Original Article

'I Wish I Had 100 Dollars a Month …' The Determinants of Poverty in Mongolia

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'Se potessi avere mille lire al mese, senza esagerare, sarei certo di trovar tutta la felicità!' (En.Tr.: 'I wish I had a thousand lira a month, without any exaggeration I'd be sure to find complete happiness') is the refrain of a famous 1939 Italian song representing the aspirations of the country's population at that time. The Euro equivalent of 1000 liras is €0.50 circa.

Abstract We consider extreme household poverty to be a risk factor in youth poverty in Mongolia, one of the 50 poorest countries in the world. The emphasis is placed on the identification of poverty trap mechanisms generated through selective access to education. We use a unique, nationally representative School-to-Work Transition survey. A young person born in a household living on US$1 a day has a *ceteris paribus* probability of school dropout that is four times higher than a contemporary born into a family living on more than $3 a day. Parental educational background is a good proxy of household poverty. Fairlie decomposition suggests that differences in characteristics expound only one-third of the gap. School dropout results in twice the probability of working poverty. It reduces the chances of women being employed and increases those of men, as women drop out of school to attend to domestic chores, while men pursue child labour in herding.

La pauvreté extrême des ménages est un facteur risque de pauvreté parmi les jeunes en Mongolie, un des 50 pays plus pauvres au monde. L'accès sélectif à l'éducation engendre des mécanismes qui piègent les gens dans la pauvreté. Cette étude utilise une enquête représentative à niveau national, sur la transition de l'école à l'emploi. Un jeune ne dans un ménage qui survit avec $1 par jour a quatre fois plus de probabilité de décrochage scolaire ceterisparibus qu'un contemporain ne dans une famille qui vit avec $3 par jour. La méthode de décomposition Farlie suggère que la différence des caractéristiques n'explique qu'un tiers cette intervalle. Ceux qui abandonnent l'école ont une probabilité deux fois plus grande de travailler tout en restant pauvres. L'abandonnement scolaire augmente la probabilité que les males soient employés, puisque ils travaillent comme enfants mineurs dans l'élevage; cependant les femmes ont moins de chance d'être employés puisque elles quittent l'école pour participer aux travaux ménagers.

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Introduction

Surprisingly for those who consider Mongolia as one of the poorest countries in the world, poverty is a relatively recent phenomenon. According to Mearns (2004, p. 110), poverty was virtually unknown until 1990, and inequality was certainly very low. By 1995, however, only a few years after the collapse of the soviet planning system, 36 per cent of the population was estimated to have fallen below the poverty line and inequality had risen significantly. Comparisons of Mongolia's ranking on the UNDP-based Human Development Index (HDI) and Human Poverty Index (HPI) suggest that in 2006 (the year when the data used in this paper was

collected) Mongolia ranked 116th on the former, whereas only 42nd on the latter. In addition, although the country's position in the ranking based on the HDI has improved in recent years, essentially because of a fast growth process, the position in the ranking based on the HPI has fallen further. The relatively high HDI depends on the deep-rooted tradition of investment in human capital and public supply of other important factors of human development during socialism.

Poverty and inequality represent important constraints for future human and economic development by hindering the expansion of internal demand, by reducing the competitiveness of the country on international markets and by reducing the educational and employment opportunities of the younger generation (Azariadis and Stachurski, 2005; UNDP, 2006, 2007).

The recent emergence of poverty in Mongolia partly explains the paucity of studies on its determinants. This article adopts a micro-econometric approach to the issue and looks, in particular, at the mechanisms generating persistence in poverty across generations. Any society develops pervasive mechanisms of intergenerational transfer of income and wealth among the richest segments of the population on the one hand and of poverty among the weakest segments of the population on the other.

This article, which is based on the Mongolian School-to-Work Transition survey (henceforth referred to as SWTS) aims to analyse the determinants of poverty among young people by focussing in particular on the consequences of extreme poverty, defined here on the basis of the Millennium Development Goals (henceforth referred to as the MDGs) of $30 and $60 per person per month. More specifically, the article endeavours to determine the existence of poverty-driven constraints on the probability of an individual investing in education and gaining access to decent employment later. We do this by estimating, firstly, the impact of belonging to an extremely poor household on the probability of dropping out of school before achieving the educational level aimed at. As a robustness check, we also use the educational level of parents rather than household income to predict dropout probability. In support of our empirical strategy, we also provide the first available estimates of the degree of intergenerational transmission of education in the country. This analysis confirms the strong correlation between parents' and children's education attainments.

Fairlie decomposition shows that over 60 per cent of the poverty gap in the probability of school dropout is unexplained by observed characteristics, which is consistent with the anecdotal evidence of discrimination at school against the poorest children. The explained part of the poverty gap is mainly because of the low educational attainment of parents, confirming the latter as an excellent proxy of household poverty.

In a second step, we show that dropping out of school positively impacts upon the probability not only of remaining unemployed, but also of experiencing working poverty (henceforth referred to as WP), that is, working for a salary that is below the poverty line.

Previous articles have studied the links between the education attainment of young people and that of their parents (father/mother), the so-called intergenerational transfer of education (see, *inter alia*, Hertz *et al*, 2007, and the references therein) or wealth (see, *inter alia*, Asadullah, 2012). To my knowledge, this is the first study that looks at the determinants of poverty. In so doing, it also studies the dynamics of the intergenerational transmission of poverty. A specificity of this study is the relating of the transmission mechanism to individual decisions on investment in education and, in particular, the decision to drop out of school, and the use of individual level data relative to a large sample of young people.

Indirectly, our analysis is confirmation of the importance of supporting education, also via cash transfers, as an effective tool to disrupt the transmission of extreme poverty from one generation to the next in a country with a traditional economic structure like Mongolia. A limitation of our conclusion is that the role of education – and hence of dropping out of school – is more important in Ulaanbaatar and in Aimag centres, than in Soum centres and rural areas.

This finding is in line with previous research, pointing to much higher returns to education particularly in the capital city and in other urban areas (Darii and Suruga, 2006; Pastore, 2010a, b).

This article is structured as follows. The next section provides grounds for the analysis by showing that the fight against poverty is at the core of any pro-growth policy in the country. The subsequent section briefly discusses the econometric methodology adopted and the data used. The following section presents the results of estimates of the determinants of dropouts as a function of household poverty and parental educational attainment. The penultimate section examines the correlation between the decision to drop out of school and subsequently remaining poor. Some concluding remarks follow in the final section.

Motivation

Poverty and Inequality

The UNDP defines 'extreme poverty' as living on less than $1 or $2 a day. In the SWTS, the sections of the Mongolian youth population falling into these categories are 10.1 and 32.9 per cent, respectively. The simplest poverty line can be drawn at the income perceived by the household with half the median income, which, in the data under consideration, equals TUGs 50 000 ($42.9 or €31.9 per month),[1] the Mongolian currency. The data used provides evidence of strong geographical differences. Whichever measure is adopted, the poverty threshold is much lower in rural than in urban areas, but this might also reflect the lower need for monetary means of payment in these areas. Poverty is highest in the capital city (Mearns, 2004, p. 118; and Morris and Bruun, 2005).

