a gain .045 and .050 standard deviation gain associated with a one standard deviation change in parental education and occupational status, respectively. Interestingly, the influence of wealth is almost identical for both sets of parents, suggesting that there is no significant gender bias in parental assistance.

Model 2 adds the indicators of the couple's human capital and permanent income, along with the duration variables and the other controls. Let us first note that cohabitating couples have, on average, fewer assets than married couples, but the difference is not statistically significant. Years of current union has a substantial effect -- 20 years of marriage increase wealth holdings by .281 standard deviation -- and husband's age at marriage is inconsequential, signaling that the most relevant accumulation process starts when the couple forms its own household. Not surprisingly, education and the occupations of husband and wife have strong effects on the couple's wealth holdings.

Moving to the central concern of this analysis, when the couple's human capital and labor market earnings terms are added to the equation in model 2, all the parental resource terms become

insignificant, with the exception of parental wealth which declines modestly in magnitude, by only 13 percent -- a drop of similar size for both members of the couple. As a comparison, the analogous drop in the estimation of consumption level was 33 percent and 42 percent for husband's and wife's parental wealth respectively. This finding suggests that the bulk of the parental wealth effect on the couple's asset holdings results from the *direct* transfer of resources, unmediated by parental investments in the couple's human capital,

A comparison of the proportion of variance explained by the couple's human capital and labor market earnings in the consumption level and asset holdings equations is also enlightening. In the case of consumption level, adding couple's human capital and earnings terms increases the R^2 by a massive 53 percent (R^2 model 2 - R^2 model 1 = .479 - .314); but the increase is only 30 percent in the asset holdings equation (R^2 model 2 - R^2 model 1 = .230 - .176). This substantial difference suggests that while the couple's labor market income provide means of consumption that is independent of parental assistance (direct and indirect effects), they have a much smaller impact on wealth accumulation, which remain more closely dependent on the initial conditions of parental resources.

In sum, we have found evidence of two different patterns of parental assistance. In the case of consumption level, the process appear to be largely indirect, mediated by the parental investments in offspring's human capital and consequent labor market returns that allow offspring to afford a higher consumption level. Additionally we found that in Mexican society education and occupational attainment are not merely vehicles for the intergenerational reproduction of advantage, although they also serve that function. Indeed, the substantial increase in proportion of explained variance in couple's consumption level after adding the couple's resources suggests that the educational system indeed provides opportunities to afford a better standard of living for individuals with disadvantaged social backgrounds. The mechanism is different with respect to adult children's asset holdings. Here we find stronger evidence of a direct pattern of transmission operating outside of the educational system and the labor market, and little evidence of the couple being able to accumulate assets through savings from labor market income. Additionally, the smaller increase in variance explained

when the couple's human resources and earnings are added suggestions that intergenerational reproduction of asset holdings is strong, and that opportunities for intergenerational wealth mobility through educational attainment and labor market effort are limited in Mexican society.

4.4. Parental Wealth and Home Ownership. Finally, we assess the influence of parental resources on adult children's home ownership. As noted in table 1, the homeownership rate in Mexico is homogeneously high across income levels, suggesting weak determination by parental resources. We analyze the determinants of time to homeownership using a Cox proportional hazard model, with time from marriage/start of cohabitation to the year of home acquisition as the clock of the process; couples who have never owned are treated as right-censored observations. Couples who obtained their houses up to 5 years before marriage were coded as obtaining them at time of marriage, accounting for the possibility that some homes are acquired in anticipation of marriage. The only departure from the previous models is the exclusion of a measure of years of marriage, highly collinear with the dependent variable. Results are presented in table 5.

Table 5 about here

Not surprisingly given the particular status of home ownership in Mexico, parental resources have only a marginal influence (model 1A). Parental education is insignificant for both sets of parents, and the occupational status of the female partner's father has a negative influence in the probability of acquiring a home. As to the parental wealth terms, only husband's parental wealth has a significant positive influence, but it is now quite small -- a one-standard deviation increase in parental wealth results in a 4.6% change in the hazard rate ($e^{.118 \cdot .385}$). This sharply contrasts with findings in the U.S., Western Europe, and Israel where parental resources are crucial to facilitating access to homeownership by offspring (Englehardt and Mayer 1994, Mulder and Smits 1999, Guiso and Jappelli 1999, Spilerman 2004). In contrast, home ownership by parents significantly reduces

the waiting time from marriage to home acquisition -- husband's parental homeownership is associated with a 23% increase in the hazard rate ($e^{.203}$) while wife's parental homeownership produces a 31% increase ($e^{.273}$). Since parental wealth is controlled, this considerable effect points to socialization processes and the formation of preferences among respondents who grew up in parental owned homes (Boehm and Schlottman 1999, 2001).

