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Declining Secondary Enrollment in Albania: What Drives Household Decisions?

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Abstract

In some post-socialist countries, the post-socialist economic downturn had a negative impact on human development indicators. Education is one area of concern. In this paper, we examine secondary schooling dynamics in Albania, where enrollment declines have occurred. Drawing on the existing literature on household investment in schooling, we examine factors underlying the recent changes. We find that, as in other counties, parental education has a significant impact on the choice to attend secondary school. But we also find that factors specifically related to transition, including household economic resources, local employment prospects, opportunity costs of children's time, and access to school are significant predictors of schooling decisions in Albania. These findings suggest a number of areas where policy interventions may positively affect long-term outcomes.

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Declining Secondary Enrollment in Albania: What Drives Household Decisions?

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The post-socialist transition resulted in a well-known, radical decline in GDP. In 1998, only Poland and Slovenia had regained pre-1989 levels of output per capita and most countries remained 30-40% below 1989 levels (UNICEF, 1999). By 2000, most post-socialist economies had returned to growth (World Bank, 2001; 2002). But in countries where downturns were deeper and longer, the associated dislocation had a negative impact on human development indicators (Meurs and Ranasinghe, 2002). These changes may, in turn, have long-term affects on the development trajectories of the affected countries.

Education is one area of concern. Former socialist countries made significant progress in increasing educational access and attainment during the middle decades of the twentieth century. In most cases starting from high levels of illiteracy and low levels of school attainment (see, for example, Perrie and Davies, 1990:38; Turnock, 1986:127, 128), by 1989 most socialist countries could boast of universal literacy and reasonably high levels of secondary school enrollment and attainment (WDI, 2000; UNDP, 1990). But in recent years, former socialist countries have seen a decline in educational spending, alongside high unemployment rates and rising poverty. In some cases, this has been associated with a decline in school enrollments, especially at the secondary level, and declines in average school attainment (Hertz, Meurs and Selcuk, 2007).

The declines in enrollment rates may prove to be temporary, with improvements occurring as economic transition progresses. But effects of the downturn may also persist for generations, and significantly impact the long-run growth trajectories of affected countries. Recent literature has shown a strong impact of parents' educational attainment on their children's educational outcomes (Black, Devereux, and Salvanes, 2005;

Oreopoulos, Page, and Stevens 2006), as well as a significant impact of educational levels on patterns of investment (Noorbakhsh and Paloni, 2001) and rates of growth (Barro and Lee, 1994)

In this paper, we examine secondary schooling dynamics in Albania, where enrollment declines have occurred. Output fell dramatically in Albania after 1989, but economic growth resumed fairly quickly. Despite the quick return to macroeconomic growth, gross secondary school enrollments have fallen dramatically, from 78.8% in 1989 to a low of 38.6% in 1995, then climbing somewhat to 50.3% in 2002 and 58.7% in 2005 (Transmonee, 2007).

Drawing on the existing literature on household investment in schooling, we examine factors underlying the recent changes. We find that, as in other counties, parental education has a significant impact on the choice to attend secondary school. But we also find that factors specifically related to transition, including household economic resources, local employment prospects, opportunity costs of children's time, and access to school are significant predictors of schooling decisions in Albania. These findings suggest a number of areas where policy interventions may positively affect long-term outcomes.

II) Explaining Household Choices about Schooling:

Economics and sociology provide a well-developed theoretical framework for understanding investments in schooling. In the most comprehensive framework, decisions to invest in further schooling are modeled as a set of sequential choices. First, government policy determines the choice sets available to parents and children. This

includes determination of legal access to and costs of schooling, as well as school quality. Government policy also to some degree the returns to schooling and to other potential household investments, and the macroeconomic context of household choice. Parents then make decisions regarding investments of time and money in children and their schooling, and children, in turn, make decisions about schooling investments.

Parents and children must weigh direct and opportunity costs of schooling against expected returns to their educational investments. These costs and expected returns vary across households, due in part to variations in parental characteristics, such as their own education. Parental education should operate both as an indicator of parents' preferences for education (which they may also instill in their children) and of their ability to educate their children directly, allowing them to do better, and so go farther in school. Parental education may also be a signal of higher latent intellectual ability, which may be shared by their children. In the inevitable absence of perfect capital markets, parental income also has an important impact on schooling choices (Haveman and Wolfe, 1995; Lillard and Willis, 1994). Further, parental preferences may vary with the age and sex of the children. The resulting model of choice is summarized in Figure 1.

Empirically, studies typically focus on a reduced form of these relationships, modeling parental choice to invest as function of parental characteristics such as education and income, controlling for the policy context and child characteristics. These studies show that parental education and income consistently have a significant positive impact on educational investment, as measured by educational attainment (Haveman and Wolfe, 1995).

Figure 1: Household Schooling Choice
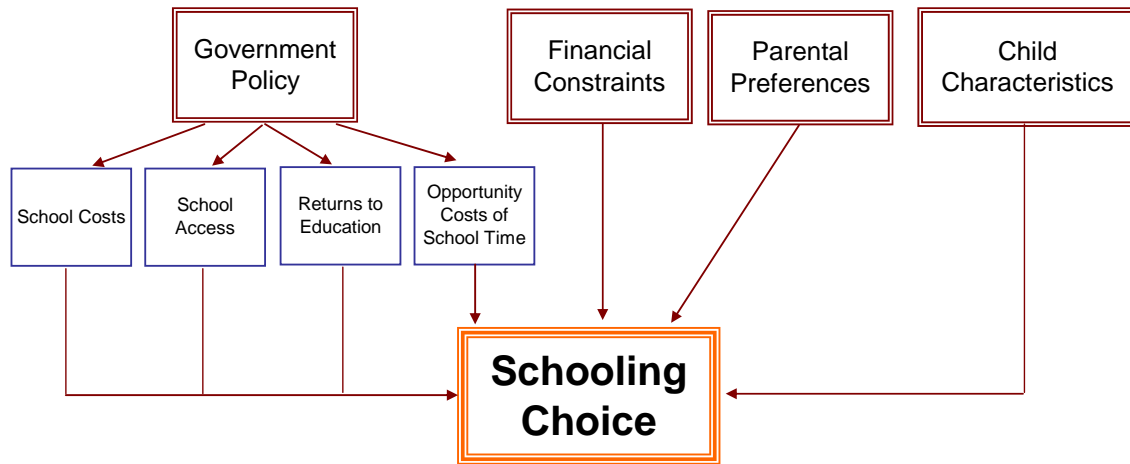
Studies also often find that government policy affects educational outcomes. One important way that government policy may influence household choice is by affecting access to and costs of schooling. While primary and secondary schooling are often nominally free, or involve only minimal fees, schooling can involve real costs to families, and these costs are heavily influenced by government policy. These costs include direct fees, the costs of school supplies, transportation and clothing (uniforms, shoes), as well as the opportunity costs of children's time. In Malaysia, government policies expanding access to education contributed significantly to children continuing longer in school over the period 1950-1980 (Lillard and Willis, 1994:1161). A rapid school construction program in Indonesia starting in 1973 also raised schooling attainment for men (Duflo, 2001), while for women it appears that the elimination of school fees and the imposition of compulsory secondary schooling had a greater impact on schooling (Hertz and Jayasundera, 2007). Socialist countries likewise pursued large-scale expansion of access to education. Ganzeboom and Nieuwbeerta (1999:352) find

that these policies had a significant impact on household choice with respect to schooling, reducing by half the partial correlation between parental education and the education of their children between 1940 and 1985.

