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**INEQUALITY AND TEENAGERS' EDUCATIONAL  
ASPIRATIONS IN URBAN MEXICO**

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# INEQUALITY AND TEENAGERS' EDUCATIONAL ASPIRATIONS IN URBAN MEXICO

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## 1.-Introduction.

The goal of this paper is to assess in which way socioeconomic and other family characteristics affect youth's aspirations for education in urban Mexico<sup>4</sup>.

The theoretical approach, grounded in Sen's capabilities approach, incorporates recent developments in two strands of the literature: a) one that assesses the impact of economic mobility on individuals' aspirations and on the impact of aspirations on individuals behavior; and b) one that stresses the importance of agency, both, as a goal itself for human development and because its instrumental value for people to achieve whatever goals or values they regard as important .

What follows presents the theoretical approach and an empirical application to Mexico DF. The paper elaborates on the plausible impact of the findings for the intergenerational transmission of inequality in LAC countries.

## 2.-Theoretical approach

Amartya Sen's capability approach is a framework for the evaluation of individual welfare, as such can provide the theoretical basis for inequality, poverty, and policy analyses. The capability approach assesses people's welfare in terms of their functionings and capabilities, which are defined as an individual's actual and potential activities and states of being respectively. Kuklys (2004) presents this capability approach using the methodology and language used in standard welfare economics. In what follows we adapt his presentation to consider specific intergenerational human development issues, which are the goals of this paper. The following concepts and notations are the building blocks for the analysis.

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<sup>4</sup> As soon as data become available, the cases of Buenos Aires (Argentina) and Managua (Nicaragua) will be also analyzed.

$x \in X$	is a vector of commodities and $X$ is the set of all possible commodities
$c = c(x)$	is a vector of characteristics of commodities, where
$c$	$c$ is a function that maps commodities into the characteristics space
$b = f(c(x) / z_i, z_s, z_e)$	is a vector of activities and states of being (functionings), where
$f \in F$	$f$ is a conversion function that maps characteristics of commodities into the space of functionings, $F$ is the set of all possible conversion functions
$z_i, z_s, z_e$	are conversion factors at the individual (i), social (s) and environmental (e) level, which determine the rate of conversion from characteristics to functionings
$Q$	is the capability set comprising all potential functionings an individual can achieve

The evaluation of an individual's welfare involves the analysis of his/her capability set  $Q_i$ , which is defined over the different potential functionings  $b$  of individual  $i$

$$Q_i(X_i) = \{b_i / b_i = f_i[c(x_i) / z_i, z_s, z_e] \forall f_i \in F_i \text{ and } \forall x_i \in X_i\} \quad (1)$$

Of importance for our analysis is that the rate of conversion from characteristics to functionings are determined by the individual (i), social (s), and environmental (e) factors. We will return to the model once we develop the concepts of aspirations, agency and cognitive abilities.

### 2.1 Aspirations and capabilities

We base our analysis of aspirations in Ray and Genicot's (2009) and Ray (2006), where an aspirations-based approach to individual behavior is presented and its implications for the persistence of poverty are elaborated.

Their approach has three major components.

The first is the fact that individual aspirations are born in a social context; they do not exist in a vacuum. Individual desires and standards of behavior are often defined by experience and observation. Other individuals — their lifestyles, their social and political norms, and their economic well-being—serve to condition and determine the

goals and aspirations of any particular person. At the same time, for a given group of people (e.g., a family), aspirations are going to be influenced mainly by those other people that are broadly similar to them, or relevant to their experiences. This first component of the analysis (the social nature of aspirations and the way they are determined) is condensed into the idea of “aspirations window”.

The second component is related to the question of how (and if) aspirations affect individual behavior. It is posited that individual’s actions could be driven by the size of the difference between the current condition in a given dimension (e.g. socioeconomic status A) and the condition an individual might aspire to (e.g. to a higher socioeconomic status B,). This takes us to the notion of an “aspirations gap”, which, if too small or too large may be inimical to investment effort to better one’s own conditions. The former occurs because there is very little to aspire towards; the latter because there is too much and no reasonable effort the person could undertake could close the gap. Both conditions may be present in a society that is polarized, either economically or socially, but the failure to invest may manifest itself in different forms in each case: if there is little to aspire people can think of current conditions with an idea of fatalism or feel complacency (adaptive expectations), whereas if the aspirations gap is too big, this could lead to a feeling of frustration.

The third element is the assessment of how socio-economic conditions influence the aspirations window, and therefore aspirations. For instance, it could be the case that a more mobile society would elicit an increase in the level of effort by individuals that want to close an attainable aspiration gap.