Model 1B adds measures of the couple's resources. The results indicate that married couples are much more likely than cohabitators to be homeowners -- marital status results in a 50.4 percent ($e^{.408}$) increase in the hazard rate; also husband's age of marriage has a modest influence (holding the other variables constant, a 10 year delay in marriage results in a 31% shift in the hazard rate ($e^{[.027^{*10}]}$). While age of marriage signals the individual's ability to accumulate savings before entering into a union, the marriage advantage may be related to the higher stability of marriage in contrast to cohabitation, which may foster long-term investments such as taking a mortgage; alternatively, it might be due to the fact that cohabitators are more likely to have experienced a marital breakup and dilution of resources. While we do not have information on whether the respondents had earlier unions, the probability of cohabiting is significantly higher among the younger respondents -- it monotonically decreases from 20 percent among respondents 25-34 years old to 7 percent among those aged 55-64 -- suggesting that the first hypothesis is more plausible. In terms of the couple's human capital and earnings, only female partner's education has a significant influence, but the impact of this variable is rather modest -- each additional year of schooling yields a 2 percent ($e^{.020}$) increase in the hazard rate; all the other measures of couple's resources are insignificant.

In sum, this analysis indicates that parental wealth and the couple's resources have a minor influence in becoming a homeowner. Access to homeownership appears to be sensitive to socio-demographic factors--stage in the lifecycle in which union is entered and marriage versus cohabitation-- but otherwise weakly stratified in Mexican society.

While access to a residence may be insensitive to socioeconomic resources, the value of the home that a couple can afford might reflect their economic resources, including those of their

parents. To address this question, Models 2A and 2B presents the total and mediated effect of parental wealth on home value for homeowners, measured by a 3-category ordinal variable based on interviewer's evaluation of monetary value of the dwelling. A correction should be introduced to account for the fact that home value is observed only for respondents who are currently owners. Given the unavailability of programmed sample selection models with ordinal dependent variables, we run a probit selection model for current home ownership, calculate the inverse mills ratio, and incorporate it as a correction factor in the main equation predicting value of the residence. For identification purposes, homeownership status of both sets of parents is included in the selection equation only. Our reasoning is that, as previously discussed, parental homeownership should affect offspring's propensity to become homeowner via socialization of preferences, rather than through transfer of resources, and therefore it should be orthogonal to the value of the reference the couple is able to afford in Mexican society.

Model 2A presents the total effect of parental resources. All the parental terms have a substantial positive influence, indicating that children of more advantaged social origins are likely to own houses of higher value. When the couple's resources are added in model 2B, it is found that the influence of parental education and occupation is largely mediated by the couple's resources. In contrast, the influence of husband's and wife's parental wealth appears to be mostly direct -- coefficients remain significant and they are reduced magnitude by only 28 percent and 17 percent, respectively. This reduction is larger than the one observed in the determination of asset holdings, but smaller than the one corresponding to consumption level, suggesting an intergenerational process in which the impact of parental assets comes primarily through direct assistance, and secondarily from parental investments in the human capital of the offspring. In sum, if access to homeownership is weakly stratified in Mexico, affording a home of higher value critically depends on parental resources.

5. Conclusions: The main hypothesis in this analysis is that parental wealth should be a critical determinant of adult children's socioeconomic outcomes in Mexican society, given the large number of households facing liquidity constraints, the weakness of social insurance mechanisms, and the limited access to credit markets. The analysis has largely confirmed this hypothesis -- parental wealth has a substantial influence on children's educational attainment, consumption level, asset holdings and value of home owned.

Furthermore, two distinct avenues of parental wealth influence were found. The effect of parental wealth on consumption level the influence is largely *indirect*, mediated by investment in offspring human capital formation, and subsequent returns from labor market participation. In contrast, *direct* transfer of resources appears to predominate for wealth holdings and home value among homeowners. In particular, human capital appears to play a rather limited role in the ability of Mexican families to build wealth, which is largely, and directly, determined by parental assets. This finding need not have been the case. We could have found a substantial mediating effect of children's human capital accumulation. The fact that we don't find it suggests that it is extremely difficult for Mexicans to build an asset reserve from their labor market income only. Probably, in a context of low wages for the large majority of the population, earnings are barely sufficient to finance everyday consumption needs, with very little left for accumulation, leading to very little wealth mobility across generations.