The above-mentioned measures of poverty are all based on income levels. However, the national government, as well as foreign governments and international organizations, can provide public transfers of in-kind goods, commodities and services, which are an important means of support, to poor households. A more accurate measure of poverty should thus consider the availability of free healthcare, educational and social services for the poorest households. Furthermore, in the country wealth is often measured in terms of the number of livestock. However, these sources of welfare are not included in the SWTS. Because of these significant data limitations, poverty could be overestimated, especially in rural areas[2] (see, for instance, Groppo and Krähnert, 2014).

Extreme Poverty and School Dropout

The emphasis on investment in education with low (or no) tuition fees and on low or no risk of unemployment made former socialist countries indicate high levels of educational attainment almost everywhere. The returns to education were prominently non-monetary in nature. Better educated people had easier access to jobs involving less fatigue and in a more favourable and friendly working environment, while enjoying greater fringe benefits than those of manual workers. Instead, private monetary returns to education were relatively low because of the low average level of incomes and also the political emphasis on combatting income inequality (Atkinson and Micklewright, 1992).

However, the available evidence based on the SWTS suggests that Mongolia still underperforms compared with most former socialist countries in terms of educational attainment.[3] A small but still significant share of 3.3 per cent of the oldest age segment (25–29 years of age) is uneducated.

Although the share of the uneducated living in rural areas is about three times higher (at 6.43 per cent) than that living in urban areas or in the provincial (*aimag*) or municipal (*soum*) centres, the larger population nevertheless makes the overall scale of the problem bigger in urban areas.

On a positive note, the share of the uneducated is lower among the oldest age segment, which might suggest that some of them had managed to achieve at least primary or basic education in their twenties through some kind of adult learning programme (del Rosario, 2005, pp. 17–18).

In addition, about 11–12 per cent of the entire sample achieves only primary education and 20.4 per cent of those aged 25–29 only basic education. In other words, 34.4 per cent of the 25–29 group has only undertaken compulsory education or below.

In the SWTS, the largest share of the uneducated left school because they did not enjoy it. del Rosario (2005, p. 27) explains this in terms of a number of factors, such as bullying by the students' peers, lack of attention from teachers and in general the low quality of education and poor conditions of school infrastructures. Secondly, about 27 per cent of the dropouts from primary education declare that they left school to take care of livestock. As is also typical of other developing countries, men fare worse than women, because, as del Rosario (2005, p. 24) points out, parents prefer boys to girls for herding, which is still an important economic activity in the country. Related to this is the high share, especially of young men, who indicate economic reasons for dropping out. Overall, economic factors explain most of the dropouts, especially if one considers that the young people who do not enjoy school have poor cultural and social backgrounds.[4]

Child labour is an apparent consequence of poverty and confirms the concern that poverty might force too many young people into a trap. In order to survive, the poorest households might find it convenient (at least in the short-run) to employ young children in low-paid jobs to supplement their already very low household income. Fighting child labour, perhaps through income support schemes for the poorest households, is an important policy target for the government and international organizations. The latter are becoming increasingly aware of the fact that child labour represents a trade-off between minor short-term advantages and significant long-term drawbacks.

The Mongolian government is aware of the importance of this problem. In fact, Mongolia has adopted a new regulation to fight child labour in the Education Act of 2005. del Rosario (2005, p. 70) reports a number of governmental interventions: (i) abolition of the cost of school dormitories and food for children through the provision of grants; (ii) free school supplies worth TUGs 16 000 (about $13.7); and (iii) the already noted implementation of adult learning programmes for the uneducated.

The Determinants of Poverty

Despite being a recent phenomenon, poverty can be a condition in which households remain trapped for generations (Azariadis and Stachurski, 2005). Already in the early 2000s, the Government of Mongolia (2001, p. 4) noted that, from the sample surveys (LSMS, PLSA) available at that time, the following five categories of population were more likely to fall into poverty: (i) single parent households with many children; (ii) households with less than 100 head of livestock (depending upon the size and structure of households); (iii) unemployed; (iv) uneducated (without basic education); and (v) vulnerable groups (the elderly, the disabled, street children and orphan children).

By studying the determinants of poverty, this article seeks to contribute to the effort of identifying the most vulnerable categories of young people in order to ensure that anti-poverty action plans are better designed and more targeted. The specific focus of the analysis is on

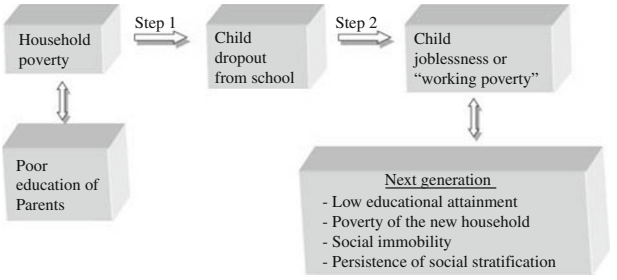

Figure 1: The intergenerational transmission mechanism.

identifying the extent to which youth outcomes in life are affected by parents' outcomes. In other words, we look at extreme household poverty as an indirect risk factor in youth poverty.

Because of the low development of the educational system and other institutions aimed at equalizing opportunities for everyone, it is anticipated that the educational levels of fathers and mothers are important predictors of the probability of young people choosing to study rather than to work. In fact, parents with high educational achievement tend to focus less on the cost and more on the benefit of education. They also tend to have higher incomes, and therefore the cost of their children's education is lower for them in relative terms. In addition, they are more able to advise their children on how to use a high standard of education in the labour market, therefore increasing the expected returns to education of their children. Intergenerational transfers of education are expected to translate in terms of poverty.

Methodology and Data

Econometric Modelling

Figure 1 outlines the mechanism that we have in mind, based on two steps that renovate with every new generation. Step 1 consists of estimating the correlation of belonging to a household living in extreme poverty with the probability of dropping out of school.[5] This requires looking at the determinants of school dropout as a function of various household characteristics, including household income (henceforth referred to as HI) to assess the existence of liquidity constraints in the decisions in accessing education. To this end, we estimate by maximum likelihood the following LOGIT model:

$$P\left(D=1 \mid \mathrm{HI}, \sum_{j=1}^{n} X_j\right) = \frac{\exp\left(\alpha+\beta\mathrm{HI}+\sum_{j=1}^{n}\gamma_j X_j\right)}{1+\exp\left(\alpha+\beta\mathrm{HI}+\sum_{j=1}^{n}\gamma_j X_j\right)} \tag{1}$$

where P denotes the probability; D is a binary variable taking the value of 1 in the case of dropping out of any type of school before completing higher secondary education and 0 otherwise; X is a vector of individual and household characteristics used as control variables; γ is a vector of their estimated parameters; HI is the variable of interest, and β is its coefficient. In fact, in the estimates, HI is allowed to identify households living on: (a) $30 or less a month; (b) between $30 and $60 a month; (c) between $60 and $100 a month; and (d) more than $100 a month.

Unfortunately, the static nature of the available data does not allow us to measure HI at the time when the decision to drop out is taken. This may possibly generate a problem of reverse causality if HI is affected by the individual income. To avoid this problem, we also study the degree of correlation between HI and the parents' educational qualifications (PE).[6] Equation (2) is therefore just the same as (1), but instead of HI, we use PE as the key variable.

$$P\left(D=1 \mid \mathrm{HI}, \sum_{j=1}^{n} X_j\right) = \frac{\exp\left(\alpha+\beta\mathrm{PE}+\sum_{j=1}^{n}\gamma_j X_j\right)}{1+\exp\left(\alpha+\beta\mathrm{PE}+\sum_{j=1}^{n}\gamma_j X_j\right)} \tag{2}$$

In the descriptive analysis, we provide unequivocal evidence confirming the existence of a strong correlation between PE and HI, which suggests that PE and HI are excellent proxies of each other.