These elements allow us to capture aspirations as an asset that people have which forms part of the conversion factor  $z_i$  in equation (1). In this line of reasoning, there could be a vicious circle by means of which, as Appaduri (2004) has put it, the poor may lack the aspirational resources to contest and alter the conditions of their own poverty. In this sense, poverty could be viewed, at least partially, both as a result of and a cause for an aspirations failure.

Two crucial questions of this framework are: how are aspirations formed and how they affect behavior (Ray and Genicot, 2009).

This paper addresses the first issue with data collected with a survey applied in Mexico DF during May and July 2009<sup>5</sup> and elaborates on its importance for the transmission of inequality in LAC countries.

## 2.2. Agency and capabilities<sup>6</sup>

Sen (1985) defines agency as what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important (p. 203). In his view, it constitutes a process freedom (Sen 1999). The other key concept in Sen's framework is that of opportunity freedoms or capabilities – “the various combinations of functionings (beings and doings) that the person can achieve” (Sen 1992, p. 40). The expansion of both types of freedoms – processes and opportunities – is the objective of development and therefore, of intrinsic value.

In terms of the implications of the concept of agency for development policies, it is worth noting that agency emerged in opposition to top-down approaches to development (Malhotra and Schuler, 2005, p. 73; Sen, 1999). Rather than designing policies to ‘target’ specific groups (the women, the poor, the ethnic minorities), whose members are implicitly seen as passive ‘inert’ recipients, the agency perspective considers individuals as able to bring about change in their lives through individual and/or collective activity (see Sen 1999).

Finally, it is worth remarking that agency and empowerment matter both intrinsically and instrumentally. Agency is considered to be an important *end* in itself; indeed, this understanding is pivotal to Sen's capability approach: “agency freedom is freedom to achieve whatever the person, as a responsible agent decides he or she should achieve” (Sen, 1985, p. 206). Instrumentally, agency matters because it has been hypothesized and many times confirmed, that it can serve as a *means* to other development outcomes. The agency of women for instance, has been shown to affect positively the wellbeing of all those around them (Sen 1999, p. 191).

Several distinctive features of agency are worth to mention: First, it is a multidimensional concept since it can be exercised in different domains. Second, it is a relational concept, since certain groups are empowered or disempowered in relation to others with whom they interact. Third, because it is relational, agency is a highly cultural concept.

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<sup>5</sup> This survey, as well as two others done in Buenos Aires (Argentina) and Managua (Nicaragua) was done for the Regional Report.

<sup>6</sup> The presentation in this subsection follows closely that of Samman and Santos (2009)

Until recently asset holdings were used as measures for agency. Several shortcomings for this proxy were identified in Alkire (2008), who also proposed new ways to measure agency in a more direct way. These direct measures of agency – as difficult as they may be to develop – seem the appropriate tool for evaluating and studying empowerment, and is the path we follow in this research.

The indicators of agency we use correspond to the Oxford Poverty and Human Development Initiative (OPHI)'s module on agency, which draws from the indicators originally proposed by Ibrahim and Alkire (2007) and subsequent revisions. A typology of questions was included in the surveys aiming at getting indicators for the following dimensions:

- a. power *over* concerned with the extent of control the respondent reports over personal decisions, establishing the extent to which the respondent's agency is constrained by local power relations and patriarchal social hierarchies
- b. power *to* concerned with the control and decision-making ability of respondents to take decisions (either alone or jointly), and further, whether or not they would be able to take decisions if they wanted to – in order to account for one's choice to *not* take decisions in a particular domain.

Following Ryan and Deci (2000) a person is defined to be autonomous *when his or her behavior is experienced as willingly enacted and when he or she fully endorses the actions in which he or she is engaged and/or the values expressed by them*. Within this self-determination theory framework, we use the indicators of agency described in *a* and *b* above to construct a Relative Autonomy Index (RAI) for adults in the family. A higher value of the index indicates a higher indication of parent's power *over* and power *to*<sup>7</sup>.

Going back to equation (1), agency could be thought as part of the conversion factors  $z_i$  and  $z_s$ : agency influences  $f$ , the conversion function that maps characteristics of commodities into the space of functionings.