Two caveats are important at this point. First, our substantive argument emphasizes the role of parental assistance and intergenerational transfers, but our observations are restricted to parental assets; a transfer process is presumed to account for the parental effects on living standards but the details of the transmission are not spelled out in this study. Secondly, the influence attributed to parental wealth may indeed be a result of unmeasured variables correlated with parental assets, which in turn affects children's outcomes. Although we have controlled by parental educational and economic resources, omitted variables referring to personality traits or cognitive ability, among others, may have a significant influence on children's outcomes. While we cannot entirely rule out

this possibility at this point, it is difficult to imagine that these factors would be correlated with wealth but not to other measures of parental advantage included in the model to the extent of annulling the intergenerational influence of wealth. However, we should emphasize that the reported coefficients may be upper bounds, in that better controls may result in their reduction. Further research utilizing more refined measures of wealth, more extensive controls, and a more detailed operationalization of transfer mechanisms is essential to advance our understanding of the intergenerational influence of wealth in different national contexts. In this paper, we hope to have provided an initial assessment of the relevance of wealth in the intergenerational stratification process in Mexico, and in the less developed world in general.

References

- Aaronson, D. 2000. "A Note on the Benefits of Homeownership" *Journal of Urban Economics* 47: 356-369.
- Alarcon, D. 2003. "Income Distribution and Poverty Alleviation in Mexico: A Comparative Analysis" in Middlebrook, K. and E. Zepeda eds. *Confronting Development. Assessing Mexico's Economic and Social Policy Change*. Stanford: Stanford U. Press.
- Angel, Shlomo, 2000. *Housing Policy Matters: A Global Analysis*, New York and Oxford: Oxford University.
- Axinn, W., G. Duncan, and A. Thornton. 1997. "The Effects of Parent's Income, Wealth, and Attitudes on Children's Completed Schooling and Self-Esteem" in Duncan, G. and J. Brooks-Gunn ed. *Consequences of Growing Up Poor*. NY: Russell Sage.
- Behrman, J. S. Duryea and M. Szekely. 1999. "Schooling Investments and Aggregate Conditions; A Household-Survey-Based Approach for Latin America and the Caribbean" Working Paper # 47 Inter-American Development Bank, Office of the Chief Economist.
- Binder, M. 1998. "Family Background, Gender and Schooling in Mexico" *Journal of Development Studies* 35: 54-71.
- _____. 1999. "Schooling indicators during Mexico's 'Lost Decade'" *Economics of Education Review* 18: 183-199.
- Binder, M. and C. Woodruff. 2002. "Inequality and Intergenerational Mobility in Schooling: The Case of Mexico" *Economic Development and Cultural Change* 50 (2): 249-267.
- Blake, J. 1989. *Family Size and Achievement*. Los Angeles: U. of California Press.
- Boehm and Schlottmann. 1999. Does Home Ownership by Parents Have an Economic Impact on Their Children? *Journal of Housing Economics* 8: 217-232.
- _____. 2001. "Housing and Wealth Accumulation: Intergenerational Impacts. Low-Income Homeownership" Working Paper Series Paper 01.15, Joint Center for Housing Studies, Harvard University.
- Boltvinik, J. 2003 "Welfare, Inequality, and Poverty in Mexico 1970-2000" in Middlebrook, K. and E. Zepeda eds. *Confronting Development. Assessing Mexico's Economic and Social Policy Change*. Stanford: Stanford U. Press.
- Bucks, B., A. Kennickell and K. Moore. 2006. *Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances*. Federal Reserve Bulletin 92: A1-A38.
- Cardoso, E., and A. Helwege. 1992. *Latin America's Economy: Diversity, Trends, and Conflicts*, MIT Press: Cambridge MA.
- Conley, D. 2001. "Capital for College: Parental Assets and Postsecondary Schooling" *Sociology of Education* 74: 59-72.
- Cragg, M. and M. Epelbaum. 1996. "Why has Wage Dispersion Grown in Mexico? Is it the Incidence of Reforms or the Growing Demand for Skills?" *Journal of Development Economics* 51: 99-116.