As a caveat to estimating (1), please note that it does not allow for differentiation between the actual impact of HI on dropping out of school and that of living in a group or neighbourhood of people who live in poverty, as, in fact, is often the case.[7]

We assume that, because of the liquidity constraints that it may generate, HI is a variable able to completely identify different social groups. To indirectly test this assumption, we decompose the gap in the probability of dropping out of school of individuals belonging to the poorest households with respect to individuals with higher incomes applying the Fairlie (2005) decomposition method. This has been introduced as an extension of the Oaxaca and Blinder decomposition in the case of non-linear models, such as LOGIT, for which Oaxaca and Blinder cannot be implemented. Similar to the Oaxaca and Blinder method, Fairlie decomposition allows disentanglement of the explained and unexplained components of the gap, the former being based on differences in observed characteristics and the latter on differences in the coefficients of these characteristics. For the sake of simplicity, calling $Y = \Pr(D) = F(X\hat{\beta})$ the simplified version of the non-linear equation (1), the decomposition of the HI gap in the probability of dropping out can be written as follows:

$$\begin{aligned}\overline{Y}^{\mathrm{HI}^1} - \overline{Y}^{\mathrm{HI}^i} = &\left[\sum_{i=1}^{N^{\mathrm{HI}^1}} \frac{F\left(X_i^{\mathrm{HI}^1}\hat{\beta}^{\mathrm{HI}^1}\right)}{N^{\mathrm{HI}^1}} - \sum_{i=1}^{N^{\mathrm{HI}^i}} \frac{F\left(X_i^{\mathrm{HI}^i}\hat{\beta}^{\mathrm{HI}^1}\right)}{N^{\mathrm{HI}^i}}\right] \\ &+ \left[\sum_{i=1}^{N^{\mathrm{HI}^i}} \frac{F\left(X_i^{\mathrm{HI}^i}\hat{\beta}^{\mathrm{HI}^1}\right)}{N^{\mathrm{HI}^i}} - \sum_{i=1}^{N^{\mathrm{HI}^i}} \frac{F\left(X_i^{\mathrm{HI}^i}\hat{\beta}^{\mathrm{HI}^i}\right)}{N^{\mathrm{HI}^i}}\right]\end{aligned} \tag{3}$$

where HI^1 is the income level of the poorest group and HI^i is the income level of the comparison group, which in the estimate can vary from (b) to (d), as set out above; N represents the sample size.[8] The first term of equation (2) is the so-called explained part of the gap, which is represented by differences in characteristics between the two income classes; the second term of the equation represents the unexplained or discrimination part of the gap. The latter is measured by differences in coefficients and therefore interpreted as due to immeasurable or unobserved endowments. The analysis will focus on term one and will decompose the overall effect into its individual components.

Step 2 of the analysis implies studying the impact of dropping out of school on the probability of finding a job overall or, once a job has been found, of experiencing WP, namely working for a salary that is below the poverty line. The poverty line is defined as being equal to half the median labour income[9] irrespective of whether income is based on salaried employment or self-

employment. Figure 1 concerns the closure of the poverty gap: household poverty correlates with school dropout and, in turn, the latter correlates with individual poverty. To test Step 2, we estimate a multinomial LOGIT model of the probability of occupying one of three labour market statuses (being jobless, i.e. unemployed/inactive or (*J*) being working poor (WP) or being employed in a decent job (*E*)) as a function of *D* and a number of individual and household characteristics (*Z*):

$$\Pr\left(LMO = k \mid D, \sum_{h=1}^{m} Z_h\right) = \frac{\exp\left(\alpha + \delta D + \sum_{h=1}^{m} \vartheta_h Z_h\right)}{1 + \sum_{h=1}^{3} \exp\left(\alpha + \delta D + \sum_{h=1}^{m} \vartheta_h Z_h\right)} \tag{4}$$

where *LMO* represents one of the three $k=1, 2, 3$ labour market outcomes mentioned above: the variable of interest is *D*, and the estimated coefficients of *Z* are named θ.

The Data Used

The analysis is based on a SWTS of young people aged 15 to 29 carried out in 2006 by the National Statistical Office of Mongolia with ILO financial and technical assistance.[10] The SWT survey of Mongolia includes detailed information on parental education, occupation and income levels of a large sample of young people, thus providing an excellent testing ground for assessing the extent of intergenerational transfers. The survey includes about 4585 households and 6100 young people (aged 15 to 29), representing 0.75 per cent of the reference population, a nationally representative sample. The number of interviewees is so high that it is hardly available for the given age bracket in other sample surveys covering the entire population.

Dropping Out of School

The Determinants of Dropping Out

Figure 2 shows the negative correlation between HI classes and the probability of dropping out of school. Extreme poverty appears to be an important driver in dropout from compulsory education.

As noted in the methodological section, HI may be problematic because it is measured at the time of the interview rather than when the decision to drop out was taken, which in the case of the oldest individuals was at a much earlier point in time. A more stable variable is the level of education of parents, which, as Figure 3 shows, is highly correlated with HI in the case of both fathers (Panel (A)) and mothers (Panel (B)). The higher the HI is, the lower the share of individuals whose fathers and mothers have only completed compulsory education.

Figure 4 provides clear visual evidence of the strong degree of intergenerational transfer of education. Over half of the children of fathers (Panel A) and mothers (Panel B) with basic educational attainment or below also have basic educational attainment or below.

As a further confirmation of this finding, I provide the first available estimates of the intergenerational educational regression coefficients and correlations by year of birth (Figure 5), as obtained by following the same computational procedure as Hertz *et al* (2007). In fact, the two indices are obtained from running batteries of regression of the education of children as a function of the education of their parents by year of birth. The latter are a kind of Solon (1992) equation

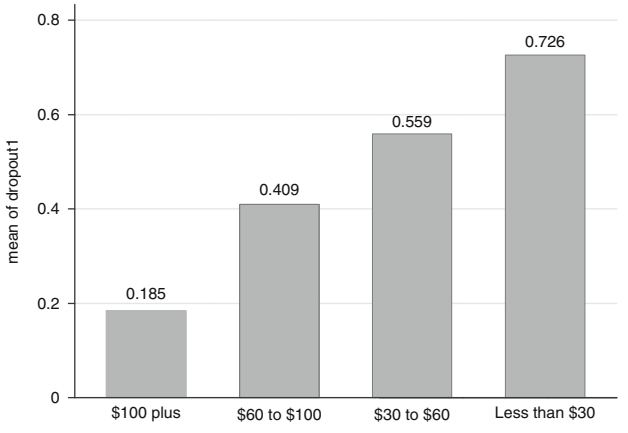

Figure 2: Dropout and extreme poverty.
Note: The sample excludes students.
Source: Own elaboration of the Mongolian SWT survey.

expressed in terms of educational attainment rather than income. The estimated coefficient of parents' education is a measure of grade persistence, whereas the square root of the R^2 of the estimated equation is the correlation coefficient, a measure for standardized persistence. The figure shows values relative to non-students as students would clearly tend to underestimate the intergenerational transfer of education. More important are the values concerning young people at least 24 years of age (born in 1983 or earlier), when everybody has finished compulsory education, or also 20 years of age (born in 1986 or earlier), as suggested in the relevant literature. The figure confirms that both grade and standardized persistence are very high, higher than the world averages computed in the work by Hertz *et al* (2007) on a sample of individuals aged 20–69 years, and equal to 0.6 and 0.41 respectively.