### **2.3 Aspirations, agency, cognitive abilities and intergenerational issues**

The approach presented here tries to advance in our empirical knowledge on those things that although extremely important for people's capabilities are "difficult to

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<sup>7</sup> From the answers to how a particular decision (e.g., children schooling, household chores) was taken the following index was constructed:  $RAI = (-1)[\text{decision was taken as result of external pressure=1}] + (-1)[\text{decision was taken as result of external pressure=2}] + (-1)[\text{decision was taken as an introjected regulation}] + (3)[\text{decision was taken as result of an integrated and identified process}]$ . Full details are in (Samman et al., 2009)

see”. Two of these aspects were summarized above: aspirations and agency, and the third (cognitive abilities) will be introduced in a different paper. One can think of aspirations as an indicator of a person willingness to participate in society and advance in whatever goals he/she deems appropriate for his/her life. On the other hand, one can think of agency, as an indicator of what a person is able to achieve considering his/her circumstances. Since aspirations are socially formed, people’s connection with relatives, friends and colleagues are important part (albeit not the only one) of their capacity to aspire. The same goes for agency since it is also a relational issue.

Our theoretical model follows equation (1) where the intergenerational dimension is added explicitly: the household generates welfare from market-goods that can be bought as well as from non-market goods that are produced at home. From this model we can produce derived demands for market-goods (e.g., food and clothing) and from non-market goods, such as different dimensions of children wellbeing<sup>8</sup>. For non-market goods such as children’s health status, cognitive abilities, aspirations and agency, this function takes the following expression:

$$H^* = H[P, y_m, y_f, u_m, u_f, \varepsilon_m, \varepsilon_f, \theta, \gamma(z_i, z_s, z_e)] \quad (2)$$

Where, P is a vector of prices including leisure,  $y_m$  and  $y_f$  are total income for mother and father, respectively,  $u_m$  and  $u_f$  are parents’ observable characteristics, such as age and schooling years;  $\varepsilon_m$  and  $\varepsilon_f$  denote non-observed parents characteristics, such as tastes. Biological factors than could influence  $H^*$  such as children’s age and sex are capture in the vector  $\theta$ .  $\gamma(z_i, z_s, z_e)$  is the *conversion function* which in turn is determined by vectors of personal ( $z_i$ ), societal ( $z_s$ ), and environmental ( $z_e$ ) factors that affect the conversion of available resources into outcomes. Personal factors  $z_i$  include parents’ agency, cognitive abilities and aspirations for themselves. Societal factors  $z_s$  includes population density and legal regulations, whereas  $z_e$  includes climate, proximity to rivers, and environmental pollution. This *conversion function* can be thought as a meta-capability since involves the knowledge of outside world as well as the subjective interpretation of how reachable are the resources available, (i.e., the perception about restrictions for resources be actually used by the individuals) and how useful are they for the production of a particular chosen functioning (e.g. a level for a non-market good such as children’s health, their cognitive abilities, agency, or aspirations).

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<sup>8</sup> The full model, based in part on Kuklys (2008) is developed in the Annex 1.

In terms of intergenerational issues, it should be clear that most (or all) components of  $H^*$  are not under children's control. In terms of Roemer (1998) approach, the right hand side of equation (1) are children's "circumstances", for which children's are not responsible for<sup>9</sup>. Following Kuklys formalization of Sen's Capability Approach, equation (2) explicitly takes into account parent's capability set which is influenced by the transformation function.

This paper's main contribution is the empirical application of equation (2) to assess determinants of intergenerational issues. In particular, we want to evaluate the relative importance of several parents' and households' characteristics on certain teenagers' functionings. To assess the importance of the transformation function in producing the actual functionings we observe in their children (such as agency, aspirations, and cognitive ability), we explicitly take into account several parents' indicators for agency, aspirations and cognitive ability, besides all the other indicators usually taken into consideration for this type of analysis such as access to services, level of durable goods, and household demographics. The next section presents main results for the case of urban Mexico. Results for Buenos Aires (Argentina) and for Managua (Nicaragua) will be developed in subsequent papers.

### **3.-Empirical applications**

#### **3.1 The data**

We concentrate in this paper on teenagers' educational aspirations which are thought to depend on teenagers' own variables (sex, age, ethnicity), on family background variables (its demographic composition, its socioeconomic status, and household's location), on parents indicators (schooling, sex, race) and on parent's aspirations and agency<sup>10</sup>.

The data gathered for the study contains information for a representative sample for three socioeconomic status (medium low, medium, and medium high) for urban areas of Mexico DF<sup>11</sup>. In each sampled household, one teenager and one of his/her parent were selected at random<sup>12</sup>. Two set of questionnaires were applied, one to the

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<sup>9</sup> See Annex 2 for a more thorough explanation of this point.

<sup>10</sup> A companion paper done by OPHI covers the issue of agency at length (Samman et al., 2009).