- De Ferranti, D., G. Perry, F. Ferreira and M. Walton. eds. 2004. *Inequality in Latin America. Breaking with History?* Washington: World Bank.
- Downey, D. 1995. "When Bigger is Not Better: Family Size, Parental Resources, and Children's Educational Performance" *American Sociological Review* 60: 333-350.
- Englehardt, G. and C. Mayer. 1994. "Gift for Home Purchase and Housing Market Behavior" *New England Economic Review* May-June pp 47-58.
- Erikson, R. and J. Goldthorpe. 1992. *The Constant Flux*. Oxford: Oxford U. Press.
- Fay, M. and A. Wallenstein. 2005. "Keeping a Roof over one's Head: Improving Access to Safe and Decent Shelter" in M. Fay ed. *The Urban Poor in Latin America*. Washington: World Bank.
- Filmer, D. and L. Pritchett. 1999. "The Effect of Household Wealth on Educational Attainment: Evidence from 35 Countries." *Population and Development Review* 25: 85-120.
- _____. 2001. "Estimating Wealth Effects without Expenditure Data-or Tears: An Application to Educational Enrollments in States of India" *Demography* 38: 115-132.
- Flug, K., A. Spilimbergo, and E. Wachtenheim. 1996. "Investment in Education: Do Economic Volatility and Credit Constraints Matter?" *Journal of Development Economics* 55: 465-481.
- Ganzeboom, H., P. de Graaf and D. Treiman. 1992. "A Standard International Socio-Economic Index of Occupational Status". *Social Science Research* 21: 1-56.
- Garza, G. 2003. "The Dialectics of Urban and Regional Disparities in Mexico" in Middlebrook, K. and E. Zepeda eds. *Confronting Development*. Stanford: Stanford U. Press.
- Giorguli-Saucedo, S. 2002. "Estructuras Familiares y Oportunidades Educativas de los Niños y Niñas en México" *Estudios Demográficos y Urbanos* 51: 523-546.
- Goldthorpe, J. and A. McKnight. 2006. "The Economic Basis of Social Class" in Morgan, S., D. Grusky, and G. Fields eds. *Mobility and Inequality: Frontiers of Research in Sociology and Economics*. Stanford: Stanford U. Press.
- Green, R. and M. White. 1997. "Measuring the Benefits of Homeowning: Effects on Children" *Journal of Urban Economics* 41: 441-461.
- Guiso, L. and T. Jappelli. 1999. "Private Transfers, Borrowing Constraints and the Timing of Homeownership." Working Paper # 17, Center for Studies in Economics and Finance. University of Salerno.
- Harkness, J. and S. Newman. 2003. "Effects of Homeownership on Children: The Role of Neighborhood Characteristics and Family Income" *FRBNY Economic Policy Review*, June: 87-107.
- Haurin, D., T. Parcel and J. Haurin. 2002. "Does Homeownership Affect Child Outcomes" *Real Estate Economics* 30: 635-666.
- Honaker, J. A., J. G. King, K. Scheve, N. Singh. 2003. *Amelia, A Program for Missing Data*. Software Manual. Online at <http://gking.harvard.edu/stats.shtml>
- Inter American Development Bank. 1999. *Facing Up to Inequality in Latin America: 1998-99 Report*. Washington: IADB and The Johns Hopkins University Press.

- Keister, L. 2000. *Wealth in America*. Cambridge UK: Cambridge U. Press.
- Kelley, J., M. Evans, and J. Sikora. 2006. "Scholarly Culture and Academic Performance in 42 Nations" Paper presented at the Research Committee on Stratification and Social Mobility ISA Spring Meeting, Nijmegen Netherlands.
- Kurz, K. and H.P. Blossfeld eds. 2004. *Home Ownership and Social Inequality in Comparative Perspective*. Stanford: Stanford University Press, Social Inequality Series.
- Lopez-Acevedo, G. 2006. "México: Two Decades of the Evolution of Education and Inequality" World Bank Policy Research Working Paper 3919, May.
- Lustig, N. 1999. *Mexico: The Remaking of An Economy*. Washington DC: Brookings Inst.
- McKenzie, D. 2005. "Measuring Inequality with Asset Indicators" *Journal of Population Economics* 18: 229-260.
- Middlebrook, K. and E. Zepeda. 2003. "On the Political Economy of Mexican Development Policy" in Middlebrook, K. and E. Zepeda eds. *Confronting Development. Assessing Mexico's Economic and Social Policy Change*. Stanford: Stanford U. Press.
- Moser, C. 1998. "The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies" *World Development* 26: 1-19.
- Mulder, C. and J. Smits. 1999. "First-Time Home Ownership of Couples: The Effect of Intergenerational Transmission" *European Sociological Review* 15: 323-337.
- Parker, S. L. Rubalcava and G. Teruel 2003. "*Language Barriers and Schooling Inequality of the Indigenous in Mexico*" in Behrman, J. A. Gaviria and M. Szekely eds. *Who's In and Who's Out: Social Exclusion in Latin America*. Washington DC: IADB.
- Portes, A. and K. Hoffman. 2003. "Latin American Class Structures: Their Composition and Change during the Neoliberal Era" *Latin American Research Review* 38: 41-82.
- Reimers, F. 1991. "The Impact of Economic Stabilization and Adjustment on Education in Latin America". *Comparative Education Review* 35: 319-353.
- Rubin, D. 1987. *Multiple Imputation for Nonresponse in Surveys*. New York: Wiley.
- Sahn, D. and D. Stifel. 2003. "Exploring Alternative Measures of Welfare in the Absence of Expenditure Data." *Review of Income and Wealth*. 49(4), pp. 463-489.
- Salas, C. and E. Zepeda. 2003. "Employment and Wages: Enduring the Costs of Liberalization and Economic Reform" in Middlebrook, K. and E. Zepeda eds. *Confronting Development. Assessing Mexico's Economic and Social Policy Change*. Stanford: Stanford U. Press.
- Sherraden, M. 1991. *Assets and the Poor*. Armonk NY: M.E. Sharpe.
- _____. 2001. 'Asset-Building Policy and Programs for the Poor', in T. Shapiro and E. Wolff eds. *Assets for the Poor*. NY: Russell Sage.
- Solis, F. and A. Villagomez. 1999. *La Seguridad Social en Mexico*. Mexico City: CIDE.
- Spilerman, S. 2000. "Wealth and Stratification Process" *Annual Review of Sociology*. V. 26.
- Spilerman, S. and F. Torche. 2004. "Living Standard Potential and the Transmission of Advantage in Chile". Chapter 8 in E. Wolff ed. *What Has Happened to the Quality of Life in the Advanced Industrial Nations*. Northampton MA: Edward Elgar.