Table 1 presents results of LOGIT estimates of (1) for the entire sample and by gender. As reported in the last rows, school dropouts represent about 21.3 per cent of the entire sample.[11]

The baseline group includes single men aged 25–29 with no children, belonging to a household whose income is greater than the Tugrik equivalent of $100 and has three members or less, where both parents have undertaken tertiary education, who did not work at school, whose main aspiration in life is to be successful at work and is living in Ulaanbaatar.

Overall, the estimate is quite satisfactory, with a relatively high pseudo-R^2 and strong predictive power. There are no statistically significant conditional gender differences in the probability of dropout, although the unconditional gender gap, as obtained in estimates including a gender dummy as the only explanatory variable, equals 0.44 per cent and is statistically significant. This contrast between unconditional and conditional estimates suggests that men compared with women have observed characteristics that correlate more with the outcome probability.

The probability of dropping out of school is the lowest for the youngest age segments, especially in the case of men, as the expected return to education decreases with education and, indirectly, with age.

Civil status only seems to affect the dependent variable marginally. Having children only reduces the probability of dropping out of school in the case of women, perhaps because women who do not drop out of school tend to find a job more easily and therefore establish a family and have children sooner (Pastore, 2010b). These findings on civil status depend on the fact that, in

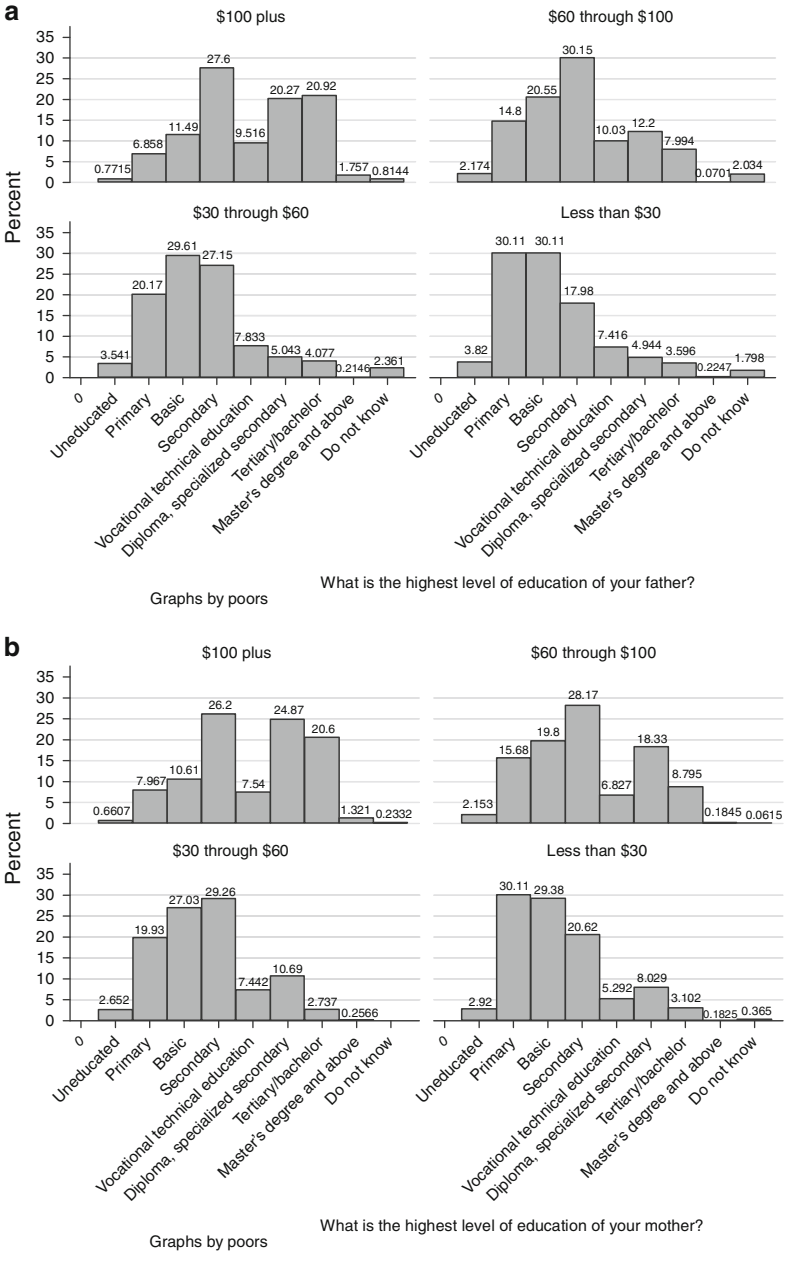

Figure 3: Parents' education and HI.
Panel (a): Father's education.
Panel (b): Mother's education.
Source: Own elaboration on the Mongolian SWT survey.

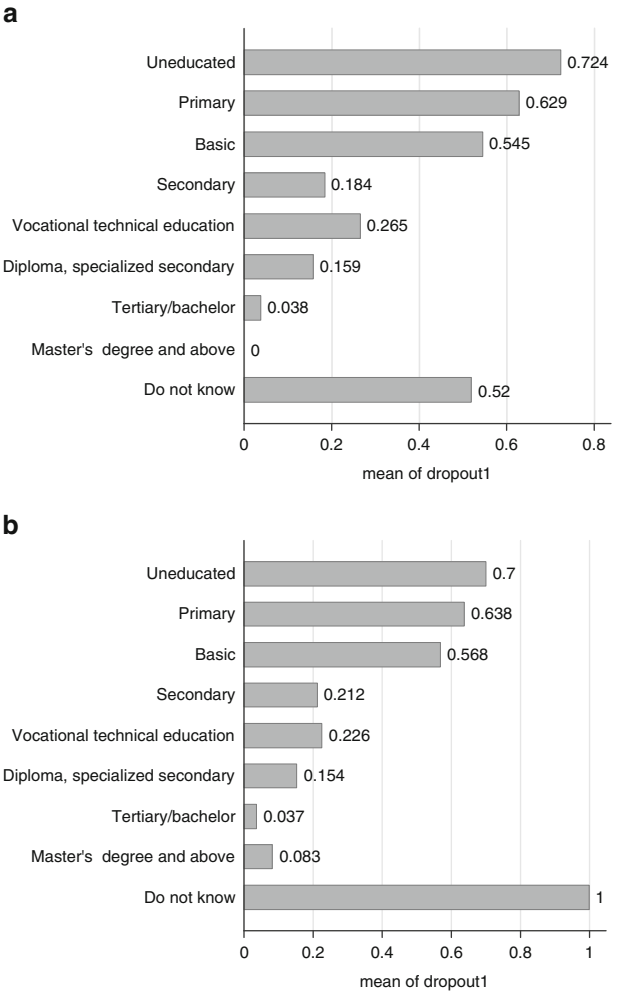

Figure 4: Dropout and parents' educational attainment.
Panel (a): Father's education.
Panel (b): Mother's education.
Note: The sample excludes students.
Source: Own elaboration on the Mongolian SWT survey.

most cases, the decision to drop out of school was taken earlier than that of marrying and/or having children.