<sup>11</sup> A more thorough description of the survey and sampling procedures are presented in [www.lacregionallhdr2009.org](http://www.lacregionallhdr2009.org)

<sup>12</sup> A stratified sampling was done to select households. Once a household with one or more child in the 12-18 years old segment was identified, a lottery (closeness of their birth dates to the date of interview)



parent and a different one to the adolescent. The questionnaire for the parent contained questions regarding to household composition in terms of members, their age and schooling levels, as well as on occupation and household's income. Importantly, the survey contained also a module on parent's several agency (empowerment) indicators and a module on parent's educational aspirations for their children<sup>13</sup>. Similar modules on agency and aspirations were applied also to the youngsters. The survey was applied to 1378 households<sup>14</sup>. Table 1 presents descriptive statistics for the sample. 53% of the teenagers in the sample are males. On average they are almost 15 years old (with a standard deviation of .5 years), and with an almost negligible participation of people with an ethnic origin<sup>15</sup>. The average number of other young persons in the households was 0.86 for the 0-12 years old bracket, 0.66 for the 13-15 years old bracket and 0.62 for the 16-18 years old brackets. As for schooling levels, about 19% of the teenagers in the sample were at Primary School, 51% at Secondary School, 28% at Preparatory School and only 1% already attending College. At time of the survey, about 76% of the youngsters were living with both parents, the rest were living either with only one of his/her parent (usually his/her mother) or in a foster family. As indicated above, the sampling of households was done following a stratification according to their socioeconomic status: in the sample, 54% corresponded to "low" socioeconomic level (SES1 from now on), 34% to "medium" (SES2 from now on) and 12% to "high" socioeconomic level (SES3 from now on)<sup>16</sup>.

Parent's schooling was concentrated in the Secondary (31%) and Preparatory (22%) levels, with lower participation of Primary level (18%), and College level (11%). A small percentage of parents (3%) reached post-graduate studies. At the time of the survey, 61% of parents had an outside job, whereas, about 32% indicated to have been living in a different State and 26% to have been living in a different municipality than that of their current residence at age 12. 64% of parents interviewed were female of which about 53% of them had an outside job, whereas for the 36% male parents, about

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was followed to select which parent to interview and a similar lottery was applied to select which of the children between 12 and 18 years old were going to be interviewed.

<sup>13</sup> The survey design was a joint effort of OPHI's team, D.Ray and G. Genicot and UNDP's LAC-Regional Report Team. The implementation of the survey was done by the Regional Report Team.

<sup>14</sup> Since there were some cases with missing data for some variables, the number of observations could vary depending on the particular set of variables used in the application.

<sup>15</sup> Following Mexican Census approach, this definition is related to whether the child speaks an indigenous language or not.

<sup>16</sup> This variable summarizes household's access to public services and ownership of different set of durable good.

93% had an outside job. Proportions of sex combinations between parents and children were as follows: mother-daughter 32% of cases, mother-son 33%, father-daughter 15%, father-son 21%

As indicated, the survey also contained information on parents' agency and on parents' schooling aspirations for their youngsters. Agency was constructed following a factor analysis that combines Relative Autonomy Indexes for three dimensions: the parent interviewed has autonomy in deciding his/her role in the house (housekeeping or an outside job), in calling shopping decisions in the household and on children's schooling decisions. The Autonomy index so defined shows a minimum of -3.4 and a maximum of 0.5 with average level of 0.12 for SES3, and -0.01 for SES1 and SES2. Regarding schooling levels aspirations, Table 1 shows that these were concentrated at the College level (65% of parents aspiring this level for their kids), whereas 17% aspired a Technical Career and about 10% a schooling level above College (*posgrados*). Smaller percentage of parents aspired a Preparatory school level (6%) and an even smaller percentage a High school level (2%). Parents were also asked to rate from 1 to 10 whether they think the kid will accomplish this aspired level: the score was about 8.4 on average with a standard deviation of 1.5.

Finally, as we wanted to assess each family's "aspirations window" and how they are formed, an important part of the questionnaire aimed at assessing households' interactions in different dimensions: with relatives, with friends and with work-related colleagues. For each of these dimensions, parents were asked about the schooling and income level that prevail in those groups of people with whom they maintain frequent relationships. To make easier the presentation, Table 1 shows constructed indicators using these dimensions. For each household interviewed, a dummy was constructed that indicates which schooling level prevailed in parent's family, friends, and colleagues: equal or more than Secondary, equal or more than Preparatory, equal or more than Colleague, and equal or more than Post-graduate studies<sup>17</sup>. The average patterns for family and for friends are fairly similar (high concentration in more than Secondary schooling, lower in more than Preparatory). For colleagues, the pattern is different, showing lower levels of interaction with colleagues due to the fact that a high proportion of women interviewed did not have an outside job.

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<sup>17</sup> Similar indicators were constructed for income levels, although these were not used in this version of the paper.