- _____. 2004. "The Impact of Parental Wealth on Early Living Standards in Israel" *American Journal of Sociology* 110: 92-122.
- Thomas, D., K. Beegle, E. Frankenberg, B. Sikok, J. Strauss and G. Teruel. 2004. "Education in a Crisis" *Journal of Development Economics* 74: 53-85.
- Spilerman, S. and F. Torche. 2004. "Living Standard Potential and the Transmission of Advantage in Chile". Chapter 8 in E. Wolff ed. *What Has Happened to the Quality of Life in the Advanced Industrial Nations*. Northampton MA: Edward Elgar.
- Torche, F. and S. Spilerman "Wealth, Parental Transfers, and Standard of Living: An Empirical Analysis of Chile" in Wolff, E. ed. *International Perspectives on Household Wealth*. Northampton MA: Edward Elgar.
- _____. 2007. "Household Wealth in Latin America" forthcoming in J. Davies and A. Shorrocks eds. *Personal Assets from a Global Perspective*. Helsinki: WIDER-UN.
- World Bank. 1993. "The Housing Indicators Program, Volume II: Indicator Tables" Washington DC: World Bank.
- _____. 2006. *World Development Indicators*. Washington DC: World Bank.

Table 1. Distribution of Asset Ownership by Income Group, Mexico and the U.S.¹

Percentile of Income ¹	Financial Assets ²				Real Estate ³			Residential Property ⁴		Business		Vehicle		Primary Residence	
	Mexico	US mutual funds	US saving bonds	U.S. stock	Mexico land	Mexico other RE	U.S.	Mexico	U.S.	Mexico	U.S.	Mexico	U.S.	Mexico	US
Less than 20	1.2	3.6	6.2	5.1	28.3	0.6	2.7	0.1	3.6	7.3	3.7	20.5	65.0	72.2	40.3
20 - 39.9	0.9	7.6	8.8	8.2	17.2	1.0	3.8	0.3	6.9	11.8	6.7	33.9	85.3	68.0	57
40 - 59.9	0.7	12.7	15.4	16.3	13.8	1.3	7.6	0.1	10.0	11.9	9.5	42.3	91.6	65.6	71.5
60 - 79.9	1.9	18.6	26.6	28.2	15.8	1.8	10.6	0.7	14.0	15.7	12.0	57.7	95.3	69.7	83.1
80 - 89.9	2.3	26.2	32.3	35.8	18.0	3.3	12.8	3.7	19.3	18.1	16.0	72.6	95.9	73	91.8
90 - 100	7.8	39.1	29.9	55.0	22.1	13.4	20.8	8.8	37.2	27	34.7	87.1	93.1	78.2	94.7
All households	1.8	15.0	16.7	20.7	19.7	2.4	8.3	1.4	12.5	13.3	11.5	44.5	86.3	70.3	69.1

¹ Source: 2006 Mexican Social Mobility Survey for Mexico. Survey of Consumer Finances, 2004 for the U.S. (reported in Bucks et al. [2006]). Both surveys were weighted to be nationally representative.

² U.S. figures separate stock, bonds, and mutual funds, Mexican figures combine these three categories.