Finally, government policy affects expected returns to education, by affecting the macroeconomic climate, investment patterns, and labor laws. Looking at Bulgaria during the post-socialist period, Hertz , Meurs and Selcuk (2007) argue that changes in the availability and cost of schooling, and in the expected returns to education, have adversely affected decisions about educational investment, reducing educational attainment.

III) Background:

A) Schooling in Albania

Widespread access to education, especially secondary education, became possible only after the 1960s. Albania was part of the Ottoman Empire until 1912. In the period leading up to 1912, and then over the ensuing decade, struggles over Albanian territory undermined efforts to expand schooling in the Albanian language. A 1934 school reform law nationalized schools and standardized the ages of compulsory schooling across the country: 7-14 years of age in rural areas, 4-14 years in urban areas. An important expansion of primary schools was planned. In 1938, the very limited secondary school system was reorganized, placing a heavy emphasis on technical education. Over the period 1922-1938, the number of primary schools increased from 509 to 642, while secondary schools increased from 2 to 18 (Table 1). Efforts to enforce compulsory education were only beginning, however. The total number of students enrolled in both

levels rose from almost 27,000 to about 60,000 over the period (estimated total

population in 1942 was 1,150,000 people). An estimated 30-40% of villagers and 60%

of the urban population had achieved literacy by 1942 (Thomas, 1969: 1-7).

Table 1: Secondary School Dynamics in Albania, 1938 - 2000

Year	[1] Gross Enrollment Ratio, Upper Secondary	[2] Number of Secondary Schools	[3] Of these, Rural	[4] Number of Vocational Secondary Schools	[5] Of these, Rural
1922*		2			
1938*		18			
1945*		175			
1955*		2192			
1990	82	827	568	575	438
1991	62	763	510	209	114
1992	50	650	428	95	17
1993	45	577	371	87	18
1994	41	472	288	69	8
1995	39	430	269	50	1
1996	39	408	259	51	2
1997	41	400	252	60	5
1998	42	394	243	54	1
1999	42	386	n.a.	51	n.a.
2000	45	375	n.a.	50	n.a.
2001	48	372	n.a.	51	n.a.
2002	50	n.a.	n.a.	n.a.	n.a.
2003	53	308	218.	50	3
2004	58	n.a.	n.a.	n.a.	n.a.
2005	59	355	215	34	5

Source: Transmonee, 2007; Statistical Yearbook of Albania, 2003; Palomba and Vodopivec,
2001; Ministry of Education, 2007; Thomas, 1968:7, 46.

*Includes all schools beyond the 7th grade.

From 1938-1944, plans for expanding schooling were disrupted by military and

political conflict, and by the end of World War II the majority of the population remained

illiterate (Bassler, 1995:307). After 1944, however, the new communist government

renewed efforts to expand access to schooling. A 1944 educational congress again made education compulsory, this time extending the length of schooling by a year, to 15 years of age, and called for establishing a 5-year primary school in every village. Seven year middle schools, with both terminal, technical and continuing, academic options were also to be expanded. By 1958, there were 2249 primary schools, 400 7-year schools, and 51 middle schools. The number of students in primary and secondary school had risen to 218,143 (for 1956, an increase of 264% over the level in 1938). In 1957, the first Albanian university opened. Non-attendance continued to be a concern, however, despite laws regarding compulsory schooling (Thomas, 1969: 34-39).

In 1964, the 7-year schools were replaced with 8-year schools, and a uniform system of schools through the 12th grade was established. By 1966, there were 119,043 students enrolled in the 8-year schools, of which 43% were girls, and a total of 12,761 students were attending the university in Tirana, of which 22% were female (Thomas, 1969: 42-99). Throughout the expansion of schooling, the emphasis continued to be on practical training and developing links between schooling and work, especially at the secondary school level.

The early years of socialism resulted in a boost in educational attainment. Figure 2, below, shows a clear increase in average schooling for those educated after the war. Those who were 69 at the time of the 2005 survey (so born in 1936 and educated from 1943 on) completed 5 to 6 years of schooling on average. Average years of schooling grew steadily to 10 years or slightly more for the cohorts born over the next 15 years. Since that time (i.e. for those 50 or younger in 2005, born after 1955, and educated after 1962) average educational attainment has more or less held steady at between 10

and 11 years. During the socialist period, terminal secondary vocational degrees over

under 12 years provided qualifications for sought-after industrial jobs.

Average Years of Education by Cohorts
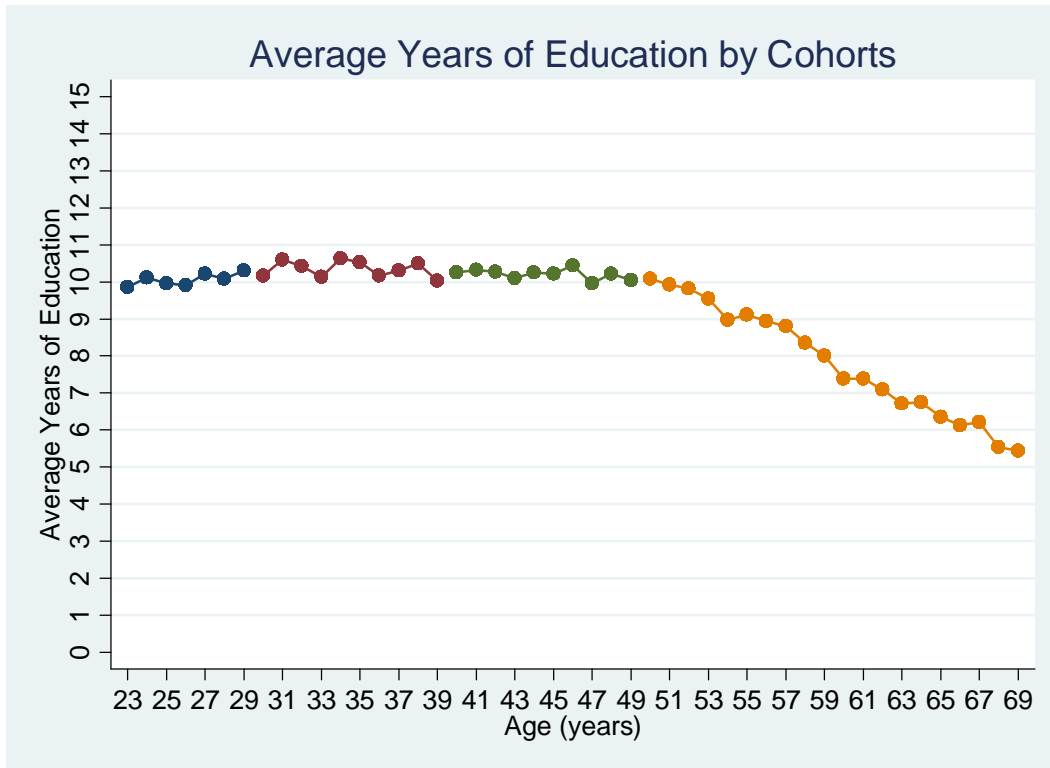
Source: ALSMS, 2002; 2005.