### 3.2. Results

We run several specifications of the following general equation:

$$\begin{aligned}
 \text{Aspiration}_{ch} = & \gamma_0 + \gamma_1 \text{Sex}_{ch} + \gamma_2 \text{Age}_{ch} + \gamma_3 \text{Eth}_{ch} + \sum_i \alpha_i \text{Schooling}_{ch_i} + \\
 & \sum_j \beta_j \text{HHchar}_j + \omega_1 \text{sexo}_{par} + \omega_2 \text{edad}_{par} + \sum_i \delta_i \text{Schooling}_{par_i} + \\
 & \sum_l \eta_l \text{Other}_{par_l} + \sigma_1 \text{Autnomy}_{par} + \sum_m \lambda_m \text{Aspirat}_{par_m} + \\
 & \sum_n \rho_n \text{Relatives}_{schooling}_n + \sum_n \pi_n \text{Friends}_{schooling}_n + \sum_n \tau_n \text{Colleagues}_{schooling}_n + \varepsilon
 \end{aligned}$$

Were “*\_ch*” at the end of the variable indicates children’s variables, and “*\_par*” those for his/her parent. *Schooling<sub>ch<sub>i</sub></sub>* and *Schooling<sub>par<sub>i</sub></sub>* are dummy variables that take value 1 if the child is attending (or parent reached) the “*i*” level at school, which goes from No schooling (“*i*”=1) up to College (“*i*”=6)<sup>18</sup>.

Table 2 presents main results from the regressions. Results were notably robust to changes in specifications. Teenagers aspirations were positively influenced by his/her schooling level only if she/he is already in Preparatory school. From the teenagers’ specific variables (θ set of variables in equation (2)) his/her age (negative) and being at the Preparatory level (positive) were statistically significant. From the six household-specific variables, the number of young people in the household impacted positively on teenager’s aspiration while the composition of the household (both parents present) impacted negatively. Regarding the socioeconomic status, measured here as a weighted combination of household’s access to services and household’s durables goods (SES), its impact showed to be always statistically significant, indicating an increasing level of teenager’s aspirations at increasing levels of socioeconomic status. Household’s location was captured here by a dummy variable indicating if the family was living in Mexico DF and not in the neighbor *Estado de Mexico*: its impact was positive and significant, perhaps indicating the better (relative) overall living conditions in DF. Parent’s schooling showed to have a positive impact on teenager’s schooling aspirations, with a strong positive impact of education from parents with post-college

<sup>18</sup> “*i*”=1 for no schooling, 2 for Primary, 3 for Secondary, 4 for Preparatory, 5 for Technical School, 6 for Colleague, and 7 for Post-graduate studies.

degrees and a strong negative one from parents with no schooling. After controlling for several other variables, the fact that the parent has an outside job showed to have (in the majority of the applications) no impact on teenager's schooling aspirations.

Regression 2 shows results when we introduce a measure for parent's agency. This variable resulted with a positive sign, but while all the other variables remained of similar importance, its significance faded away when other variables were included in the model (in particular, when the proxy for social capital variable was introduced). This suggests collinearity indicating that the degree of autonomy is related to certain dimensions of social capital.

Regression 3 shows the impact on teenager's schooling aspirations coming from parent's aspirations for them. Results were always statistically significant for these variables, and the size of the impact of parents aspiring a post-graduate degree for their kids were about twice the size of the impact of parent's aspiring a colleague degree for them<sup>19</sup>.

Regressions 4 to 6 show results after including the set of social capital variables, which reflect schooling levels for groups of people with whom parents maintain a relationship. Following regression 4, having relationships with relatives with a schooling level equal or more than Secondary level affects positively teenager's aspirations relative to the base category that are relationships with relatives with less than Secondary schooling. Interestingly, it was found a negative impact in those cases where the family is not maintaining frequent relationships with relatives. The main change with the rest of the variables already included in the previous regression is that the indicator for Agency loses its significance, indicating a correlation between these variables. Regression 5 includes only the social capital indicator for friends, and none of them resulted statistically significant, whereas regression 6 includes only the social capital indicator for colleagues, resulting the category "no relationship" a positive influence in teenager's aspirations for schooling, as it seems to be the case for those parents interacting with colleagues that have at least Preparatory.

