

**CHILDREN'S EDUCATIONAL
OUTCOMES UNDER ADVERSE
LABOR MARKET CONDITIONS:
EVIDENCE FROM THE WEST BANK
AND GAZA**

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1. Introduction

In this paper we examine the educational outcomes of adult offspring according to gender in the West Bank and Gaza Strip. The question we address is: what is relative magnitude of family background and family assets on the educational outcomes of children? Acquiring education is often considered as the main way through which individuals can improve their economic and social status. Numerous studies document the association between family background, parental schooling and the schooling of children (Chase-Lansdale and Brooks-Gunn, 1996; Behrman, & Knowles 1998; Behrman and Knowles, 1999; Evans and Fuller, 1999; Shea, 2000). Family background variables are commonly captured by parent's education and occupation. Their effect is mediated through parenting skills, parent's abilities and social networking. On the other hand, parental income is commonly believed to be strongly correlated with children's educational outcomes because having more resources increases the ability to purchase educational goods or to bring a measure of stability to the parental environment. Many studies find that long-term parental characteristics are more important than the effect of short-term variables such as household income as determinants of children's educational attainment but that the impact varies according to child's gender. For example, Rosenzweig and Schultz (1982) find that parents invest more in children who are more likely to be economically productive adults and gender turns out to be an important variable in the family decision calculus leading parents to favor investment in male offspring more than female. Cameron and Heckman (1998) estimate an ordered probit model and find that long-term family characteristics are far more important than current family income (when the child is 16 years old) in determining educational outcomes. In a subsequent study, Cameron and Heckman (1999) find that family income plays a significant role in high school completion while it has a reduced effect on college attendance. Blau (1999) finds that family background characteristics play a more important role than family income in determining children's cognitive development. Bratti (2002) finds that current family income has a significantly positive impact on children's education, but that the long-term family characteristics are far more important.

The empirical findings in the mostly advanced countries beg the question about the impact of family background variables on the educational outcomes of Palestinian children. Because of political conditions, Palestinian households have lived for decades under a highly unstable and stressful economic environment. Under these circumstances, the sustenance of education - and, more so, of the higher education of the young generations - emerges as a highly burdensome undertaking (Rosenfeld, 2002). Yet, available literature indicates that Palestinians have traditionally placed a high value on education and taken advantage of all opportunities to secure it for themselves and for their families (Abu-Lughod, 1973). For the uprooted, displaced and dispossessed, education is

a portable, transferable commodity, and as it happens, one of special value to less well-endowed Palestinians (Davies, 1979). Some literature even attributed Palestinian's high level of educational achievement to the role of education as a means of survival. Nonetheless, there is evidence suggesting that children of relatively better-off Palestinian families are more educated than children from poor families (Badran, 1980).

Utilizing household-level data from the West Bank and Gaza, this paper addresses the potential impact of parental education and family background on the educational outcomes of Palestinian children who are 23 years of age or older. Specifically, the paper addresses the following issues:

1. Do educated parents invest more in the education of their offspring relative to less educated parents?
2. Are children of the working Palestinian class deficient? That is, less educated than children whose parents are involved in professional and managerial positions?
3. What is the relative impact of economic conditions on the educational outcomes of children?

In view of recent literature, which suggests that female education is more important than male education for social outcomes such as fertility, child health, and infant mortality (Schultz, 1993; Beutel and Axinn, 2002; Kingdon, 2002), the paper derives separate estimates of the educational attainments by gender. In the process, we distinguish between refugee and non-refugee Palestinians in the West Bank and Gaza Strip. In 1995, 40 percent of the Palestinian populations in the Occupied Territories are UNRWA refugees. Gaza especially experienced a mass influx of refugees from the coastal regions south of Jaffa following the 1948 war. The rest were settled in refugee camps and in scattered townships and villages (Pederson, 2001).

There are somewhat unusual aspects of the Palestinian population and family structure that make the current investigation intriguing. Specifically, Palestinians are documented to have high fertility and large families; factors that increase the cost of educating children. On the other hand, the West Bank and Gaza economy generally lacks viable physical investment opportunities at normal risks that are observed in other economies. While real estate and housing are viable, political considerations greatly discount their attractiveness. Moreover, Palestinians encounter idiosyncratic shocks and their youth have often been unable to find employment to meet their high level of education (UN, 2002). Some Palestinians opted to migrate to other parts of the world, particularly to the GCC countries in order to capture the economic returns to their education. Others remained in the Territories and sought semi and unskilled jobs in the Israeli labor market (Olmstead, 1994). Despite political and economic anomalies, Angrist (1995)

demonstrated that Palestinians over-invested in education during the 1980s and early 1990s, which diminished the rates of returns to their educational investments. However, subsequent work illustrated that the advent of the Palestinian National Authority accompanied by fresh doses of private sector investment elevated the demand for skilled workers and improved the returns to education (Sayre, 2001).

This paper is organized in four sections. Section 2 introduces the data and main variables and discusses the estimation method. Section 3 presents the empirical findings and assesses the relative magnitude of family background and living conditions on children's educational outcomes. The last section offers a summary of salient findings and highlights their policy implications.