In 1990, (gross) primary school enrollment rates were around 100% and

secondary school enrollment rates in Albania were around 80% (Palomba and

Vodopivec, 2001; Transmonee, 2007; Table 2). About 80% of the population was literate

in 1991 (Bassler, 1995:307).

After 1990, however, enrollments fell significantly. Gross primary school

enrollments fell steadily to about 90% in 1999, and have hovered around that level since.

Upper secondary gross enrollments (for children 15-18) fell more dramatically, from

almost 79% in 1990 to around 40% for the period 1996-1999 (Transmonee, 2007).

Secondary school enrollments fell even farther in rural areas (Palomba and Vodopivec, 2001: 62).

Beginning in 1999, upper secondary school gross enrollments began to recover somewhat, to 58% in 2005. These levels are still well below those of 1990, however, and are the lowest among transition economies outside Central Asia (Transmonee, 2007). As can be seen in Figure 3, enrollment declines around the age of 14, as children transition to upper secondary school.

Figure 3: Enrollment Rates by Age, Albania, 2002, 2005
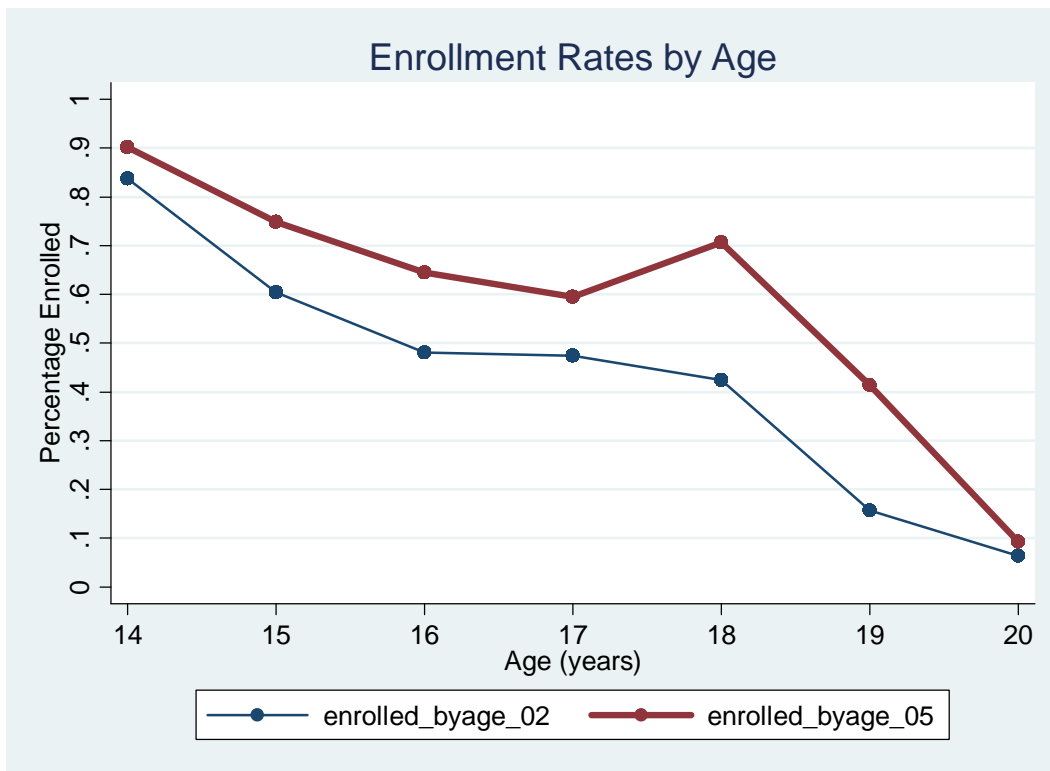
Source: ALSMS, 2002; 2005.

B) Underlying Factors:

In post-socialist economies, the radical changes since 1989 have significantly affected the context of parental and student schooling choice. The well-known post-socialist economic downturn has affected employment opportunities, expected returns to education, and households' ability to pay schooling costs. Parents' and children's preferences may also have changed, as traditional cultural values, which place less value on education, have experienced a revival, at least in some areas (Silova and Magno, 2004). Changes in government spending have reduced access to, and the quality of, secondary schools, while also affecting the costs of schooling, as school fees have risen. The expected returns to education, households' preferences, and ability to pay, may be thought of as affecting the demand for education, while costs and availability of secondary schooling reflect supply-side factors influencing schooling choice. In this section, we outline changes in these variables underlying schooling choice.

Real per capita GDP fell to 67% of its 1989 level in 1992 but then began to climb slowly. Despite the quick return to growth, it took until 1998 for per capita GDP to regain the 1989 level, but growth then continued through 2005. Between 2002 and 2005, the real per capita GDP increased 16% (Table 2), to about $7376 (US).

Real wages fell with the decline in output, reaching a low of 69% of 1989 levels in 1993. By 2000, real wages had reached 139% of 1989 levels, but they remained very low (UNICEF 2003). The UNDP estimates average wages per month in 2000 at 16,620 lek (about 119 USD in 2000), whereas Albanian households estimate that they need an average of 31,000 lek per month to live a decent life. Rural incomes are significantly

lower (UNDP, 2000: 15), although costs of living in rural areas are also likely to be

lower.

Table 2: GDP, Education Spending, and Employment: Albania 1990-2005

Year	[1] Real GDP per capita (Index)	[2] Education Spending as % of GDP	[3] Real Education Spending per capita (Index)	[4] Population Aged 5-17 (Index)	[6] Employment as % of Population Aged 15-59
1990	100	4.2	100	1261	73.6
1991	72.4	5.0	86.1	99.7	74.4
1992	67.9	4.2	67.8	99.0	59.7
1993	75.3	3.3	59.10	98.6	57.1
1994	83.7	3.3	65.7	98.7	62.4
1995	92.2	3.8	83.4	98.9	60.2
1996	101.6	3.7	89.4	100	58.4
1997	91.8	3.3	72.1	101.2	57.2
1998	104.0	3.2	79.2	101.3	55.3
1999	114.7	3.3	90.0	101.4	53.6
2000	123.2	3.1	90.1	101.8	55.9
2001	131.5	3.1	97.0	86.4	50.3
2002	134.9	2.8	89.9	85.5	49.6
2003	141.8	3.0	101.2	84.2	49.2
2004	149.3	3.1	106.5	82.3	48.8
2005	156.6	3.1	115.5	81.0	47.9

Source: Transmonee, authors' calculations (2007).