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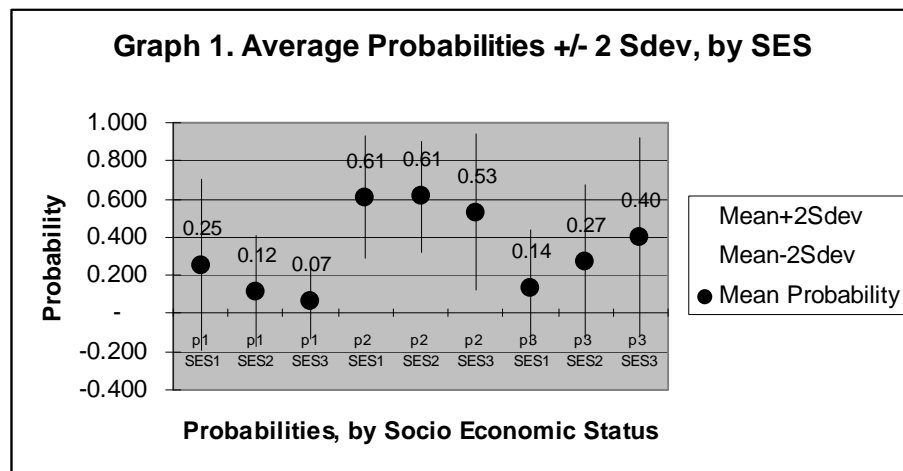
<sup>19</sup> The issue of endogeneity of parents' aspirations is important here. Since parent's assessment (and aspirations) about children's prospects for, say, being successful at College, could be influenced by children's own assessment and aspirations for his/her future, it is not clear that parent's aspirations is an exogenous variable. In the next version of the paper we will instrument this variable.

It is noticeable that coefficients for SES2 and SES3 become closer in magnitude when some social capital variables are included in the regression. It looks like, at least in term of aspirations, some relationships are acting as “bridging” social capital.

Results remain similar when all social capital variables are included together (regression 7).

One way of summarizing our results is presented in Graph 1 that shows by Socioeconomic status (SES) the mean probability in the sample for teenager’s aspirations “less than College” (p1), “College” (p2) and “more than College” (p3). The picture is clear:

- a) Mean probability for teenagers aspiring “less than College” is higher for families belonging to SES1 (0.70) and decreasing for SES2 (0.41) and SES3 (0.07)
- b) Mean probability for teenagers aspiring “College” is more or less the same for SES1 and SES2 (about 0.61), and lower for SES3 (0.53)
- c) Mean probability for teenagers aspiring “more than College” is a lot lower for SES1 (0.14), than for SES2 (0.27) and for SES3 (0.40)



Note: p1 is the probability of aspiring “less than College”, p2 is the probability of aspiring “College”; and p3 is the probability of aspiring “more than College” (p3). SES refers to household’s socioeconomic status: 1 is “low”, 2 is “medium-low”, and 3 is “medium-high”.

In terms of our discussion on equality of opportunity, this graph clearly shows that schooling aspirations are not evenly distributed in society.

Moreover, our empirical application shows that teenagers' aspirations depend on circumstances that are unevenly distributed in society (like SES, for instance) and for which they have null control. Some of them are relatively easy to observe: parents' schooling level, sex and labor market participation, households' demographic characteristics, and households' access to services and ownership of durables goods. Others are more difficult to observe. Nonetheless, with proxy indicators for some of them, we found here that they have a significant positive impact on children's own schooling aspirations: parents' agency (in some specifications), parents' own aspirations for their kids (in all of them), and also some characteristics of parents' connections with the outside world (schooling levels of relatives, friends and colleagues).

#### **4.- Conclusions**

The goal of this paper was to assess the ways in which socioeconomic and other family characteristics affect youth's aspirations for education in urban Mexico, an analysis that will be later extended for the cases of Buenos Aires (Argentina) and Managua (Nicaragua).

The theoretical approach is based on recent developments in the economic literature that assess the impact of economic mobility on individuals' aspirations and on the impact of aspirations on individuals' behavior. In this literature, aspirations are considered as assets people have. The literature stresses two key aspects of aspirations: a) Do they matter for people's actions? b) How are they formed?). We have tackled in this paper the second aspect. Although we leave the first issue for further research, there exists ample evidence that aspirations are important drivers for individuals' decisions.

We developed a theoretical model based on Kuklys (2004) to derive reduced demand equations for children's aspirations on expected schooling levels.

Results showed an unequal distribution of schooling aspirations in urban Mexico. Moreover, teenagers' aspirations depend on circumstances, like SES, that are unevenly distributed in society and for which they have null or little control. Some of them are relatively easy to observe: parents' schooling level, sex and labor market

participation, households' demographic characteristics, and households' access to services and ownership of durables goods. Others are more difficult to observe and specific surveys are needed in order to have some proxy indicators of them.