2. Data, variables and method

The data source for this research is the 1995 demographic Survey of the Occupied Palestinian Territories carried out by the Palestinian Central Bureau of Statistics (PCBS) together with Norwegian Fafo Institute for Applied Social Science. The survey covered about 110,500 individuals who are members of approximately 15,000 households. The households interviewed were selected through a probability sample, so the results are representative of the West Bank and Gaza Strip (Pederson 2001). Data on the age, gender and educational status of children were collected along with information on family demographics, parent's education and labor market engagement. The survey also provided information on occupations of individuals. While not reporting household income directly, the survey provided information on family ownership of assets that we utilize to proxy for potential differentials in the standards of living among Palestinian households. These include household's ownership of private cars, availability of telephone services and whether the family's dwelling is connected to the electricity grid or not. Similar to the approach by Stokk (2001), we construct an index of 7 household amenities; ownership of color television, video, refrigerator, cooking stove, washing machine flush toilet and connection to piped water. The family is scored on a scale of zero to seven depending on the number of amenities it has. Available space is also included by utilizing information on the number of rooms in the dwelling to generate categorical measures of physical crowdedness (i.e. number of persons per room of the family dwelling). The demographic survey also avails information on the refugee status of all members of households. The information is used here in order to test the hypothesis that children's educational outcomes vary according to the refugee status of families.

For the purposes of analyzing the determinants of educational attainment, we censor the sample to adults aged 23 years or older and who are not currently enrolled in schools. The problem with censoring is that it may introduce sample selection bias, since children who are censored are also likely to be those who

will receive the most education. One way of dealing with the potential sample selection is limiting the sample such that only observations that cannot be censored are used in the estimation. The underlying idea is that children aged 23 years or older cannot be censored, because the maximum education (16 years), will have been obtained at that age since schooling in the West Bank and Gaza begins at 7 ($23=7+16$). Similarly, if we consider the possibility of receiving 15 years of education, all children more than 22 years of age will not be censored. Since the selection of the sample is based on an exogenous variable, age, this method will not give rise to sample selection bias (Ejrnaes and Portner, 2002). However, simulations were also conducted by applying the method, explained below, to reduced cut-off points for child's age, 18 to 21; but results remained essentially similar to those reported here.

Methodologically, our strategy is to apply an ordered probit model that has the following specification (Greene, 2000):

$$S_i^* = \beta' \mathbf{x}_i + \varepsilon_i, \varepsilon_i \sim N[0, 1], \quad (1)$$

$$S_1 = 0 \text{ if } s \leq \mu_0,$$

$$1 \text{ if } \mu_0 < s \leq \mu_1,$$

$$2 \text{ if } \mu_1 < s \leq \mu_2,$$

$$\dots$$

$$J \text{ if } s > \mu_{j-1}.$$

Where s_i is an index of the 'propensity' for schooling and in place of the index, four ordered levels of education are observed: elementary or less, primary or intermediate graduates, secondary graduates, and university graduates. These characterize the levels of schooling in the data and the last three represent graduation points in the education system. The vector β is to be estimated and ε_i is a random error term that is assumed to be normally distributed across observations. The observed counterpart to s_i^* is s_i and the μ s are free parameters that merely provide the ranking of educational levels.

An advantage of the ordered probit is that it takes into account the ordering information in the schooling level variable. The observed schooling level is related to the latent schooling variable as follows:

$$s_i = \left\{ \begin{array}{l} 1 ? \quad 0 < s^* \leq \mu_1 \text{ (Elementary or less)} \\ 2 ? \quad \mu_1 < s^* \leq \mu_2 \text{ (Intermediate- graduates)} \\ 3 ? \quad \mu_2 < s^* \leq \mu_3 \text{ (Secondary - graduates)} \\ 4 ? \quad \mu_3 \leq s^* \text{ (University - graduates)} \end{array} \right\} \quad (2)$$

$$Prob[s = 3] = \Phi(\mu_3 - z'\beta) - \Phi(\mu_2 - z'\beta)$$

$$Prob[s = 4] = 1 - \Phi(\mu_3 - z'\beta)$$

The thresholds parameters, μ 's, are estimated along with the parameter vector β . The objective is to compute predicted probabilities of the four educational outcomes and also changes in predicted probabilities that would be implied by changes in the independent variables.

The main variables included in the vector x are: (i) age and age squared which may represent time trend in educational attainment. It is expected that older household members have relatively less education than younger members; (ii) child's age, gender birth order, number of children along with the number of adults in the family, sex and age of household head; (iii) parental education measured in four educational attainments; (iv) dummy variables for parental occupation status, and; (v) dummies capturing variations in the familial standards of living; and (vi) region dummies indicating the region in which most education was obtained.

Parental occupations are measured in eight dummy variables: workers in elementary and unskilled occupations (base category), workers in legal and managerial jobs, professionals, clerks, service/sales workers skilled agricultural workers and crafts and related workers. Regional dummies are included in order to capture the demand impact of potential variations in school availability or accessibility.