Household incomes have been further depressed by the fact that many people lack

formal, paid work. Only 50% of the population aged 15-59 years was employed in 2002,

and 48% in 2005 (Table 2). Registered unemployment was lower: 15.8% in 2002, 14.1%

in 2005 (Transmonee, 2007), and some of the non-employed labor force maybe out of the

country (de Coulon and Piracha, 2005). Overall, the UNDP reports that 25% of the

population faced absolute poverty in 2002, with the share falling to 18.5% in 2005

(UNDP 2007: 3). Poverty declined somewhat even as unemployment continued to rise,

due to a significant social welfare program (Ndihma Ekonomike) put in place in 1993 (Kilic, 2007).

The structure of employment also changed. As employment in manufacturing, extractive industries, and construction declined, agriculture and trade have become more important fields of employment (INSTAT, 2003). In these fields, self-employment is more common, and required skills have changed from those needed in the socialist economy. Students may not be well-served by existing educational programs.

Partly as a result of these changes, households can expect only limited gains if they invest scare resources in secondary education. Among employed Albanians, estimates based on 1996 data show high private returns to primary schooling (13-16% for an additional year) but low returns for both vocational and general secondary schooling (2.2 - 4.5% for an additional year, depending on the estimation method and type of schooling, compared to a global average of about 18%) (Palomba and Vodopivec, 2000; Psacharopoulos and Patrinos, 2002:12-13). Among Albanian children who expect to be self-employed, especially in agriculture, the lack of an agricultural/vocational track in secondary education may mean lower than average returns.

While secondary school graduates cannot expect much higher wages than their primary school-educated counterparts, and they also face no better employment probabilities than those who have completed only primary education. Both experienced unemployment rates around 49% in 1997 (Berryman, 2000: 84). Expected returns to secondary education are even lower than those outlined above if one considers this low probability of finding a job. Payoffs to university education are higher in terms of both wages and employment outcomes, but Albania has the lowest university enrollment rate

in Europe (World Bank, 2002). Unless prospective students see a high probability of attending university after high school, the benefits of secondary education appear limited.

Expected returns are even lower for girls, for a number of reasons. Girls are less likely to participate in the labor market after graduation: women made up less than 45% of the labor force in 1998 (World Bank, 2002). Women face a higher probability of unemployment than their male counterparts (18% compared to 13% in 2004) (World Bank, 2006), and they can expect to face labor market segregation and lower wages (Miluka, 2007). In addition, if girls are expected to leave the family home and join their spouse's household, as is traditional in many parts of Albania, parents may see little benefit to educating girls.

While expected returns to secondary education may be low, opportunity costs of educational time may be significant. High unemployment often leads families to mobilize as many workers as possible. Privatization of agricultural land and loss of formal (non-agricultural) employment have combined to radically increase the prevalence of small-scale family farming, which relies on household labor. With the closing of state-run childcare centers and preschools, older children may also be needed to take care of younger siblings. Early marriage, which became more common as the national economy deteriorated (Silova and Magno, 2004), can particularly increase opportunity costs of schooling for teenage girls, who may have full-time work at home.

The above factors may affect families' demand for secondary education, but changes in government spending on education have also affected supply over the period 1989-2005. Government spending on education as a share of GDP fell from 4% of GDP in 1989 to 2.7% in 1999, as real GDP fell and remained below previous levels (UNICEF,

2003:95). Real spending on education thus fell dramatically (Table 2). Despite the decline in enrollments, real spending per student fell from 780 lek in 1990 to 614 lek in 1998 (Palomba and Vodopivec, 2001:71).

Government spending on education as a share of GDP hovered around 3% from 2000-2005, while real GDP increased, resulting in a 30% increase in real spending (WDI, 2007) (Table 2). This leaves 2005 spending below the already low level of 1990, however.

The result of the declining funding was loss of both access to schools and a decline in their quality. Schools were closed, especially in rural areas. While the number of primary schools actually increased after 1989, the number of secondary schools fell radically, from 827 in 1990 to 394 in 1998. The vocational technical schools which had historically serviced rural populations, offering agricultural training among other specializations, were particularly targeted for closure. Of the 575 vocational schools in 1990 only 54 remained in 1998, with only one serving a rural area. Resources were shifted into general-track schools, and their number expanded, from 75 to 331 (Berryman, 2000: 102). While there are some important arguments in support of such a shift of resources into general schooling (Strohl, 2003), the shift left rural populations with little choice in schooling and without programs leading to a terminal degree or marketable skills. Access to even the general track schools was limited, as the total number of rural schools fell by 57% (Berryman, 2000) (Table 1).

In schools that remain available, school quality has fallen in many places. In the face of declining resources, maintenance and upgrades of schools were deferred. About 35% of schools were built before 1960, and maintenance was limited in the final years of

socialism, so that many schools were in very poor condition in 1989. Since then, the country experienced two periods of civil unrest and vandalism in the 1990s. Now, many schools do not offer even basic facilities and infrastructure (OECD, 2002: 11).

Teacher quality has likely declined as teacher salaries have fallen, relative to other public sector salaries, and working conditions deteriorated. Student-teacher ratios in secondary school have fallen, on average, but urban schools have experienced serious crowding (Palomba and Vovpivec, 2001:35), as Albania has experienced massive rural-urban migration since 1989. Urban populations increased 30% from 1990-1998 (UNDP, 2000:46), and have continued to increase (see below for a discussion of dynamics between 2002-2005). Although few (fewer than 1%) Albanian drop outs in our survey data (see below for a full discussion of the data) listed teaching quality as a factor in their decision not to continue schooling, Palomba and Vodopivec (2001: 66) find a small but significant impact of the percentage of unqualified teachers in a school district on a student's decision not to attend

Even as school quality has declined, costs of schooling have risen. On average, households with enrolled students spent about 850 new lek on monthly on educational expenses in 2002 and 1129.19 new lek (in constant 2002 lek, when 1 USD equaled about 140 lek) in 2005 but, as can be seen from Table 3, expenditures varied widely.

School closures play a role in the increased costs of schooling to students and their families. For many students, daily commuting would not be feasible, given distances, reduced availability of public transport and rising transportation costs. For those boarding students, schooling costs extend well beyond books and fees, to accommodations, food and weekend travel. Families of boarding students also face

additional opportunity costs, as the student is not available to help with farming and other household production during the week. Even for families whose children can commute daily, transportation costs to schools beyond the village can be significant. Transportation was the second largest cost in both years, after tutoring. Among the approximately 1400 high school drop outs in the Albanian survey data (described below), 9% gave distance to school as their reason for not attending school, while another 7% listed costs more generally.