Nonetheless, it was found here that they also have a significant impact on children's schooling aspirations: parents' agency, parents' own aspirations for their kids, and some characteristics of parents' connections with the outside world (proxied here by schooling levels of relatives, friends and colleagues).

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Table 1- Descriptive Statistics (weighted sample)

<b>A.-Teenager's characteristics</b>					
<i>Teenager's schooling aspiration</i>					
	#	mean	std.dev	min	max
Schooling level (<College=1, College=2, >College=3)	1,368	2.0	0.63	1	3
% aspiring less than College	1,368	18.8			
% aspiring College	1,368	59.7			
% aspiring Post-graduate studies	1,368	21.5			
Child is a male, %	1,378	0.53	0.50	0	1
Age, in years	1,378	14.9	1.97	12	18
Ethnicity, as %	1,378	0.01	0.10	0	1
<i>Schooling level</i>					
No schooling	1,374	0.01	0.08	0	1
Up to Primary	1,374	0.19	0.39	0	1
Up to Preparatory	1,374	0.51	0.50	0	1
Up to Technical School	1,374	0.28	0.45	0	1
Up to College	1,374	0.01	0.12	0	1
<b>B.-Household Characteristics</b>					
# 0-12 years old in the household, average	1,378	0.86	1.02	0	5
# 13-15 years old in the household, average	1,378	0.66	0.57	0	3
# 16-18 years old in the household, average	1,378	0.62	0.64	0	2
Household is bi-parental, %	1,378	0.76	0.43	0	1
<i>SocioEconomic Status 1, %</i>	1,378	0.54	0.50	0	1
<i>SocioEconomic Status 2, %</i>	1,378	0.34	0.47	0	1
<i>SocioEconomic Status 3, %</i>	1,378	0.12	0.33	0	1
Household is located in DF, %	1,378	0.55	0.50	0	1

Table 1- Descriptive Statistics (cont.)

<b>C.-Parent's characteristics</b>					
	#	mean	std.dev	min	Max
No schooling	1,378	0.03	0.16	0	1
Primary	1,378	0.18	0.39	0	1
Secondary	1,378	0.31	0.46	0	1
Preparatory	1,378	0.22	0.41	0	1
Technical School	1,378	0.12	0.33	0	1
College	1,378	0.11	0.32	0	1
Post-College	1,378	0.03	0.16	0	1
Parent has an outside HH job	1,378	0.61	0.49	0	1
At 12 years old, parent lived in different State	1,356	0.32	0.47	0	1
At 12 years old, parent lived in different Municipality	1,356	0.25	0.43	0	1
Parent is a male	1,378	0.36	0.48	0	1
Parent's degree of autonomy (Relative Autonomy Index)	1,331	0.00	0.71	-3.4	0.5
<i>Parent's aspirations for the child</i>					
Parent aspires Secondary School	1,345	0.02	0.14	0	1
Parent aspires Preparatory School	1,345	0.06	0.23	0	1
Parent aspires a Technical degree	1,345	0.17	0.38	0	1
Parent aspires a College degree	1,345	0.65	0.48	0	1
Parent aspires a Post_ College degree	1,345	0.10	0.29	0	1
Average score of parent's assessment of child likely success, 1 to 10 scale	1,354	8.38	1.54	1	10

### D.-Household relationships

<i>Relatives</i>					
relatives more than Secondary, %	1,343	0.82	0.38	0	1
relatives more than Preparatory, %	1,343	0.44	0.50	0	1
relatives more than professional, %	1,343	0.13	0.34	0	1
no interaction with relatives, %	1,343	0.01	0.12	0	1
<i>Friends</i>					
friends more than Secondary, %	1,265	0.84	0.37	0	1
friends more than Preparatory, %	1,265	0.50	0.50	0	1
friends more than professional, %	1,265	0.17	0.38	0	1
no interaction with friends, %	1,265	0.02	0.15	0	1
Table 1- Descriptive Statistics (final)	<b>#</b>	<b>mean</b>	<b>std.dev</b>	<b>min</b>	<b>Max</b>
colleagues more than Secondary, %	1,334	0.45	0.50	0	1
colleagues more than Preparatory, %	1,334	0.26	0.44	0	1
colleagues more than professional, %	1,334	0.10	0.30	0	1
no interaction with colleagues, %	1,334	0.39	0.49	0	1