Recent literature suggests that children's educational outcomes may also depend on religious background in several distinct ways. One possibility is that growing up in a household with a particular religious affiliation may impart certain habits and aid in skill development and human capital acquisition leading to higher earnings later in life. Alternatively, the religious affiliation may promote certain traits, such as discipline, ambition, and responsibility that increase adult labor supply. To the extent that such values are associated with family background, they are likely to be transmitted to children (Cornwell, Tinsley & Warren, 2000). Following the literature, we include a dummy variable to gauge the religious conscription of the Palestinian family (Moslem or Christian). Notice however, that Palestinian Christians represent approximately four percent only of all households that were sampled in the demographic survey.

In our analysis below, we derive expected education probabilities conditional on family and personal traits. Since the dependent variable has four categories, the predicted probabilities of having different education levels can be derived as follows:

$$\left. \begin{cases} Prob[s = 1] = \Phi(-z'\beta) \\ Prob[s = 2] = \Phi(\mu_2 - z'\beta) - \Phi(-z'\beta) \end{cases} \right\} \quad (3)$$

Where Φ is the cumulative normal distribution function such that the probabilities sum to one. The parameter vector β and the cut-points are obtained by maximum likelihood estimation.

3. Empirical Findings

Recalling that our sample is restricted to cohorts in the age groups 23 years or older who are not currently enrolled, our estimates reveal the following. First, the variables capturing age and its squared term suggest that the peak in the sample occurs around the age of 31 for males and 27 for female offspring. Second, the increasing age of household head contributes to better educational outcomes of children. Since we have controlled for birth order, this age effect largely represents experience both in household production activities (better care for child's education), as well as possibly in income earnings activities outside the home. Third, there is a clear gender divide in educational attainment as gleaned from the sign of the dummy variable connoting child's gender. While pooling data for boys and girls, we are interested in testing whether parents have different preference for and impact on the education of children along the gender line. In the pooled model, the estimated impact of the gender dummy is significant at the one percent level, suggesting that families invest less in girls even after standardizing for household characteristics. Therefore, we estimate separate ordered probit models for male and female children and the appropriate Hausman's test of the equality of the set of coefficients rejected pooling male and female regressions ($\chi^2_{50, 5786} = 2043$).

As shown in Table (1), the findings indicate that although refugees experienced severe social and economic disruptions, they succeeded in adapting and in schooling their children. Male children of refugee parents have marginally higher average years of schooling (10.7) relative to non-refugee children (10.5). Female refugee children are also slightly more educated than non-refugees. In general, up until the completion of the intermediate or primary education, children of Gaza refugee parents do marginally better than West Bank refugees. This may reflect slightly wider spread of UNRWA schools in Gaza relative to the West Bank. Moreover, the West Bank has many distant villages causing students to trek long distances in order to be part of the education process (UN, 2002). At the secondary and university levels however, educational attainments of Gaza refugees drag slightly behind that of the West Bank. For instance, the probability of completing university education is 6.4 percent among Gaza refugees and 7.3 percent among West bank refugees. The corresponding probability among non-refugees is 10 percent. In addition to higher costs of secondary and higher

education due to higher fertility in Gaza, slightly better living standards together with more relative availability of tertiary education institutions in the West Bank may account for the observed differences.

The parameter estimates on mother's and father's education are positive indicating that children with more educated fathers and mothers have better educational outcomes than children from less-educated parents. The findings also indicate that parental completion of secondary education typically has a larger effect on children's schooling than parental years of education before that, suggesting the presence of non-linearity.

In all regressions, the family structure and demographics appear to produce strong but opposing effects. On the one hand, family size, measured by the number of siblings, has a negative impact on children's educational outcomes. The observed large number of children per family, connoted by the variables "no of children" reflects the fact that Palestinian women have high fertility rates. Total fertility is 6.5, higher in Gaza 7.8 than in the West Bank, 5.8. Apparently, Palestinian women get their children with very little spacing as 58 percent of the births are within 24 months of the previous one. This means that Palestinian women get their children relatively soon after marriage, continue to get children at very short intervals, and then stop well before the menopause (Pederson, 2001). But again, the negative impact of larger families is more pronounced in the case of daughters and therefore, the dilution effect is stronger for girls. That is, as the numbers of children increase, familial resources available to an individual (especially female) child decrease. In this context, family resources generally include parental time, attention, economic investments as well as material and financial assets (Blake, 1989).

On the other hand, our findings suggest that birth order has a positive and significant effect on completed education. Hence, it appears to be an advantage to be born as one of the later children. The quadratic term in the specification of birth order indicates that the advantage is highest for middle-born, about the fourth child in the birth order. We have tried out other specifications including years of birth together with dummies for birth order. They all confirmed the pattern reported here and shown in Table (1). Notice, however, that it is an advantage to be the first child if the child is male but not so for females. One way to interpret this finding is that older siblings contribute to the costs of educating younger siblings and thus older siblings become de facto responsible for the education of the younger children in the family. Rosenfeld (2002) succinctly described the mechanism of Palestinian family reproduction and work whereby the work of one family member produced the education of another, which produced work that produced education, and so on. In sum, our finding here agrees with the view that family structure provides social capital for parents to invest in education of their children (Coleman, 1988).