Table 3: Average Monthly Costs of Secondary School, Albania 2002, 2005

Average Monthly Educational Expenditure for Enrolled Individuals				
Educational Expenditure	Amount			
	2002		2005	
	Mean	Std	Mean	Std
school fees	20.9	367.6	186.9	1260.6
uniforms	23.6	97.8	26.9	85.5
textbooks	133.9	107.1	112.5	153.7
suplemental textbooks	n.a.	n.a.	40.6	73.2
materials	55.6	66.0	66.2	65.2
lodging	51.7	460.0	81.9	653.8
excursions	n.a.	n.a.	72.6	176.3
other educational expenditure	20.7	106.7	40.3	185.6
transportation	227.5	1805.0	172.6	478.8
tutor	306.1	1686.9	326.2	1689.7
gifts to teachers	n.a.	n.a.	15.1	51.7
school service	10.3	18.8	0.2	5.8
total educational expenditures	850.3	2555.5	1129.2	2508.7

* measured in real 2002 lek

Source: ALSMS, 2002, 2005.

IV) Analysis and Data

Our argument is that the changes in many of the key determinants of the costs and benefits of education that we have just itemized play an important role in the deterioration in secondary school enrollments. Ideally, an empirical test of this claim

would be based on microsurvey data from 1989 to the present, but such are not available. Instead, we draw on the 2002 and 2005 Albania Living Standards Measurement Survey (ALSMS), as well as wage and unemployment data at the district level from the Albanian Institute of Statistics (INSTAT), to provide a cross-sectional analysis of factors underlying families' decisions to enroll their children in secondary school. If we can establish that income, local unemployment rates, distance to school, and other related factors are important determinants of secondary school enrollment probabilities in present day Albania, then it is highly likely that historical changes in these variables can also help explain the observed changes in enrollment rates.

The 2002 ALSMS includes 450 Primary Sampling Units (PSU) with 8 households in each, for a total sample size of 3,600 households and 15,559 individuals. The survey covers general household characteristics, such as size and composition of the household, educational levels of household members, ownership of both agricultural and non-agricultural land, labor market participation, farming, and income. The survey is representative at the national level and is stratified by four regions: Coastal, Central, Mountain and Tirana. The 2005 ALSMS employs the same sampling frame and survey design as the 2002 ALSMS. There are 455 PSU with 8 households per PSU, for a total of 3,640 households and 15,750 individuals. The surveys in both years are very comparable,[1] and we pool them in our analysis to increase its statistical power.

Albanian schools are organized, as noted above, into 8-year primary and "lower secondary" schools (typically for children aged 7-14 years), followed by 3-5-year "upper secondary" tracks. Eight years of education are compulsory, and children must pass an

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[1] The surveys were also implemented during approximately the same months (April-September in 2002 and April-November in 2005), making the schooling responses comparable.

exit exam in order to continue beyond the initial 8 years[2]. Enrollment rates decline

significantly, by 15 to 20 percentage points, after age 14 (which is the end of compulsory

schooling, and after which children must pass an exam to continue in school), as seen in

Figure 3. To explore the determinants of secondary school enrollment, while allowing

for slight departures from the normal age-grade profile, we confine our analysis to

individuals between the ages of 14 to 20, and we exclude individuals who are 18 and

older and report having completed a secondary degree, or that they are attending

university.[3]

Given these criteria, the final sample consists of 1,769 individuals in 2002, and

1,825 individuals in 2005, for a total of 3,594. In all analyses, the data are weighted

using the sampling weights supplied by the World Bank. These weights are designed to

ensure that the sample is nationally representative, taking account of both initial design

effects as well as the problem of non-random non-response.

Enrollment is a binary outcome (with 1 indicating enrollment), and its

determinants are analyzed using the standard probit model:

$$Pr(Y=1|X) = \Phi(X\beta)$$

where Y is the binary outcome, X is a matrix of explanatory variables discussed below, Φ

is the cumulative distribution function of the standard normal distribution, and β is a

vector of parameters.

In analyzing the factors underlying the enrollment decision, we include in X

proxies for most of the variables mentioned in Figure 1. Demand-side factors include

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[2] After 2005, the exit exam was moved to the end of 9th grade.
[3] Note that we have chosen to include in those "not attending" children who have opted for, and completed, a short secondary track of 3 years. We include them in the non-attending group because we cannot know if the choice to take a short course was made freely, or chosen as a result of the factors we consider here. We assume the latter.

household characteristics (parental preferences, households' ability to pay the costs of schooling), opportunity costs of schooling, and expected returns to schooling. We also examine the impact of supply-side factors that determine the cost of access to secondary school.

Household and Personal Characteristics

Parental education is one of the main correlates of children's education in previous studies. To measure parental education, we use the years of schooling of the head of household. The household head's education is an appropriate measure for parental education in Albania due to the Albanian family structure, where the head of the household is considered the main decision maker. The head's years of education varied from 0 to 21 years. Seventeen percent of children had a household head with fewer than 8 years of education.

More educated parents are expected to positively influence their children's schooling in two ways (aside from their higher expected income, which is controlled for separately): First, more educated parents are presumed to have a higher preference for education, and they may also have better information on returns to education. Second, more educated parents are better able to educate their children at home, which may complement and facilitate their achievements in school. As can be seen from Table 4, the heads of household of enrolled children had significantly more education than the heads of household of un-enrolled children, as expected.

Age is obviously one of the most important determinants of enrollment: as seen in Figure 3, enrollment declines nearly monotonically with age, but in a non-linear fashion, with a particularly steep drop between ages 14 and 15, which is when the exam-based

transition to upper secondary school occurs. To capture these non-linear age effects we use a set of age dummies, with age 14 being the omitted reference category. To capture the potential impact of differing parental (and child) preferences by gender, we include an indicator for boys. As can be seen from Table 4, enrolled children were more likely to be male (although this difference falls below the 10% threshold for statistical significance in 2005).

As a final measure of parental preferences, we include a dummy for female-headed households. There is now a significant literature suggesting that when women contribute to decisions about spending on children's health and education, spending levels are higher (Lundberg, Pollak and Wales, 1997). We therefore expect female-headedness to contribute to higher levels of schooling, all else being equal.

The inclusion of household income captures the economic conditions of the household, or its ability to pay the direct and opportunity costs of schooling. Higher income relaxes the liquidity constraints of the household, positively affecting children's education. We measure income on a per capita basis, to control for difference in family size, and then take its natural log to reduce the impact of large outliers. Households of enrolled children have significantly higher per capita incomes than those of children who are not enrolled (Table 4).