The number of household members is another useful proxy of HI: the larger the family size, the greater the opportunity cost of education, which might force some young people in the family to drop out of school. There is a continuous increase in the odds ratio with the increasing number of household members, although the variable becomes statistically significant in the case of households with at least six members. The impact of the number of household members is slightly higher in the case of men. It is likely that some men are, so to say, 'sacrificed' for herding, especially in rural areas.

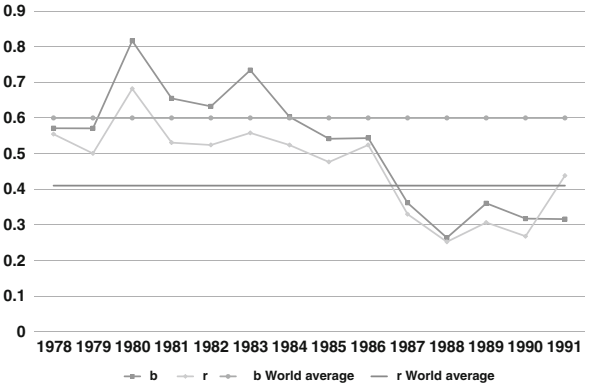

Figure 5: Intergenerational educational regression coefficients and correlations by year of birth.
Note: The values are relative to non-students. World averages are based on Hertz *et al* (2007).
Source: Own elaboration on the Mongolian SWT survey.

Having lost their own parents increases the chances of dropping out of school in a highly statistically significant way for both genders. Confirming a finding that is common in the literature on the prominent role of mothers in determining the educational attainment of their children (see, *inter alia*, Francesconi *et al*, 2010), the impact of being motherless is stronger than that of being fatherless. The reason is that mothers live closer than fathers to their children and therefore their impact on the educational performance of children is greater than that of fathers. The probability of dropping out of school is nine times greater in the case of motherless female children.

As already noted in the methodological section, another channel through which the poverty trap might be generated is parental educational background. The educational level of parents dramatically affects the probability of their children dropping out of school, especially in the case of parents with basic education or below. Children of uneducated mothers are 9.7 times more likely to drop out of school compared with the baseline of children of mothers with tertiary education or above. Again, the role of mothers is more important.

Only less than 10 per cent of the sample work while studying. It does not seem to be statistically significant except in a few cases. Interestingly, having worked while studying tends, overall, to reduce (not increase) the probability of dropping out of school. This is especially the case of young men working part-time, in the service sector or in other types of activity. This finding indirectly confirms the role of HI.

The aspirations of young people might be partly innate and correlate to some non-cognitive skills, that recent research (Heckman *et al*, 2006) considers important to explain labour market success. Answers to the question about the main aspirations in life of young people may include these abilities (see, for instance, Chevalier, 2007). Dropping out of school is associated with some goals in particular, such as aspiring to establish a reputation, to have a lot of money (especially for women), living freely (for men) and living a good family life. Not surprisingly, the probability of dropping out of school correlates negatively with the aspiration of achieving a good education and making a contribution to society. This can be taken as evidence that educational aspirations should be supported as they can generate not only a private return to the individual, but also a social return to the community as a whole.

Furthermore, dropping out of school is much more common in rural areas, especially for men. Living in Soum centre means a greater probability of dropping out of school only

Table 1: Determinants of dropping out of school in Mongolia by gender (LOGIT estimates)

Variable	*All*	*Women*	*Men*
Women	1.5633	—	—
Age group (baseline: Young old: aged 25–29 years)			
Young teenager (aged 15–19 years)	0.4527***	0.6273*	0.3519***
Young adults (aged 20–24 years)	1.2378*	1.6878**	0.9538
Civil status (baseline: single)			
Married woman	0.8314	0.9083	—
Married man	1.6526*	—	1.523
Divorced, separated, widowed woman	1.4841	1.7347	—
Divorced, separated, widowed man	0.5871	—	0.4906
Men with children	1.1613	—	1.1877
Women with children	0.5655**	0.5115***	—
HI classes ($) (baseline is more than $100 a month)			
From $60 to $100	1.5330***	1.5790**	1.5441**
From $30 to $60	2.0296***	1.8131***	2.3699***
Less than $30	3.8510***	4.0907***	3.6441***
Number of household members (baseline is 3 members or less)			
4	1.0196	1.0097	1.0618
5	1.113	1.2918	1.0104
6	1.3707*	1.2206	1.5401*
7	1.5716**	1.4810	1.7249*
8	2.3631***	2.1087**	2.8781***
9 or more	2.0079**	2.0101*	2.1081*
Fatherless	2.6100***	3.3169**	2.0695*
Motherless	4.4310***	9.0692***	3.5079***
Father education (baseline: tertiary or above)			
Uneducated	3.1475***	2.9058*	3.4955*
Primary education	2.2804***	2.4069*	2.1086*
Basic	2.3453***	2.3647*	2.3080**
Secondary	1.381	1.3153	1.3632
Vocational technical secondary	1.7586*	1.6617	1.721
Specialized secondary	1.5007	1.9372	1.2198
Mother education (baseline: tertiary or above)			
Uneducated	9.6755***	17.5683***	8.7084***
Primary education	6.6310***	14.2376***	5.2242***
Basic	4.8750***	11.4513***	3.3084***
Secondary	2.3189**	3.5081*	2.1452*
Vocational technical secondary	2.1391*	3.2427	2.059
Specialized secondary	1.5468	3.0276	1.2993
Worked while at school (baseline: did not work at school)			
As a clerk	0.5676	0.6739	0.6154
Part-time	0.1936**	0.1655	0.2008*
In services	0.0843***	—	0.1169*
In agriculture	1.3544	0.7653	1.4678
As a commercial	0.1288	—	0.413
Other types of working activity	0.2508**	0.4286	0.1785**
Family-run business	0.3308	0.6000	0.2426
As a volunteer	0.6131	1.256	0.2974

Table 1 *continued*

Variable	*All*	*Women*	*Men*
Main goal in life[a] *(baseline: Being successful at work)*			
Making a contribution to society	0.5832**	0.5776*	0.5799*
Participating in community affairs	1.4447	1.7415	1.3108
Upholding religious faith	2.1298	1.5302	3.0329
Having a lot of money	1.7202***	2.0669**	1.4707
Having a good family life	1.3656**	1.4143*	1.3610*
Having a good education	0.4301***	0.4794***	0.3980***
Gaining work experience	1.4863	1.0914	1.9004*
Living wisely	0.7885	0.7286	0.7775
Being self-confident and achieving goals	0.8573	0.9201	0.7681
Gain a reputation	2.7880**	2.9520*	2.5856
Live freely	1.6416	1.1291	2.1504*
To work overseas	1.1248	1.437	0.9861
Location (baseline: Ulaanbaatar)			
Aimag centre	1.075	0.9768	1.1803
Soum centre	1.6366***	1.4139	1.7285***
Rural area	6.8143***	5.0954***	8.8833***
Constant	0.0134***	0.0102***	0.0179***
Number of observations	6301	3203	3098
Number of dropouts	1339	529	810
% of dropouts	21.3	16.5	26.2
Pseudo-R^2	0.377	0.366	0.379
Correctly classified cases	86.1	87.6	84.7
Area under the ROC curve	0.89	0.89	0.89

[a]Respondents are allowed to declare the three most important goals in their life. The variables in the estimates have been produced taking into account only the first answer.
*significant at 10%; **significant at 5%; ***significant at 1%.
Note: Robust standard errors are computed using the Huber/White/sandwich estimator.
The table presents the odds ratio, attained by taking the exponential of the logistic regression coefficients: they measure the relative probability of the associated characteristics with respect to the baseline characteristics. When the odds ratio is greater than one, the associated characteristics has a higher probability of experiencing the outcome under consideration; *vice versa*, when the odds ratio is smaller than one, the associated characteristics has a lower probability of experiencing the outcome under consideration.
Source: Own elaboration on the Mongolian SWTS.

for men. Instead, there are no statistically significant differences between Aimag centres and the capital city.