3.1 Marginal Effects

We consider here the marginal change in the predicted probability of a schooling outcome m in the interval μ_{m-1} to μ_m from a change in the continuous variable x_k , holding other explanatory variables at their mean values. For continuous variables, the marginal change is given by:

$$\frac{\partial \Pr(s=m|\bar{x})}{\partial x_k} = \beta_k \left[f(\mu_{m-1} - \bar{x}\beta) - \phi(\mu_m - \bar{x}\beta) \right], m = 1, 2, 3, 4 \quad (4)$$

Where $\phi(\cdot)$ denotes the normal probability distribution. For categorical explanatory variables, change in predicted probability of a schooling outcome m as variable x_k changes in a discrete manner from x_0 to x_1 , holding continuous explanatory variables at their mean values and other dummy explanatory variables omitted, is given by:

$$\frac{\partial \Pr(s=m|x)}{\partial x_k} = \Pr(s=m|x, x_k = x_0) - \Pr(s=m|x, x_k), m = 1, 2, 3, 4 \quad (5)$$

Tables, 2 to 4, report changes in predicted probabilities from using (4) and (5). Predicted probability that an individual has only an elementary education falls with age until 30 years. Similarly, the predicted probability of being a primary graduate falls until the same age. These effects suggest that younger Palestinians are relatively more likely to be secondary school graduates or university graduates other things being equal. Conversely, older members are relatively more likely to be elementary or primary graduates, and relatively less likely to be secondary school graduates or university graduates. With the proliferation of UNRWA schools along with public and private schools over time, these results may be indicating that education has expanded over time.

The marginal effect on educational outcomes, shown in Tables 2 and 3, varies however according to parent's level of education. Father's level of education appears stronger than mother's education up until the primary level, beyond which the marginal effect of mother's education exceeds the corresponding effect of father's education. The differential impact is confirmed by F -tests, which rejected the hypothesis of the equality of mother's and father's effect on the educational attainment of children. We also find that parent's education exerts asymmetric gender impact - a more powerful determinant of girls' educational outcomes relative to boys. Not unexpectedly, mother's education plays a stronger role in the educational outcomes of daughters than the corresponding impact of father's education.

As shown by the size of the coefficients connoting parent's occupations, children whose fathers belong to the working class appear disadvantaged relative to other

children. The reasons for this educational gap may be many, for example, the parents' general attitude towards schooling, the social and cultural environments at home also influence children's possibilities at school, factors that may well be closely connected with the educational level of parents. This said, the estimated impact is gender-specific with daughters of the working class achieving less education than male offspring in the same class category.

Considering specific occupations, the findings reveal that the marginal impact on the completion of university education by male offspring ranges between (0.23) and (0.47) for children whose fathers' are in professional, legislative and managerial occupations. Conversely, children whose fathers are in blue-collar and unskilled occupations are by far less likely to complete university education, and the respective marginal effects of their fathers' occupations range between (.002) and (.005). Mother's occupations have some, albeit weak, impact on the educational outcomes of children. The marginal effect of mother's in professional and technical jobs is stronger for daughters than for sons. Female offspring with mothers in teaching jobs also have higher prospects of completing university education relative to children with mothers in clerical and unskilled occupations.

Living standards are significant determinants of children's educational outcomes. Children raised in households that have personal cars (about 24 percent) have greater opportunity to be transported to and from schools and hence are more likely to be educated relative to children that are raised in families without private transportation means, *ceteris paribus*. Children raised in homes that have access to electricity are also better educated than children that grow up in dwellings without access to telephone service or are not connected to the electricity grid. Likewise, availability of other household amenities is associated with positive educational outcomes. *Ceteris paribus*, availability of space per person also influences children's educational attainment. Children that lived in crowded homes are less educated than children that grew up in less crowded housing structures. For children that live in houses where the density is less than 2 persons per room, the expected probability of discontinuing schooling at the primary level is 0.39, but escalates to 0.52 for children living in dense houses, 4 persons or more per room.

Recalling that our model contains a variable specifying religious affiliation, the findings support the proposition that children of Moslem households have lower educational attainments than children of Christian upbringing. The negative marginal impact of religion is much stronger for female Moslems than their males' counterparts. Thus, while the marginal impact associated with completing university education is (-.13) for female Moslems, the corresponding impact is negligible (-.003) for male Moslems. Notice however that the impact of religion becomes discernible and significant post the secondary education only. There are

several reasons for this. First, many Palestinian Christians cluster in Bethlehem region, that has well-developed university and attendant academic resources and infrastructure. For instance, the demographic sample revealed that Christians make up 15 percent of Bethlehem population while their proportion ranges between 1 to 4 percent in other regions. Second, judged by the amenity index, Palestinian Christians have higher living standards: fifty percent of Christian households have private cars compared with 23 percent for Moslems; 48 percent of Christians have phones relative to 18 percent in the case of Moslems and while the average Christian family has 4.8 types of amenities, the corresponding figure is 3.4 among Moslem families. Third, there is the cost considerations associated with higher fertility among Moslem families. For instance, in the case of parents that had completed university education, the average number of Moslem children in the family is 3.3 relative to an average of 2.5 in families with university-educated Christian parents. In addition to these considerations, there is also the possibility that Christian households value higher education more than their Moslem counterparts, especially in the case of female children.