Table 4: Descriptive Statistics by Year and Enrollment Status (Weighted)

2002	Enrolled			Non-Enrolled		Total	
	Mean		S.D.	Mean	S.D.	Mean	S.D.
Female Headed Households	0.076	*	0.27	0.050	0.22	0.062	0.24
Children Under 6 years	0.163	*	0.43	0.262	0.55	0.219	0.50
Head's Education	9.797	*	4.07	7.478	3.31	8.491	3.84
Land Owned (Sqm)	4937	*	7394	6937	7506	6063	7520
Distance Index	-0.096	*	0.89	0.375	1.18	0.169	1.09
PC Income (New Lek)	64235	*	63460	46476	39705	54222	52168
Log PC Income	10.48	*	1.98	10.335	1.60	10.400	1.77
District Unemployment Rate	16.08	*	8.68	17.144	8.39	16.678	8.53
District Wage Rate (New Lek)	19037	*	1035	18894	907	18956	968
Urban Household	.51	*	.50	.207	.41	.339	.474
Internal Migrant Household	0.143	*	0.35	0.196	0.40	0.173	0.38
Age	15.55	*	1.471	17.10	1.821	16.43	1.84
Male	0.504	*	0.50	0.436	0.50	0.466	0.50

2005	Enrolled			Non-Enrolled		Total	
	Mean		S.D.	Mean	S.D.	Mean	S.D.
Female Headed Households	0.050	*	0.218	0.076	0.265	0.060	0.24
Children Under 6 years	0.114	*	0.381	0.209	0.482	0.150	0.42
Head's Education	9.924	*	9.923	7.832	3.014	9.141	3.45
Land Owned (Sqm)	5920	*	1570	8483	1280	6877	1470
Distance Index	-0.030	*	0.898	0.565	1.559	0.193	1.22
PC Income (New Lek)	1070321	*	1269938	696170	839548	93026	1142416
Log PC Income	13.45	*	1.193	13.058	1.242	13.302	1.23
District Unemployment Rate	14.74	*	8.32	15.749	7.835	15.120	8.16
District Wage Rate (New Lek)	24375	*	3644	23481	3091	24040	3473.65
Urban Household	.459	*	.499	.233	.423	.374	.484
Internal Migrant Household	0.045	*	0.207	0.030	0.170	0.618	0.49
Age	15.78	*	1.548	16.974	1.718	16.228	1.714
Male	0.512		0.500	0.464	0.499	0.494	0.500

Pooled	Enrolled			Non-Enrolled		Total	
	Mean		S.D.	Mean	S.D.	Mean	S.D.
Female Headed Households	.061	*	.239	.061	.238	.061	.239
Children Under 6 years	.134	*	.401	.241	.521	.184	.464
Head's Education	9.871	*	3.723	7.61	3.20	8.816	3.664
Land Owned (Sqm)	3480	*	1240	3390	9100	3440	1100
Distance Index	-.057	*	.894	.451	1.35	.181	1.158
PC Income (New Lek)	658734	*	1095039	306792	620077	493758	920820
Log PC Income	12.323	*	2.139	11.422	1.980	11.850	2.105
District Unemployment Rate	15.293	*	8.493	16.59	8.200	15.90	8.38
District Wage Rate (New Lek)	22177	*	3892.9	20725	3059	21496	3600
Urban Household	.480	*	.500	.218	.413	.357	.479
Internal Migrant Household	.085	*	.279	.130	.336	.106	.308
Age	15.69	*	1.52	17.052	1.781	16.33	1.78
Male	.509	*	.500	.447	.497	.479	.500

* Difference between enrolled and unenrolled children in this attribute is significant at the 10% level

We use two variables to capture the impact of the opportunity cost of children's time on their enrollment. Informal labor market work for children is still uncommon in Albania (see below). Children not in school are more likely to provide unpaid household labor, including child care, or to work on the family farm. As a proxy for the demand for childcare services we include the number of children in the household under 6 years of age (i.e. not yet in school). The demand for farm labor is measured by the amount of land owned by the household (measured in square meters), although it is important to note that land owned may also reflect wealth of the household (which would have an off-setting positive impact on enrollment).

Enrolled children had significantly fewer siblings under the age of six years than did their un-enrolled counterparts (about one fewer); and their households also owned significantly less land (Table 4). This suggests that land ownership is indeed mainly measuring the opportunity cost of schooling, rather than serving as a wealth measure. Land holdings were small, about 6000 square meters, on average, in 2002 and almost 7000 in 2005, but they varied significantly, from 0 to 42,000 square meters.

Given the high prevalence of internal migration in Albania since 1990, we include a dummy variable indicating whether anyone in the household has moved from a different municipality in Albania since 1990. The expected effect of internal migration is ambiguous. Many households have migrated internally in search of better living conditions and better education for their children. In this case, we expect children in migrant households to be more likely to enroll in secondary school. On the other hand, migrant households have often faced hardship and may have difficulty adapting to their new environment, which may have a potential negative effect on their children's

schooling. Compulsory schooling laws are also harder to enforce when families migrate (see Kabakchieva and Iliev, 2002 for a discussion of this dynamic in Bulgaria). In 2002, 17% of households were classified as internal migrants, while in 2005, a very high 61% were so classified. In 2002, children from migrant households were significantly less likely to be enrolled in school, but by 2005, there was no longer a significant difference between the two groups (Table 4).

Finally, a small number of people in our sample of individuals 14-20 years old are themselves heads of household. We expect that this important difference in the family structure may independently affect schooling decisions, and we control for this using a dummy variable.

Community Characteristics: Albania is characterized by strong, historical and physical differences among regions. These differences include distinct cultural attitudes, particularly in the expectations of gender roles, and also significant differences in levels of economic development. To control for these differences, we use regional dummies, dividing Albania into four regions: Coastal, Central, Mountain and Tirana. As can be seen in Table 5, enrollment rates are significantly higher in Tirana region, although the gap has been reduced since 2002. Tirana is set as the default category for the regional dummies in the regressions. In the weighted sample, 30% of the children come from the Coastal region, 47% from Central, 14% from the Mountain region and 9% from Tirana.

We also include an alternative geographical indicator, a dummy for urban households. This captures regional differences slightly differently, comparing the more highly developed urban areas in all regions with the less-developed rural areas of the

country. Forty- five percent of households lived in urban areas in 2002. By 2005, 48% of sample households lived in urban areas.

Table 5: Enrollment Rates by Region, 2002, 2005

	2002		2005	
	Mean	Std	Mean	Std
Coastal*	0.46	0.50	0.66	0.47
Central*	0.40	0.49	0.57	0.50
Mountain*	0.37	0.48	0.64	0.48
Tirana	0.75	0.43	0.76	0.43
Total	0.44	0.50	0.63	0.48

* Percentage enrolled is significantly different from Tirana, p < 0.10.

Source: ALSMS, 2002; 2005.