Finally, confirming the existence of poverty traps, HI influences the dependent variable in a highly significant way, even after controlling for several other aspects of family background. The coefficient is extremely high for the lowest income levels. More specifically, the poorest HI segment has about 3.9 times greater probability than that of the baseline.

It is worth asking whether financial constraints on access to education differ by location. Table 2 reports the coefficients of only HI in estimates of the same type as those in Table 1. Belonging to a household with less than $30 a month implies a penalty that is much greater for men in Ulaanbaatar and for women in rural areas. In the capital city, women are less affected by financial constraints than are men. Instead, in rural areas, financial constraints seem to affect people in almost the same way, if not more women. Financial constraints are gender and location specific, which should provide useful information for better targeting policy intervention. Moreover, in the capital city income differences are greater.

Table 2: Determinants of dropping out of school in Mongolia by location and gender (Logit estimates)

Variable	*Ulaanbaatar*			*Aimag*		
	All	*Women*	*Men*	*All*	*Women*	*Men*
Poverty (baseline: more than $100)						
From $60 to $100	1.5418	0.9575	2.0219*	1.8192	3.5203*	1.2961
From $30 to $60	3.0568***	1.5058	4.8024***	1.7297	2.1394	1.6137
Less than $30	5.7337***	2.9835	9.4485***	4.5653***	4.7243*	4.8669**
Number of observations	2410	1232	1178	1069	559	510
Variable	*Soum centre*			*Rural area*		
	All	*Women*	*Men*	*All*	*Women*	*Men*
Poverty (baseline: more than $100)						
From $60 to $100	1.5442	1.7404	1.3916	1.3884	1.6737	1.2975
From $30 to $60	2.1235**	2.7061*	1.667	1.6316**	1.5181	1.9946*
Less than $30	4.0135***	6.6277***	2.9570**	3.0273***	3.7234***	2.4469**
Number of observations	1410	727	683	1413	686	727

Note: The estimates include the same control variables as in Table 1. The notes under Table 1 also apply here.
Source: Own elaboration on the Mongolian SWTS.

We also estimate equation (2), by excluding the classes of HI and focussing only on PE. Table 3 reports the coefficients of the variables of interest and shows that they are very similar to the previous ones, but clearly bigger in size.

Fairlie Decomposition

Do HI classes identify a specific vulnerability that is not captured by other observed characteristics of the individuals belonging to the poorest group? To answer this question it would be useful to disentangle the explained component of the HI gap in the probability of school dropout (the differences in characteristics) and the discrimination component, that is, the different way in which the educational system treats individuals belonging to the poorest income class (differences in coefficients). Access to education could be lower among individuals belonging to the poorest households because of their lower than average characteristics. Alternatively, there could be a different way in which the educational system treats individuals belonging to the poorest household.

Table 4 reports the results of the Fairlie decomposition of the gap of the poorest income class as compared with the richest, the two intermediate income classes and, in the last column, the sample average. As expected, the gap reduces as the income difference declines. The smallest difference (20.4 per cent) is observed in the comparison of households living on $30–$60 a month. The decomposition exercise shows that a sizeable part of the gap (46 per cent) is unexplained by differences in characteristics, suggesting that extreme poverty may be a possible factor in discrimination. This finding could in turn be consistent with the previously mentioned evidence that the poorest children are subjected to bullying, making school unenjoyable for them.

Table 4 also disentangles the explained component of the gap. Individual and household characteristics are grouped in 11 clusters. Among the characteristics that are associated with a (statistically) significantly higher probability of dropping out of school and could therefore be used as a policy target, the most important are location, being parentless, the education of mothers

Table 3: Determinants of dropping out of school by gender. Focus on parents' education (Logit estimates)

Variable	*All*	*Women*	*Men*
Father education (baseline: tertiary or above)			
Uneducated	3.5082***	3.2159*	4.0031**
Primary education	2.4769***	2.6145*	2.3937**
Basic	2.5462***	2.6338*	2.5547**
Secondary	1.4185	1.3784	1.4146
Vocational technical secondary	1.8110*	1.8167	1.7722
Specialized secondary	1.391	1.9422	1.1076
Mother education (baseline: tertiary or above)			
Uneducated	11.0196***	19.8471***	10.0264***
Primary education	7.3956***	15.7710***	5.7744***
Basic	5.5536***	12.8857***	3.8147***
Secondary	2.6597***	4.0725*	2.4735**
Vocational technical secondary	2.3786**	3.5263*	2.2964*
Specialized secondary	1.6349	3.1026	1.4053
Number of observations	6301	3203	3098

Note: The estimates include the same control variables as in Table 1, excluding classes of HI. The notes under Table 1 also apply here.
Source: Own elaboration on the Mongolian SWTS.

(more than fathers) and life aspirations. The household size tends to reduce the gap, probably because the poorest households are less numerous than are the richest ones.

For the sake of brevity, I omit results of Fairlie decomposition of the gap in the probability of dropping out regarding the educational level of one's own parents as based on the specification used in Table 3.[12] The variable of interest is a dummy that equals one where the mother or father has attained compulsory education or below. The gap in the dropout probability is sizeable in both cases. The decomposition shows that the gap remains almost totally unexplained by observed factors in both cases. This finding does not change when we experiment with the definition of parents' education. The size of the gap almost doubles up to 34.8 probability points when the mother has below compulsory education and up to 27.5 probability points when the father has below compulsory education. Nonetheless, again the gap is unexplained by the available observed variables suggesting that the educational level of parents indicates something specific that is largely independent of other individual characteristics and is related to the way such characteristics are priced in the educational system when they are possessed by individuals with a poor educational background.

The Consequences of School Dropout

The previous section has shown that household poverty leads to school dropout by imposing financial constraints on the individuals' ability to access education. However, what are the consequences of dropping out of school on subsequent labour market outcomes? Darii and Suruga (2006) and Pastore (2010b, p. 248) find that the private returns to education are also not negligible in Mongolia. However, no previous study has looked at the wage penalty associated with the decision to drop out of school.