Considering regional dummies, we find that the location of the household also influences the educational outcomes of children, although the differential impact is not particularly marked. There is a premium that ranges between 2 to 5 percent for children whose families are located in Jenin, Tulkarem, Nablus and Bethlehem. Relatively disadvantaged are children living in Jericho, Hebron and Gaza North and South. These differentials may reflect distance to schools and availability and quality of (especially secondary and university) education facilities.

All said, our empirical work suggests that long-term household characteristics are stronger determinants of child education than short-term economic conditions. The conclusion is validated by the strong impact of parent's education and occupation and by the demographic composition of the Palestinian family, as discerned in Tables (2 to 4). For instance, while ownership of a personal car is associated with increases of 2 to 3 percent in the transition probabilities to secondary and university education respectively; the corresponding effect of university-educated fathers range between 6 and 14 percent. The corresponding marginal effect is even stronger in the case of mothers--ranging between 7 and 28 percent respectively.

4. Conclusions

Utilizing micro-level data from the Demographic Survey of 1995, this paper has estimated the impact of long-term family background variables on the educational outcomes of children. Higher levels of parent's education are strongly associated with positive educational outcomes for Palestinian children in the West Bank and Gaza. What explains the behavior of Palestinian households? There are several possibilities. First, investment in children's education may be

the best possibility available to parents. That is, parents reckon that education sustenance is the best way to secure the future given their economic hardships. Second, in the absence of social security and state pension systems, parents will be dependent on their children in their old age. Cultural and political factors appear to be strong players too. That is, education may be considered by Palestinian families as a strategic means of survival given the vagaries of their political and economic environment. They virtually have no alternative but to compete vigorously against “Others” under highly adverse economic conditions.

Highly-educated parents are more likely to place a higher value on education for daughters as well as sons than parents who are not well-educated. However, our research has corroborated that there is a clear gender dimension in the educational outcomes that Palestinian parents choose to make. The gender divide is stronger in the case of less educated parents and for children with parents engaged in blue-collar jobs. Post primary education level, Moslem families tend to educate their boys and girls less than their Christian counterparts. The gap is due to differences in geographic locations: Bethlehem, where Christians cluster has well-developed higher education institutions. In addition, Christian parents are more educated, enjoy higher standards of living and have fewer children relative to Moslem households. When control is made for parent’s education and for living standards, the gap for male children almost disappears but remains perceptible for girls. This suggests that Moslem family expectations regarding behavior of female children and roles within the family, including early marriage, lead females to truncate their education earlier than males.

Parental living standards, gauged by the amenity index and by family ownership of cars, phones and housing space, are important determinants of children’s educational outcomes. Male and female children are more educated, on average, if they come from fortunate families, which suggest that lack of financial resources restricts the educational career of poor children. But relative to long-term family background variables, standards of living are weaker determinants of children’s educational outcomes. Given the high unemployment and the frequent instability in the earnings of typical Palestinian families, households in the West Bank and Gaza have devised strategies to cope with these adverse economic conditions. Specifically, in times of economic crisis and shortages, there are two basic coping mechanisms within the family: cutting consumption and reallocating resources on the one hand, and selling assets on the other. While both strategies are successful in that they allow families to make the most of their limited resources, they also carry serious threats to the immediate health and social well-being of family members and for the sustenance of children’s education. In particular, these strategies seriously undermine the household’s capacity for future recovery by eroding health, education and physical assets and by damaging relations with the family and community (Oxfam, 2002).

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Table 1: Determinants of Children's Educational Outcomes, West Bank and Gaza (Estimation method: Ordered probit model)