Given the recent radical decline in the number of secondary schools, especially in rural areas, the physical lack of access may have become a significant impediment to enrollment. Increasing distance to school raises transportation costs and may create security issues, especially for girls. Our survey measures the distance to secondary school only for enrolled children; moreover, this measure reflects some choice and is not a measure of distance to the nearest secondary school. To examine the impact of access on schooling choice, therefore, we use an index of distance to basic infrastructure created through principal factor analysis[4] including distance to primary schools, health services and bus stops. Bus stops can be an important equalizer, providing students with access to secondary schools located outside their community. As can be seen in Table 4, enrolled children lived significantly closer to these community services than did their un-enrolled counterparts.

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[4] Principal components analysis is a technique for condensing the information contained in a large number of variables to a smaller number by creating a set of mutually uncorrelated components of the data. Intuitively, the first principal component is the linear index of underlying variables that captures the most variation among them.

Expected Returns to Schooling: Given the highly uneven economic development of Albania's regions, expected returns to education are likely to vary greatly. To examine the impact of these variations on schooling decisions, we include district level[5] unemployment and wage rates. We expect higher wages and lower unemployment rates to have a positive impact on enrollment. However, higher average wages also might increase the opportunity cost of schooling thus reducing enrollment, while high levels of unemployment could be expected to have the opposite effect. Average wages varied only moderately across districts in 2002, but the difference increased substantially by 2005. In 2002, the lowest average wage was 83% of the highest, while in 2005 the lowest was only 65% of the highest. Unemployment rates varied significantly in both years, from just under 4% to just over 47%. The average rate fell slightly from 2002-2005, from 16.7% to 15.1%. Among the enrolled, average district-level wages are significantly higher, and average district-level unemployment is significantly lower than among the un-enrolled children (Table 4).

V) Results

Our probit regression results, using the above-listed variables to predict enrollment, appear in Table 6. All estimates incorporate survey weights[6], and their

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[5] Albania's four regions are divided into 36 districts, which are administrative units containing a major city and the villages around them.

[6] The use of survey weights has been the subject of much debate, the problem being that if the parameter one seeks to estimate is in fact heterogenous across people, then neither the weighted nor the unweighted results will yield a consistent estimate of the population mean of that parameter. On the other hand, if the parameter is in fact the same for all people, then the unweighted results are to be preferred, as they are more efficient. Still, Deaton (1997) argues that the weighted results do serve a valid descriptive function, and we present them as our primary findings. In our case, differences in the results of the weighted and unweighted regressions were minor. Any differences between them are mentioned in additional footnotes to the text.

standard errors are calculated to be robust to heteroskedasticity, and to take account of possible correlations among error terms within each primary sampling unit. Note that this latter provision is required, as close geographic neighbors often face similar unobservable shocks or environmental conditions. It has the effect of increasing our estimated standard errors, and so reducing the likelihood of finding statistically significant effects, and is thus a statistically conservative approach.[7]

Finally, note that the coefficients have been transformed to represent the marginal effect on the probability of enrollment of a one unit change in any given independent variable, for a representative individual, namely, someone who is found at the mean of all independent variables. Because no such person actually exists (half male? 46% urban?), we also present results based on various actual combinations of right-hand-side variables, representing real people, in our discussion.

We find that all parameters have the expected sign, and most are statistically significant at the ten percent level or better. Looking first at age, we see a sharp drop in the probability of enrollment, of nearly 31 percentage points, between age 14 (the reference category) and age 15. This decline, which adjusts for the influence of all other factors, is larger than the raw, unadjusted, numbers plotted in Figure 3. The probability of enrollment falls by another 15 percentage points by age 16, then holds steady until age 18, whereupon it falls by another nine points (at age 19) and another five points (at age 20). Clearly, the transition between lower and upper secondary school, and the related exit exam, are related to the decision to discontinue secondary schooling.

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[7] Some slight efficiency gains are possible by taking account of the stratified nature of the sample, but these had no substantive effect whatsoever and are not reported.

We also find strong evidence for the impact of our parent/child/social preference-related variables, among which we include gender. Males are six percentage points more likely to be enrolled at any given age than females. Children of more educated parents were also more likely to be enrolled in secondary school: each extra year of parental education was associated with a 3.7 percentage point increase in the probability of enrollment. Being a member of a female-headed household had a positive but insignificant impact on enrollment.

Our remaining demand-side variable was the log of per capital household income, and this had the expected positive effect on enrollment. To get a sense of the magnitude of this coefficient, consider the household at the 25th percentile of the per capita income distribution (which was 41,000 lek, or 10.62 in logs) as compared to a household at the 75th percentile (647,000 lek, or 13.38 in logs). This income advantage of 2.76 in logs, multiplied by the coefficient in the table (0.01906) translates into a 5.26 percentage point difference in the likelihood of that household's children being enrolled in secondary school.

Table 6: Determinants of Secondary School Enrollment, Children 14-20 years, Pooling 2002 & 2005

N=3594

Enrolled	dF/dx	Robust Std. Err.	z	P>z
Male*	.064	.024	2.63	0.009
age=15*	-.309	.037	-7.55	0.000
age=16*	-.456	.029	-12.39	0.000
age=17*	-.455	.032	-11.04	0.000
age=18*	-.459	.028	-12.02	0.000
age=19*	-.548	.021	-12.83	0.000
age=20*	-.604	.014	-15.82	0.000
Female Headed Household*	.052	.052	0.99	0.322
Child Headed Household	-.347	.096	-2.75	0.006
Children Under 6 Years	-.077	.031	-2.50	0.012
Land Owned (Sqm)	-.6110	1.00	-0.61	0.542
Coastal Region*	.025	.071	0.36	0.721
Central Region*	.076	.072	1.05	0.294
Mountain Region*	.089	.070	1.24	0.215
Internal Migrant Household*	-.094	.054	-1.73	0.084
Head's Education	.037	.005	8.15	0.000
Log Real PC Income	.019	.008	2.45	0.014
Log Real District Wage	.135	.211	0.64	0.524
District Unemployment Rate	-.017	.006	-2.86	0.004
District Unemployment Rate^2	.000	.000	3.11	0.002
Distance Index	-.082	.014	-5.79	0.000
Year=2002*	-.079	.055	-1.43	0.154
Urban Household*	.233	.032	7.08	0.000
Observed Enrollment Rate	.531			
Predicted Enrollment Rate	.535			
Pseudo-R^2	.292			

* dF/dx is for discrete change of dummy variable from 0 to 1.

The two variables that we use to measure the opportunity costs of students' time also seemed to play a role in schooling decisions. Each extra sibling under the age of 6 reduces the predicted probability of enrollment by 7.7 percentage points, all else equal, and children who were running their own households were nearly 35 percentage points less likely to be enrolled.[8] The amount of land owned by the household did not appear to have a significant net impact, however, perhaps because land measures both the demand for farm labor (an opportunity cost) as well as wealth (which should have an offsetting positive effect on the decision to continue in school).