³ Comprises farm, land, commercial and rental property, and other types of nonresidential real estate. Mexican figures separate land from other real estate, US figures combine these two categories.

⁴ Includes second home, vacation home, time shares, and other types of residential property.

Table 2. Parental resource effects on years of schooling completed, Mexican males 2006.¹

	Model 1	Model 2	Model 3
Father's Education ²	.251*** (.018)	.253*** (.018)	.254*** (.018)
Mother's Education ²	.173*** (.018)	.173*** (.018)	.173*** (.018)
Father's Occup. Status ³	.014* (.006)	.015* (.006)	.014* (.006)
Books at home ⁴	.803*** (.048)	.824*** (.050)	.805*** (.048)
Urban residence ⁵	.949*** (.096)	.946*** (.096)	.982*** (.096)
Intact family ⁶	.137 (.125)	.135 (.125)	.152 (.125)
Indigenous background ⁷	-1.331*** (.254)	-1.320*** (.254)	-1.309*** (.254)
Number of siblings ⁸	-.040** (.013)	-.041** (.013)	-.041** (.013)
Parental home ownership ⁹	.353*** (.105)	.350*** (.105)	.358*** (.105)
Parental wealth ¹⁰	.789*** (.131)	1.068*** (.197)	1.306*** (.206)
Parental wealth * Books at home		-.188* (.099)	
Parental wealth * Urban residence			-.797*** (.244)
Age ¹¹	.110*** (.014)	.110*** (.014)	.111*** (.014)
Square (Age)	-.004*** (.0003)	-.004*** (.0003)	-.004*** (.0003)
Constant	4.832*** (.232)	4.807 (.232)	4.787*** (.232)
N	6,322	6,322	6,322
R ²	.407	.409	.410

¹ Results based on multiple imputation with five datasets. Sample reduced to males aged 25-64. OLS regression analysis of years of schooling completed.

² Years of schooling.

³ Occupational status coded by International Socioeconomic Index (ISEI) (Ganzeboom et al. 1992).

⁴ Number of books at home when respondent was in adolescence (excludes textbooks), coded into the following ordered categories: 0 books, 1-2, about 10, 20 or more.

⁵ Indicator variable coded 1 if respondent grew up in an urban area, 0 otherwise.

⁶ Indicator variable coded 1 if respondent grew up with both biological parents, 0 otherwise.

⁷ Indicator variable coded 1 if respondent reports belonging to an indigenous group, 0 otherwise.

⁸ Count of respondent's siblings.

⁹ Indicator variable coded 1 if parents owned home in respondent's adolescence 0 otherwise.

¹⁰ Estimate of parental wealth based on factor analysis of set of parental assets, see text for details.

¹¹ Respondent's age in years.

Table 3. Parental Resource Effects on Adult Children's Consumption Level ¹

	Model 1		Model 2	
Male Partner's Parents				
Father's Education ²	.031***	(.003)	.017***	(.003)
Father's Occ. Status ³	.0039***	(.0010)	.0003	(.0009)
Parental Wealth ⁴	.302***	(.025)	.201***	(.022)
Home Ownership ⁵	-.033	(.019)	-.035*	(.017)
Indigenous background ⁶	-.419***	(.043)	-.295***	(.039)
Female Partner's Parents				
Father's Education ²	.016***	(.003)	.005*	(.002)
Father's Occ. Status ³	.003**	(.001)	-.0007	(.0008)
Home Ownership ⁴	.012	(.020)	.013	(.017)
Parental Wealth ⁵	.226***	(.027)	.131***	(.024)
Age at Marriage ⁷			.010***	(.001)
Years since Marriage ⁸			.017***	(.0007)
Married ⁹			.167***	(.022)
Husband's education ²			.030***	(.002)
Wife's education ²			.033***	(.003)
Husband's occ. status ³			.006***	(.0007)
Wife not employed ¹⁰			-.051***	(.014)
Wife occ. status ³			.002***	(.0007)
Constant	-.282	(.041)	-1.439***	(.056)
R ²	.314		.479	
N	5,187		5,187	

1. Results based on multiple imputation with five datasets. Sample reduced to households with a cohabitating couple. Set of dummies accounting for size * rural/urban status of locality of residence included in the model, but not presented to save space. Dependent variable is estimate of couple's consumption level based on first factor in factor analysis of a set of household goods and services. See text for details.