Variable	Total		Male		Female	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Age	.1244	.0203	.14885	.0272	.11871	.0310
Age squares	-.0020	.0003	-.0024	.0004	-.0022	.0004
Male=1	.3867	.0343
Age of HH	.0047	.0021	.0045	.0026	.0035	.0039
HH Male = 1	-.0235	.1204	-.0508	.1497	.0262	.2099
Father Alive	.0851	.1209	.2643	.1509	-.1176	.2091
Mother Alive	-.0396	.0649	-.0563	.0828	-.0452	.1084
Gaza Refugee = 1	.2671	.0603	.2826	.0703	.2674	.1224
WB Refugee = 1	-.0200	.0402	.0639	.0504	-.1787	.0690
No. of Children	-.0294	.0096	-.0219	.0089	-.0363	.0143
No. other members	-.0275	.0075	-.0330	.0059	-.0387	.0115
Persons per room						
2 to 2.99 persons	-.1604	.0495	-.2210	.0487	-.1769	.0705
3-3.99 persons	-.1173	.0717	-.2571	.0598	-.0137	.0923
>4 persons	-.0896	.0984	-.1865	.0753	-.0996	.1125
Birth order rank	.1592	.0499	.1244	.0613	.2972	.0901
Rank squared	-.0172	.0088	-.0160	.0109	-.0253	.0157
Father's ed. (Base=elementary or less)						
Intermediate = 1	.3315	.0495	.2366	.0599	.4884	.0911
Secondary = 1	.2527	.0668	.3109	.0785	.0522	.1345
University = 1	.5117	.0902	.3978	.1083	.7214	.1734
Mother's ed (Base= elem. or less)						
Intermediate = 1	.0393	.0652	-.0294	.0772	.2477	.1291
Secondary = 1	.3977	.1019	.4070	.1229	.4778	.1928
University = 1	.8972	.2015	.7903	.2345	1.703	.4502
Father's occupation (base=unskilled)						
Legal & managerial	.3772	.1236	.5134	.1497	.0378	.2277
Professionals	.2692	.0814	.4421	.1001	-.0774	.1481
Technicians/asst.	.0929	.1051	.1432	.1283	-.1154	.1899
Clerks	.2038	.1110	.1019	.1301	.4842	.2278
Services/sales	.0163	.0496	-.0355	.0596	.0883	.0935
Skilled worker	.0584	.0480	.0974	.0590	-.0290	.0860
Crafts workers	-.0372	.0493	-.0488	.0589	.0300	.0928
Mom's occupation (base=unskilled)						
Legal & managerial	.3768	.6143	.2727	.9251	.4090	.9200
Professionals	-.0425	.1317	-.1855	.1687	.3316	.2198
Technicians/asst.	.1324	.4447	.12001	.5368	.0568	.8227
Clerks	.0346	.8773	.08482	.8578
Services/sales	-.5522	.2327	-.4286	.2928	-.8938	.4228
Skilled workers	-.0541	.0950	-.0404	.1138	-.0952	.1823
Crafts workers	.2532	.1812	.1806	.2256	.5051	.3147
Muslim = 1	-.2914	.0952	-.0153	.1205	-.6469	.1639
Amenity index	.0815	.0138	.0285	.0171	.1887	.0247

Table 1: Cont'd.

Variable	Total		Male		Female	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Electricity = 1	.2891	.1191	.5180	.1465	-.0903	.2105
Personal Car = 1	.1686	.0367	.1580	.0430	.2013	.0734
Phone = 1	.1667	.0399	.0965	.0482	.2927	.0735
Regions (base=Gaza South)						
Jenin=1	.2066	.0824	.1649	.0997	.2729	.1562
Tulkarim=1	.2142	.0814	.1910	.1019	.2006	.1583
Nablus=1	.1187	.0799	.0480	.0959	.1516	.1538
Ramallah=1	-.0814	.0814	-.0558	.0982	-.1498	.1563
Jericho=1	-.3702	.1289	-.3843	.1616	-.3922	.2244
Bethlehem=1	-.0829	.0945	-.1217	.1135	-.0307	.1808
Hebron=1	.0703	.0801	-.0105	.0944	.1599	.1585
Gaza North=1	-.1889	.0599	-.2450	.0698	-.0317	.1205
Gaza Middle=1	.0865	.0735	.0655	.0860	.1512	.1454
N	5779		3937		1849	
Log likelihood	-6622		-4419		-2019	
LR χ^2	1081		591.2			
_cut μ_1			2.512			.1121
_cut μ_2			4.166		1.75	.5241
_cut μ_3			4.703			

Table 2: Marginal Effect of Family Background and Living Standards, Pooled Sample

Variable	Elementary	Primary	Secondary	University	Var. means
Age	-.0275	-.0079	.0132	.0222	28.30
Age squares	.0004	.0001	-.0002	-.0004	835.8
Age of Household	-.0012	-.0003	.0005	.0009	61.34
Household Sex: Male = 1	.0008	.0002	-.0004	-.0007	.9040
Father Alive	-.0240	-.0053	.0112	.0180	.9045
Mother Alive	.0095	.0030	-.0046	-.0079	.9429
Gaza Refugee = 1	-.0629	-.0268	.0310	.0587	.2276
WB Refugee = 1	.0027	.0008	-.0013	-.0022	.4827
Number of Children	.0065	.0018	-.0031	-.0052	5.038
Other Family Members	.0022	.0006	-.0010	-.0017	4.728
Persons per room					
2 to 2.99 persons	.0448	.0105	-.0211	-.0342	.3309
3-3.99 persons	.0416	.0085	-.0193	-.0307	.2060
>4 persons	.0469	.0080	-.0216	-.0333	.1204
Rank	-.0326	-.0094	.0156	.0264	1.733
Rank Squared	.0037	.0010	-.0017	-.0029	4.027
Father's ed. (Base=elementary or less)					
Intermediate = 1	-.0760	-.0419	.0382	.0797	.1987
Secondary = 1	-.0610	-.0318	.0307	.06223	.1269
University = 1	-.1080	-.0860	.0546	.1394	.0637
Mother's ed (Base= elem. or less)					
Intermediate = 1	-.0131	-.0043	.0063	.0111	.1864
Secondary = 1	-.0821	-.0546	.0417	.0949	.1127
University = 1	-.1449	-.1895	.0649	.2695	.0495
Father's occupation (base=unskilled)					
Legal & managerial	-.0843	-.0582	.0429	.0997	.0167
Professionals	-.0643	-.0346	.0324	.0666	.0861
Technicians/asst.	-.0262	-.0101	.0129	.0234	.0277
Clerks	-.0553	-.0288	.0278	.0563	.0186
Services/sales	-.0045	-.0013	.0022	.0037	.1109
Skilled workers	-.0149	-.0049	.0072	.0126	.1278
Crafts workers	.0075	.0020	-.0035	-.0059	.1164
Mother's occupation (base=unskilled)					
Legal & managerial	-.0713	-.0445	.0362	.0796	.0008
Professionals	.0060	.0018	-.0032	-.0053	.0416
Technicians/asst.	-.0285	-.0115	.0141	.0259	.0012
Clerks	-.1813	-.5366	-.1519	.8698	.0354
Services/sales	.1692	-.0210	-.0664	-.0816	.0043
Skilled workers	.0144	.0034	-.0068	-.0111	.0269