Table 2- Regressions results

Variables	Reg.1	Reg.2	Reg.3	Reg.4	Reg.5	Reg.6	Reg.7
<b>Teenager's characteristics</b>							
Sex	0.179***	-0.141**	-0.0247	-0.0496	0.00704	-0.0194	-0.0562
Age	0.108***	0.128***	0.0779***	0.0805***	0.0896***	0.0919***	0.0738**
Ethnicity	0.478	0.469	0.134	0.0959	0.0842	0.139	0.150
<i>Schooling level (base is Secondary School)</i>							
No schooling	0.780*	0.755*	0.789*	0.717	0.733	0.866*	0.766
Up to Primary	0.00205	-0.0598	0.0412	0.0105	0.0678	0.0471	0.0791
Up to Preparatory	0.242**	0.281***	0.333***	0.291***	0.346***	0.350***	0.313***
Up to Technical School	-0.128	-0.208	-0.194	-0.225	-0.214	-0.123	-0.0604
Up to College	0.0852	0.0947	-0.237	-0.348	-0.267	-0.112	-0.198
<b>Household Characteristics</b>							
# 0-12 years old in the household	-0.0628*	0.0780**	-0.0736**	-0.0463	-0.0849**	-0.0607	-0.0466
# 13-15 years old in the household	0.254***	0.235***	0.247***	0.280***	0.266***	0.291***	0.292***
# 16-18 years old in the household	0.222***	0.242***	0.213***	0.261***	0.219***	0.280***	0.247***
Household is bi-parental	-0.204**	-0.212**	-0.383***	-0.355***	-0.415***	-0.388***	0.418***
<i>SocioEconomic Status (base: SES 1)</i>							
SES 2	0.486***	0.511***	0.544***	0.503***	0.489***	0.536***	0.448***
SES 3	0.681***	0.696***	0.605***	0.603***	0.607***	0.553***	0.564***
Household is located in DF	0.286***	0.245***	0.263***	0.268***	0.314***	0.285***	0.276***

Table 2- Regressions results (cont.)

Variables	Reg.1	Reg.2	Reg.3	Reg.4	Reg.5	Reg.6	Reg.7
<b>Parent's characteristics</b>							
<i>Parent's schooling level (base: Secondary School)</i>							
No schooling	-1.39***	-1.38***	-1.13***	-0.956***	-0.877***	-0.991***	-1.05***
Up to Primary	0.0648	0.0287	0.113	0.114	0.145	0.0115	0.0813
Up to Preparatory	-0.0671	-0.126	-0.155	-0.162	-0.118	-0.144	-0.0762
Up to Technical School	0.659***	0.575***	0.474***	0.461***	0.483***	0.389***	0.390***
Up to College	0.215*	0.148	0.0774	0.0592	0.176	-0.0342	0.0539
Up to Post-Colleague	0.929***	0.840***	0.929***	0.868***	1.039***	0.876***	0.947***
Parent has an outside HH job	-0.142*	-0.180**	-0.139	-0.142	-0.240**	0.261*	0.230
At 12 years old, parent lived in different State	-0.0814	-0.0695	-0.0196	-0.0156	0.0385	0.0588	0.0850
At 12 years old, parent lived in different Municipality	-0.194**	-0.216**	-0.249***	-0.255***	-0.288***	-0.203**	-0.232**
Parent's sex	0.0939	0.134	0.188**	0.165*	0.226**	0.238**	0.235**
Parent degree of autonomy (Relative Autonomy Index)		0.155***	0.0941*	0.0764	0.106**	0.0788	0.0815
<i>Parent's aspirations for the child (base is "less than College")</i>							
Parent aspires a College degree for the child			1.038***	1.055***	0.964***	0.963***	0.968***
Parent aspires a Post College degree for the child			1.922***	2.026***	1.889***	1.808***	1.898***
<b>Household relationships (frequency)</b>							
relatives more than Secondary				0.385***			0.493***
relatives more than Preparatory				-0.171*			-0.126
relatives more than Professional				0.156			0.103
no interaction with relatives				-0.780**			1.651***
friends more than Secondary					-0.148		-0.234*
friends more than Preparatory					0.0566		0.0500
friends more than Professional					-0.138		-0.148
no interaction with friends					-0.333		0.629
colleagues more than Secondary						-0.262**	-0.308**
colleagues more than Preparatory						0.314**	0.282**
colleagues more than Professional						0.173	0.231
no interaction with colleagues						0.447***	0.474**

Table 2- Regressions results (final)

Variables	<b>Reg.1</b>	<b>Reg.2</b>	<b>Reg.3</b>	<b>Reg.4</b>	<b>Reg.5</b>	<b>Reg.6</b>	<b>Reg.7</b>
Cutting point 1	2.172***	2.549***	-1.072**	-0.819*	-1.416***	-0.845*	-0.516
Cutting point 2	-0.252	-0.606	1.123**	1.392***	0.772		1.748***
# Observations	1344	1299	1270	1240	1170	1234	1151