2 Years of schooling.

3 Occupational status coded by International Socioeconomic Index (ISEI) (Ganzeboom et al. 1992).

4 Estimate of parental wealth based on factor analysis of set of parental assets, see text for details.

5 Indicator coded 1 if parents owned home during respondent's adolescence, 0 otherwise.

6 Indicator coded 1 if male partner reports belonging to an indigenous group, 0 otherwise.

7 Age of male respondent at time of marriage/ initiation of cohabitation.

8 Years of marriage/ cohabitation.

9 Indicator coded 1 if couple is married, 0 if cohabiting.

10 Indicator coded 1 if wife never employed since marriage, 0 otherwise.

Table 4. Parental Resources Effects on Adult Children's Asset Holdings¹

	Model 1		Model 2	
Male Partner's Parents				
Father's Education ²	.008***	(.003)	.002	(.003)
Father's Occ. Status ³	.0035**	(.001)	.001	(.001)
Parental Wealth ⁴	.433***	(.029)	.377***	(.028)
Home Ownership ⁵	.021	(.022)	.022	(.022)
Indigenous background ⁶	-.023	(.051)	.035	(.050)
Female Partner's Parents				
Father's Education ²	.007*	(.003)	.002	(.003)
Father's Occ. Status ³	-.0017	(.0012)	-.004**	(.0012)
Parental Wealth ⁴	.419***	(.031)	.361***	(.031)
Home Ownership ⁵	.008	(.023)	.007	(.022)
Age at marriage ⁷			.003	(.0015)
Years of Marriage ⁸			.010***	(.001)
Married ⁹			-.033	(.029)
Husband's education ²			.013***	(.003)
Wife's education ²			.013***	(.003)
Husband's occ. status ³			.005***	(.0009)
Wife not employed ¹⁰			-.068***	(.019)
Wife occ. status ³			.004***	(.0009)
Constant	-.248***	(.048)	-.822***	(.071)
N		5,187		5,187
R ²		.176		.230

¹ Results based on multiple imputation with five datasets. Sample reduced to households with a cohabiting couple. Set of dummies accounting for size * rural/urban status of locality of residence included in the model, but not presented to save space. Dependent variable is estimate of couple's wealth holdings based on first factor in factor analysis of a set of household financial and real assets. See text for details.

² Years of schooling.

³ Occupational status coded by International Socioeconomic Index (ISEI) (Ganzeboom et al. 1992).

⁴ Estimate of parental wealth based on factor analysis of set of parental assets, see text for details.

⁵ Indicator coded 1 if parents owned home during respondent's adolescence, 0 otherwise.

⁶ Indicator coded 1 if male partner reports belonging to an indigenous group, 0 otherwise.

⁷ Age of male respondent at time of marriage/ initiation of cohabitation.

⁸ Years of marriage/ cohabitation.

⁹ Indicator coded 1 if couple is married, 0 if cohabiting.

¹⁰ Indicator coded 1 if wife never employed since marriage, 0 otherwise.

Table 5. Parental Resource Effects on Time to Home Acquisition and Value of Owned Home. Mexico 2006¹

	Time to Homeownership ²				Value of Home ³			
	Model 1A		Model 1B		Model 2A		Model 2B	
Male Partner's Parents								
Father's Education ⁴	.0005	(.007)	-.005	(.007)	.044***	(.006)	.027***	(.007)
Father's Occ. Status ⁵	.002	(.002)	.0001	(.002)	.007***	(.002)	.003	(.002)
Parental Wealth ⁶	.118*	(.056)	.072	(.056)	.177***	(.052)	.125*	(.054)
Home Ownership ⁷	.203***	(.045)	.191***	(.046)				
Indigenous background ⁸	.075	(.100)	.136	(.101)	-.427***	(.105)	.196	(.109)
Female Partner's Parents								
Father's Education ⁴	.011	(.007)	.003	(.007)	.028***	(.006)	.017**	(.006)
Father's Occ. Status ⁵	-.006**	(.002)	-.008**	(.002)	.005*	(.002)	-.001	(.002)
Parental Wealth ⁶	.108	(.061)	.067***	(.062)	.204***	(.057)	.170**	(.061)
Home Ownership ⁷	.273***	(.047)	.275	(.047)				
Age at marriage (male partner) ⁹			.018***	(.003)			.020	(.003)
Time of marriage ¹⁰							.031***	(.002)
Married ¹¹			.408***	(.066)			.262**	(.090)
Husband's education ⁴			-.001	(.006)			.036***	(.007)
Wife's education ⁴			.020**	(.007)			.032***	(.006)
Husband's occ. status ⁵			.002	(.002)			.005*	(.002)
Wife not employed ¹²			-.036	(.038)			.051	(.036)
Wife occ. status ⁵			.001	(.002)			.005*	(.002)
N	5,187		5,187		4,093		4,093	
LR chi ² (df)/ Pseudo R ²	150.5 (13)		218.0 (19)		.06		.10	

(ctd.)