Table 2: Cont'd.

Variable	Elementary	Primary	Secondary	University	Var. means
Mother's occupation (base=unskilled) Cont'd.					
Crafts workers	-.0585	-.0319	.0295	.0609	.0067
Muslim = 1	.0705	.0417	-.0357	-.0765	.9678
Amenity index	-.0225	-.0065	.0108	.0182	3.475
Electricity = 1	-.0762	-.0052	.0335	.0478	.9820
Personal Car = 1	-.0469	-.0178	.0229	.0417	.2481
Phone	-.0411	-.0152	.0201	.0363	.2397
Region categories:					
Jenin=1	-.0458	-.0200	.0227	.0431	.1068
Tulkarim=1	-.0442	-.0191	.0219	.0414	.0990
Nablus=1	-.0230	-.0081	.0112	.0199	.1322
Ramallah=1	.0320	.0065	-.0149	-.0236	.1137
Jericho=1	.1302	-.0060	-.0538	-.0703	.0186
Bethlehem=1	.0311	.0061	-.0144	-.0227	.0629
Hebron=1	-.0124	-.0040	.0060	.0104	.1510
Gaza North=1	.0567	.0088	-.0259	-.0396	.1441
Gaza Middle=1	.0196	-.0069	.0096	.0170	.0648

Table 3: Marginal Effect of Family Background and Living Standards, Males

Variable	Elementary	Primary	Secondary	University	Var. means
Age	-.0321	-.0220	.0185	.0356	27.30
Age squares	.0004	.0002	-.0002	-.0004	766.6
Age of Household	-.0009	-.0006	.0005	.0010	60.43
Household Sex: Male = 1	.0102	.0076	-.0060	-.0119	.9301
Father Alive	-.0621	-.0244	.0328	.0537	.9314
Mother Alive	.0113	.0086	-.0066	-.0133	.9499
Gaza Refugee = 1	-.0541	-.0479	.0321	.0699	.2479
WB Refugee = 1	-.0132	-.0091	.0076	.0147	.4671
Number of Children	.0045	.0031	-.0026	-.0050	5.189
Other Family Members	.0068	.0047	-.0039	-.0076	5.380
Persons per room					
2 to 2.99 persons	.0477	.0281	-.0267	-.0491	.3482
3-3.99 persons	.0578	.0285	-.0315	-.0548	.230
>4 persons	.0418	.0209	-.0229	-.0398	.1285
Child birth order: (Base=first child)					
Rank	-.0258	-.01771	.0149	.0286	1.753
Rank Squared	.0033	.0022	-.0019	-.0036	4.107
Father's ed. (Base=elementary or less)					
Intermediate = 1	-.0441	-.0421	.0265	.0597	.1990
Secondary = 1	-.0550	-.0600	.0335	.0816	.1290
University = 1	-.0669	-.0822	.0408	.1083	.0616
Mother's ed (Base= elem. or less)					
Intermediate = 1	.0062	.0040	-.0035	-.0066	.0170
Secondary = 1	-.0670	-.0864	.0409	.1124	.1059
University = 1	-.1012	-.2038	.0552	.2497	.0419
Father's occupation (base=unskilled)					
Legal & managerial	-.0787	-.1171	.0477	.1481	.0170
Professionals	-.0728	-.0937	.0443	.1221	.0722
Technicians/asst.	-.0275	-.0243	.0164	.0353	.0215
Clerks	-.0200	-.0165	.0118	.0246	.0205
Judge	.0075	.0048	-.0042	-.0080	.1155
Services/sales	-.0194	-.0153	.0114	.0233	.1244
Skilled Agric.	.0104	.0065	-.0059	-.0110	.1226
Mother's occupation (base=unskilled)					
Legal & managerial	-.0482	-.0530	.0293	.0717	.0005
Professionals	.0426	.0191	-.0229	-.0387	.0347
Technicians/asst.	-.0233	-.0199	.0138	.0293	.0012
Clerks	-.1277	-.5692	-.1568	.8537	.0325
Judge	.1109	.0202	-.0535	-.0775	.0038

Table 3: Cont'd.