Table 4: Fairlie decomposition of the probability of dropping out of school by classes of HI

	Poorest (less than %30 a month) /richest (more than $100 a month)	*Poorest (less than %30 a month)/middle 1 (from $60 to $90 a month)*	*Poorest (less than %30 a month)/middle 2 (from $30 to $60 a month)*	*Poorest (less than %30 a month)/all the rest*
Number of observations	3299	2331	1873	6301
Number of the 'poorest'	601	601	601	601
Number of 'richer group'	2698	1730	1272	5700
Probability of dropping out for the poorest	0.5141	0.514143	0.5141	0.5141
Probability of dropping out for the richer	0.0949	0.219653	0.3097	0.1807
Gap	0.4193	0.2945	0.2044	0.3334
Total explained component of the gap	0.2268	0.1436	0.103	0.2309
As %	0.5409	0.4876	0.5039	0.6926
Unexplained component of the gap	0.1925	0.1509	0.1014	0.1025
As %	0.4591	0.5124	0.4961	0.3074
Women	−0.0047	−0.0095	−0.007	−0.0077
	−0.0026	0.0027	0.0023	0.0015
	−2.07	−6.62	−6.79	−3.33
Poverty	0	0	0	0.045
	—	—	—	0.0088
	—	—	—	19.49
Age	0.0028	0.0099	0.0147	0.0088
	−0.0018	0.0029	0.0034	0.0016
	1.21	6.89	14.27	3.81
Civil status	0.0164	0.0046	0.0047	0.0093
	0.0059	0.0055	0.0051	0.0034
	7.23	3.20	4.56	4.03

Household size	−0.0167	−0.0145	−0.0026	−0.0096
	0.0050	0.0041	0.0041	0.0024
	−7.36	−10.10	−2.52	−4.16
Being parentless	0.0237	0.0094	0.0035	0.0143
	0.0108	0.0047	0.0034	0.0031
	10.47	6.55	3.40	6.19
Education of father	0.0092	0.0065	0.0054	0.0126
	0.0135	0.0061	0.0045	0.0045
	4.07	4.53	5.24	5.46
Education of mother	0.0542	0.0331	0.0177	0.0447
	0.0106	0.0066	0.0051	0.0049
	23.89	23.05	17.18	19.36
Work and study	0.0024	0.0015	0.002	0.0006
	0.0019	0.0013	0.0013	0.0006
	1.07	1.04	1.94	0.26
Aspirations in life	0.0142	0.0131	0.0068	0.012
	0.0041	0.0036	0.0033	0.0021
	6.25	9.12	6.60	5.20
Location	0.1250	0.09	0.0566	0.101
	0.0138	0.0081	0.0065	0.0061
	55.12	62.67	54.95	43.74

Notes: The decomposition is based on equation (1). The control variables are the same as in Table 1. Nonetheless, for the sake of brevity, the impact of similar control variables has been clustered together in 9 groups. For a full account of the variables that are included in each group see Table 1.
Source: Own elaboration on the Mongolian SWTS.

Table 5: Determinants of labour market outcomes. Multinomial logit (20–29 years old)

Variable	*Entire sample*			*Urban areas*			*Rural areas*		
	All	*Women*	*Men*	*All*	*Women*	*Men*	*All*	*Women*	*Men*
				Panel (A): Working poor					
Women	1.3451	—	—	1.1133	—	—	2.6726***	—	—
Education (baseline: secondary or below)									
Vocational technical secondary	0.4782**	0.3581**	0.7674	0.6039	0.2767	1.0435	0.4527*	0.3478*	0.7654
Specialized secondary	0.3100**	0.3065*	0.3154	—	—	—	—	—	—
Tertiary Education or above	0.1514***	0.1009***	0.3758*	0.2380***	0.1378***	0.4677	0.0590***	0.0695***	0.0000***
Age group (baseline: aged 25–29 years)									
Young adults (aged 20–24 years)	1.5556***	1.7109***	1.4868**	1.4141	1.0892	1.8278*	1.5250**	1.8974**	1.34
Civil status (baseline: single)									
Married woman	1.5780*	1.4097	—	1.8508	1.7514	—	0.8378	0.9	—
Married man	0.6692	—	0.7316	1.1955	—	1.3001	0.7454	—	0.7386
Divorced, separated, widowed woman	2.3543	2.9626	—	—	—	—	—	—	—
Divorced, separated, widowed man	0.0000***	—	0.0000***	—	—	—	—	—	—
Man with children	0.8197	—	0.8184	0.9502	—	1.0072	0.6909	—	0.6662
Woman with children	1.3234	1.4045	—	0.7393	0.6364	—	1.6934	1.7525	—
Number of household members	1.0173	0.9675	1.0508	1.0738	1.0306	1.1036	1.089	1.1372	1.0915
Fatherless	0.6339***	0.5638**	0.7417	—	—	—	—	—	—
Motherless	0.8183	1.3126	0.4390**	—	—	—	—	—	—
Working while studying	1.2431	1.3122	1.2067	1.8787	2.0131	1.5531	0.6939	0.6139	0.735
Dropout	2.1875***	2.4378***	2.6272***	1.6218	1.429	2.0016*	2.4440***	2.6101***	2.8830***
Location (baseline: Ulaanbaatar)									
Aimag centre	1.8931*	1.5431	2.3034*	2.0642*	1.9691	2.1877	—	—	—
Soum centre	2.9624***	2.9437**	3.1047**	3.4078***	3.8312***	3.2112***	—	—	—
Rural area	19.8776***	33.7675***	12.6861***	—	—	—	—	—	—
Constant	0.0304***	0.0381***	0.0287***	0.0209***	0.0390***	0.0128***	0.3200***	0.6153	0.2899**
				Panel (B): Joblessn					
Women	1.3573***	—	—	1.1143	—	—	3.7375***	—	—

Education (baseline: secondary or below)									
Vocational technical secondary	0.3001***	0.2859***	0.3112***	0.3621***	0.3794***	0.3412***	0.3567**	0.2236**	0.6468
Specialized secondary	0.2369***	0.2716***	0.2069***	—	—	—	—	—	—
Tertiary Education or above	0.1505***	0.1589***	0.1562***	0.1793***	0.1771***	0.1886***	0.2456***	0.3318**	0.1072**
Age group (baseline: aged 25–29 years)									
Young adults (aged 20–24 years)	1.8466***	1.9890***	1.7016***	2.0874***	2.1497***	2.0099***	1.3059	1.6888*	1.049
Civil status (baseline: single)									
Married woman	0.7774	0.7777	—	0.8852	0.9028	—	0.3853**	0.4878*	—
Married man	0.3063***	—	0.3045***	0.2783***	—	0.2771***	0.4982	—	0.4425
Divorced, separated, widowed woman	1.0157	1.0973	—	—	—	—	—	—	—
Divorced, separated, widowed man	0.6681	—	0.7394	—	—	—	—	—	—
Man with children	1.3163	—	1.2833	1.4351	—	1.3861	0.9881	—	1.0367
Woman with children	1.4580**	1.4594**	—	1.3959*	1.4251*	—	1.3377	1.3021	—
Number of household members	1.0478*	1.0352	1.052	1.0154	0.9966	1.0363	1.2186***	1.3456***	1.1339
Fatherless	1.0414	1.0998	0.9561	—	—	—	—	—	—
Motherless	0.8424	0.9425	0.7712	—	—	—	—	—	—
Working while studying	1.193	1.1622	1.2079	1.1897	1.1795	1.175	1.0138	0.6806	1.3375
Dropout	0.6791***	0.9408	0.5657***	0.9273	1.3016	0.7163*	0.6032**	0.8614	0.3969***
Location (baseline: Ulaanbaatar)									
Aimag centre	0.7614**	0.6872**	0.866	0.7471**	0.6719**	0.851	—	—	—
Soum centre	0.6414***	0.5192***	0.8063	0.6125***	0.4775***	0.8105	—	—	—
Rural area	0.3615***	0.4467***	0.3177***	—	—	—	—	—	—
Constant	1.9000***	2.4683***	2.0252***	1.8711***	2.3461***	1.6496**	0.3345***	0.5628	0.6847
N	3670	1909	1761	2711	1425	1286	959	484	475

Note: The table reports relative risk ratios.
Source: Own elaboration on the Mongolian SWTS.