- 1 Results based on multiple imputation with five datasets. Sample reduced to households with a cohabitating couple. A set of dummy variables accounting for size * rural/urban status of locality of residence included in all models, not presented to save space.
- 2 Cox proportional hazard model of time from marriage/ cohabitation to home acquisition. Residences acquired up to five years prior to marriage coded as acquired at time of marriage. Non-homeowners coded as right-censored observations.
- 3 Ordinal probit model of home value for homeowners, coded into three ordered categories (high, middle, low) as reported by interviewer. Inverse mills ratio obtained from selection equation for homeownership entered as correction factor. For identification purposes, main equation excludes indicator for homeownership for both sets of parents.
- 4 Years of schooling.
- 5 Occupational status coded by International Socioeconomic Index (ISEI) (Ganzeboom et al. 1992).
- 6 Estimate of parental wealth based on factor analysis of set of parental assets, see text for details.
- 7 Indicator coded 1 if parents owned home during respondent's adolescence, 0 otherwise.
- 8 Indicator coded 1 if male partner reports belonging to an indigenous group, 0 otherwise.
- 9 Age of male respondent at time of marriage/ initiation of cohabitation.
- 10 Years of marriage/ cohabitation.
11. Indicator coded 1 if couple is married, 0 if cohabiting.
- 12 Indicator coded 1 if wife never employed since marriage, 0 otherwise.

Appendix. Descriptive Statistics for Variables in the Analysis, 2006 Mexican Social Mobility Survey.

Variable	Mean	s.d.
<i>Male Partner's Background</i>		
Father's Education ¹	3.72	3.91
Mother's education ¹	3.28	3.55
Father's Occ. Status ²	28.77	10.15
Parental Wealth ³	.07	.39
Home Ownership ⁴	.76	.43
Number of books at home ⁵	.85	1.07
Intact Family ⁶	.85	.35
Number of siblings	5.55	3.38
Indigenous background ⁷	.03	.17
Urban Residence	.47	.50
Age	42.78	11.36
Age (Squared)	1958.90	1007.43
<i>Female Partner's Background</i>		
Father's Education ¹	3.57	3.74
Father's Occ. Status ²	28.38	9.68
Parental Wealth ³	.05	.33
Home Ownership ⁴	.78	.42
<i>Married/ Cohabiting Couple</i>		
Consumption Level Index ⁸	-.01	.69
Asset holdings index ⁹	.00	.72
Married ¹⁰	.76	.43
Age at marriage ¹¹	24.25	6.22
Time of marriage ¹²	19.39	11.12
Home ownership ¹³	.70	.46
Years from marriage/ cohab. to homeownership ¹⁴	6.67	7.39
Value of owned residence ¹⁵	1.51	.57
Husband's education ¹	8.05	4.49
Wife's education ¹	7.39	4.10
Husband's occ. status ²	34.01	13.01
Wife not employed ¹⁶	.53	.50
Wife occ. status ²	16.50	20.39

¹ Years of schooling

² Occupational status coded by International Socioeconomic Index (ISEI) (Ganzeboom et al. 1992)

³ Estimate of parental wealth based on factor analysis of financial assets (stocks, bonds, mutual funds), business equity, land, other real estate, residential property, saving accounts, and vehicles, see text for details.

⁴ Indicator coded 1 if parents owned home during respondent's adolescence, 0 otherwise.

- ⁵ Number of books at home when R was in adolescence, coded into the following ordered categories: 0 books, 1-2, about 10, 20 or more.
- ⁶ Indicator coded 1 if R lived with both biological parents during adolescence, 0 otherwise.
- ⁷ Indicator coded 1 if male partner reports belonging to an indigenous group, 0 otherwise.
- ⁸ Estimate of couple's consumption level based on first factor in factor analysis of a set of household goods and services. See text for details.
- ⁹ Estimate of couple's wealth holdings based on first factor in factor analysis of a set of household financial and real assets. See text for details.
- ¹⁰ Indicator coded 1 if couple is married, 0 if cohabitating.
- ¹¹ Age of male respondent at time of marriage/ initiation of cohabitation.
- ¹² Years of marriage/ cohabitation.
- ¹³ Indicator coded 1 if couple owns primary residence, 0 otherwise.
- ¹⁴ Time from marriage/ cohabitation to home acquisition. Calculation is for homeowners.
- ¹⁵ Estimated of home value for homeowners, coded into three ordered categories (high, middle, low) as reported by interviewer.
- ¹⁶ Indicator coded 1 if wife never employed since marriage, 0 otherwise.