Variable	Elementary	Primary	Secondary	University	Var. means
Mother's occupation (base=unskilled) Cont'd.					
Services/sales	.0086	.0054	-.0048	-.0091	.0279
Skilled Agric.	-.0338	-.0320	.0203	.0455	.0667
Muslim = 1	.0032	.0022	-.0018	-.0035	.9697
Amenity index	-.0059	-.0041	.00342	.00658	3.525
Electricity = 1	-.1385	-.0154	.0643	.0896	.9829
Personal Car = 1	-.0316	-.0247	.0185	.0377	.2766
Phone	-.0195	-.0147	.0113	.0228	.2397
Region categories:					
Jenin=1	-.0317	-.0278	.0189	.0406	.0988
Tulkarim=1	-.0362	-.0330	.0216	.0476	.0896
Nablus=1	-.0098	-.0071	.0056	.0112	.1221
Ramallah=1	.0119	.0074	-.0067	-.0125	.1046
Jericho=1	.0970	.0228	-.0480	-.0718	.0162
Bethlehem=1	.0269	.0145	-.0149	-.0264	.0635
Hebron=1	.0022	.0014	-.0012	-.0024	.1597
Gaza North=1	.0559	.0259	-.0302	-.0515	.1577
Gaza Middle=1	-.0132	-.0100	.0077	.0155	.0708

Table 4: Marginal Effects of Family Background and Living Standards, Females

Variable	Elementary	Primary	Secondary	University	Var. means
Age	-.0109	.0012	.0050	.0046	30.45
Age squares	.0003	-.0000	-.0001	-.0001	983.2
Age of Household	-.0011	.0001	.0005	.0005	63.27
Household Sex: Male = 1	-.0089	.0011	.0040	.0037	.8485
Father Alive	.0388	-.0026	-.0182	-.0179	.8474
Mother Alive	.0151	-.0014	-.0070	-.0067	.9280
Gaza Refugee = 1	-.858	.0010	.0413	.0434	.1844
WB Refugee = 1	.0603	-.0068	-.0276	-.0259	.5159
Number of Children	.0123	-.0014	-.0056	-.0052	4.718
Other Family Members	.0131	-.0015	-.0059	-.0055	3.339
Persons per room					
2 to 2.99 persons	.0610	-.0096	-.0271	-.0242	.2942
3-3.99 persons	.0046	-.0005	-.0021	-.0019	.1698
>4 persons	.0344	-.0056	-.0152	-.0135	.1032
Child birth order: (Base=first child)					
Rank	-.1006	.0118	.0459	.0428	1.691
Rank Squared	.0085	-.0010	-.0039	-.0036	3.856
Father's ed. (Base=elementary or less)					
Intermediate = 1	-.1446	-.0202	.0732	.0916	.1757
Secondary = 1	-.0174	.0015	.0081	.0077	.1197
University = 1	-.1910	-.0665	.0995	.1580	.0454
Mother's ed (Base= elem. or less)					
Intermediate = 1	-.0781	-.0018	.0382	.0416	.1698
Secondary = 1	-.1380	-.0261	.0710	.0931	.1265
University = 1	-.2766	-.3276	.0755	.5287	.0526
Father's occupation (base=unskilled)					
Legal & managerial	-.0126	.0012	.0058	.0056	.0162
Professionals	.0267	-.0041	-.0119	-.0106	.0587
Technicians/asst.	.0402	-.0072	-.0176	-.0153	.0205
Clerks	-.1389	-.0281	.0717	.0953	.0146
Services/sales	-.0292	.0021	.0137	.0133	.1011
Skilled workers	.0098	-.0012	-.0044	-.0041	.1352
Crafts workers	-.0101	.0010	.0046	.0044	.1032
Mother's occupation (base=unskilled)					
Legal & managerial	-.1203	-.0187	.0616	.0775	.0016
Professionals	-.1009	-.0092	.0507	.0595	.0167
Technicians/asst.	-.0189	.0015	.0088	.0085	.0010
Clerks	.3423	-.1667	-.1082	-.0672	.0054
Services/sales	.0330	-.0055	-.0146	-.0128	.0248

Table 4: cont'd.

Variable	Elementary	Primary	Secondary	University	Var. means
Mother's occupation (base=unskilled) cont'd.					
Skilled Agric.	-.1433	-.0322	.0743	.1011	.0070
Muslim = 1	.1756	.0534	-.0916	-.1374	.9637
Amenity index	-.0639	.0074	.0291	.0272	3.371
Electricity = 1	.0298	-.0019	-.0140	-.0138	.9799
Personal Car = 1	-.0655	.0026	.0312	.0317	.1876
Phone	-.0944	.0021	.0452	.0470	.2395
Region categories:					
Jenin=1	-.0865	-.0010	.0421	.0454	.1238
Tulkarim=1	-.0647	.0014	.0311	.0322	.1189
Nablus=1	-.0497	.0026	.0235	.0235	.1535
Ramallah=1	.0522	-.0093	-.0229	-.0199	.1330
Jericho=1	.1444	-.0045	-.0568	-.0430	.0237
Bethlehem=1	.0104	-.0013	-.0047	-.0043	.0616
Hebron=1	-.0522	.0023	.0248	.0250	.1325
Gaza North=1	.0108	-.0014	-.0049	-.0044	.0108
Gaza Middle=1	-.0491	.0016	.0234	.0239	-.0491