Joblessness and WP

Employment itself is not always a way out of poverty. In this section, we ask whether dropping out of school positively affects the probability of finding a job or experiencing WP once a job has been found.

Table 5 presents Multinomial LOGIT estimates of equation (4) for the oldest age group (20–29 years of age). The table also provides a gender and a territorial breakdown with separate estimates for urban (Ulaanbaatar, Aimag and Soum centres) and for rural areas. The baseline category is employment. Panel (A) shows relative risk ratios of the estimates concerning the probability of being WP rather than being in gainful employment, and Panel (B) reports the relative risk ratios of the estimates concerning the probability of being jobless rather than being in gainful employment.

In unconditional estimates, dropping out of school appears to have a probability of experiencing low-income jobs about 10.3 times higher than average and a probability of being jobless lower than average, but not statistically significant. This result in terms of the likelihood of being jobless is due to important gender differences: women (men) who dropped out have a higher (lower) than average risk for joblessness. Both coefficients are statistically significant and depend on the different reasons for dropping out of school of men and women, namely, herding and domestic chores respectively.

Conditional estimates partly confirm these findings. First, dropping out of school is associated with a higher risk of WP, although such a risk is only statistically significant in rural areas. This is an indirect confirmation of the role of child labour in herding as a factor of dropout. In fact and additionally, dropping out of school reduces the risk for joblessness for men, also in urban areas, but is not a statistically significant determinant of joblessness for women. The difference in statistical significance between conditional and unconditional estimates in the case of women is probably due to the other observed characteristics of women, essentially having children, which also partly explains their higher risk of joblessness.

Education provides quite an important defence against WP in Mongolia. All odds ratios are lower than one, although not all coefficients are statistically significant. This contributes towards justifying the tendency of young Mongolians to attribute great importance to higher education in their aspirations (Pastore, 2009).

Civil status and the status of the mother/father do not seem to be a statistically significant determinant of WP, with some exceptions, such as married men who are less likely to be WP and women with children who instead are more likely to be WP.

Furthermore, the probability of WP is much lower in the capital city of Ulaanbaatar than in the Soum centres, or even more so in rural areas. The difference between the capital city and the Aimag centres is not highly significant. As Mearns (2004) reports, this is also the consequence of the low productivity of jobs in rural areas and of the dismantling of state-owned and cooperative large farms typical of the soviet times.

Unreported Fairlie decomposition of the gap in the probability of finding gainful employment for those who drop out of school suggests that only about one-third of the gap is explained by observed characteristics and, among them, a low level of educational qualifications covers almost all of the explained components of the gap, which seems like another way of saying that it is dropout itself that matters.[13]

Summary Remarks

This article studies the determinants of poverty in Mongolia. The main hypothesis that the article aims to test is whether household poverty can be taken as a risk factor for youth poverty. The first

step of the analysis consists of studying correlations between a number of indicators of household poverty and the probability of dropping out of school. In a second stage, the article shows that dropping out of school can dramatically increase the probability of experiencing WP, that is, working for an income that falls below the poverty line.

Household poverty is determined by means of a number of indicators, not only HI but also the number of household members, whether parents are alive and the educational level of parents. A specificity of this article is also the usage of a monetary measure of household poverty, such as income of $1, $2 and $3 a day, as the MDGs would suggest.

All of these background factors are important determinants of school dropout. Even after controlling for all the components of family background, the probability of dropping out of school is still dramatically high for the lowest incomes levels. More specifically, the poorest HI segment has about 3.9 times higher probability of dropping out of school than that of the baseline group with an income of more than $100 a month. Moreover, financial constraints are not gender neutral: they are much greater for men in Ulaanbaatar and for women in rural areas. In addition, the educational level of parents, especially of mothers, is an important proxy of the poverty level of households.

Step 2 of the analysis asks and answers the question whether experience of being a school dropout is able to increase the chances of falling into WP and/or joblessness. We show that young people who dropped out of school have double the average chance of experiencing WP. Again, this effect, being greater in Soum centres and rural areas than in the capital city or in the other Aimag centres, depends heavily on the location of individuals. This might depend on the lower average incomes and the lower labour market dynamism of rural areas. However, dropping out of school reduces the risk for joblessness for men because child labour in herding is their reason for dropping out of school, but increases the probability of being jobless for women who drop out of school to perform domestic chores.

This article has clear policy implications. By highlighting the key role of financial constraints on access to education, it suggests that special support should be provided for young people born in households living on $1 a day. This in turn justifies government programmes, often supported by international organizations, such as the ILO and the World Bank, aimed at providing special financial aid to households living in extreme poverty. It also confirms the importance of those programmes of non-governmental organizations that enable households in western countries to provide monthly cash transfers to the poorest children living in the most peripheral areas of Mongolia. In fact, given the small amount of funds that are necessary and the nature of the direct interrelationship between sending and recipient households, these programmes are an important policy tool whereby every family living in an advanced economy can be a policy maker.

Future research will apply some recent indices of inequality and poverty to Mongolia that also take account of the role of inequality of opportunity, which are comparable across countries (Brunori *et al*, 2013a, b).

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Notes

1. As at 31 May 2007, the nominal exchange rates of the TUG to the Euro and the US dollars were as follows: 1 Euro=1566.8700 Tughrik, 1 Tughrik=0.0006 Euro, 1 US Dollar=1164.6993 Tughrik, 1 Tughrik=0.0009 US Dollars.
2. We wish to thank the anonymous referee for pointing this problem out.
3. Compulsory education ends at the age of 15 when it is time to attain a diploma of non-complete secondary education. Primary and lower secondary education together comprise the basic compulsory educational level that the state provides for free, as stated in the country's constitution. General education includes a combination of basic education and high school (Gerelmaa, 2005).
4. del Rosario (2005) reports many examples of discrimination of urban pupils and teachers against other students coming from rural areas and/or from poor families. The former believe that the latter hold back the class.
5. The econometric approach adopted in this paper allows only us to study correlations. Insurmountable data limitations prevent us from assessing causality. We submit, though, that the methodology adopted here can be a basis for more in-depth panel data analysis where longitudinal data is available.
6. Some respondents might consider individual income as part of HI. Unfortunately, there is no information available regarding this problem. Omitted scatter analysis of the two variables shows a strong positive correlation. We wish to thank an anonymous referee for this insightful remark and suggestion.
7. To distinguish the effect of household income from a peer effect, different estimation procedures should be carried out, which our data do not allow. I thank John Earle for noting this.
8. For a full account of how the Fairlie decomposition method is implemented in STATA, see Jann (2006).
9. Despite often being very close to it, the poverty line should not be confused with the 25th percentile.
10. The Mongolian SWTS resembles similar surveys carried out in Azerbaijan, China, Egypt, Iran, Kosovo, Nepal and Syria. For further information, see www.ilo.org/employment/areas/WCMS_159352/lang–en/index.htm.
11. Table 1 only includes dropouts from primary education.
12. The estimates are available on request from the author.
13. The decomposition is obviously based on ancillary LOGIT estimates of the probability of being working poor rather than employed for a sufficient income, ignoring the third category of jobless young people. In fact, Fairlie cannot be implemented in the case of MNL estimates. The results of the decomposition are available on request from the author.

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