We found some evidence that labor-market conditions, which determine both the expected returns to education as well its opportunity costs, play a role in schooling decisions. Local area wages had no significant effect, but the local unemployment rate did appear to matter. The coefficients on the linear and squared unemployment rate terms indicate that higher unemployment rates are associated with lower school enrollment rates for the majority of the sample, and that the effect is strongest at the lower range of reported levels of unemployment (but note that these are rather high levels of unemployment by standard measures). For example, starting at 10% unemployment, each additional point of unemployment reduces the enrollment probability by 2.3 percentage points. The relationship remains negative until the unemployment rate reaches 22%, which is to say, for 81% of the sample. Thereafter the relationship between local unemployment rates and enrollment probabilities becomes positive. This falling-then-rising effect of unemployment may reflect its dual role as a measure both of opportunity cost as well as of the expected benefits of schooling.

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[8] This latter effect was half as large, and not statistically significant at customary levels, in the unweighted regression equation.

Our composite measure of the distance to public facilities, including bus stops and schools, also proved significant. Although units of this index have no natural interpretation, we can again get a sense of the importance of the distance measure by comparing communities that scored at the 25th percentile with those at the 75th percentile (the more distant communities). This inter-quartile comparison amounts to a change in the distance measure of slightly more than one unit, which would then reduce the enrollment probability by slightly more than the reported parameter estimate for this variable; the result works out to 8.7 percentage points.

Of the various geographic variables, the urban indicator proved very important, whereas regional differences were not (once the urban control was in place). Children in urban areas were 23 percentage points more likely to be enrolled, all else equal, which likely captures a mixture of unobserved supply and demand-side differences between urban and rural households and locales. Interestingly, the growth in the enrollment rate from 2002 to 2005, which is large in unadjusted terms, as illustrated in Figure 3, is rendered small and statistically insignificant once the urban dummy variable is included.[9] This suggests that some of the increase in enrollment observed between 2002 and 2005 was the result of internal migration towards the cities, allowing for better access to schools. Yet children of the internal migrant households themselves were 9.4% *less* likely to be enrolled, all else equal, than their non-migrant counterparts. This may reflect the disruptions associated with migration, or it may be a reflection of the types of families who have recently migrated. Note that there is no contradiction in arguing that migration to the cities increased enrollment, but that recent arrivals in urban areas were still less

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[9] It remains significant in the unweighted model.

likely to be enrolled than their non-migrant urban counterparts – the migrants could still

be more likely to enroll in their new locations than in their old

VII) Discussion:

Our analysis confirms numerous other studies which find a large and significant

impact of parental education on childrens' schooling decisions.[10] The results also

highlight the impact of factors more closely related to Albania's conditions of economic

transition. Low household incomes reduce the likelihood of enrollment in secondary

school, as do limited expected returns to schooling due to high unemployment. On the

supply side, poor access to schools, buses and other infrastructure also negatively affects

enrollment.

Girls are more likely to discontinue secondary schooling than are boys, and the

negative gender effect seems to work through a number of channels. Girls have

traditionally had lower secondary school enrollment rates than boys in Albania. Lower

enrollment rates for girls may thus reflect a continuation of parental preferences and

social norms regarding girls' schooling. But a number of factors related to post-socialist

transition also appear to be negatively impacting girls' outcomes. Household

responsibilities, especially childcare, have a negative impact, and child care

responsibilities have risen as state-run, subsidized preschools have closed. In addition,

children with their own households are much less likely to be enrolled in secondary

school, which means that the re-emergence of early marriage for girls will negatively

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[10] Hazans, Rastringina and Trapeznikova (2007) find a similar strong impact of parental education and income in their study of the relationship between family background, particularly ethnicity, and schooling outcomes in post-socialist Baltic states.

impact on schooling choice. Finally, women face a significantly higher unemployment rate than men, which may reduce expected returns to education for girls.[11]

Demands of agricultural labor (as measured by the amount of land owned by the household) do not seem to exert a negative impact on enrollment, controlling for other factors. Still, un-enrolled children are much more likely to work on a family farm than are their enrolled counterparts, perhaps because they are also more likely to live in rural areas. Forty-one percent of un-enrolled children report such work, on average over the two years, compared to only 2.7% of enrolled children. The share of un-enrolled children reporting farm work fell from 2002 to 2005, from 47.3% to 32.5% (perhaps as a result of migration to urban areas) (Table 7). Boys and girls were equally likely to report farm work.

Table 7: Reported Work by Enrolled and Un-enrolled Children, Percent

		Enrolled		Un-enrolled
	2002	2005	2002	2005
Work on Own Farm	5.0	1.1	46.9	32.3
Work for Others	0.8	0.4	6.0	10.0
Work for Self/Family	0.6	0.0	2.2	2.9
Look for Work	0.3	0.3	22.0	17.1

Source: ALSMS, 2002; 2005.

While regression evidence suggests that the opportunity costs of foregone agricultural work are not an important factor in schooling decisions, other survey

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[11] Data on the gender wage gap in Albania is not available, but would certainly also suggest lower expected returns to secondary schooling for girls.

evidence suggests that opportunity costs of other, paid, labor activities (especially off-farm activities) are also not an important factor pulling children from school. Of the un-enrolled children, only 7.6% reported that they had worked for others in the past 7 days (averaged over 2002 and 2005), although a significant number reported looking for work (Table 7). Few children reported working for themselves or other family members. Overall, un-enrolled children report little work for the family or for others. Still, un-enrolled children are much more likely to work than enrolled children (of whom under 1% reported working), and their share increased from 6% of un-enrolled children in 2002 to 10% of un-enrolled children in 2005 (again perhaps in response to rural-urban migration and the resulting increased opportunities for informal work). Opportunities for paid work may play a bigger role in boys' decisions, as twice as many boys as girls searched for a job or engaged in paid work.

Our findings contrast somewhat to an earlier study, by Geremia Palomba and Milan Vodopivec (2001), based on 1999 data. After controlling for the size and demographics of the family, Palomba and Vodopivec (2001) found that opportunity costs had a significant negative impact on school attendance at the secondary level. These opportunity costs were measured only by an urban dummy (as a proxy for access to job opportunities), however. We find little evidence that foregone work opportunities (other than child care) impact on schooling choice. We also find that urban residence is *positively* associated with secondary school attendance, and consider this variable as a possible measure of access to schools. The study by Palomba and Vodopivec (2001) did not control for parental education or household income, which earlier research suggests plays a consistent role in household schooling choices, and this omission may contribute

to the differences in our findings. But massive rural-urban migration also took place

been 1999 and 2005, and this demographic change may partially explain the changing

impact of urban residence on schooling choice. Finally, Palomba and Vodopivec (2001)

were able to include a measure school quality in their regression: the percentage of

unqualified teachers in a district. They find that school quality does significantly affect

attendance of secondary school. Our data do not allow us to control for this important

variable, which has clearly been affected by the collapse in educational spending

reflected in Table 2.

VIII) Conclusions:

Most of the supply- and demand-side factors we considered here had the expected

impact on enrollment. Increased age, being female, having young children in the

household, having a less educated head of household, being from a migrant household,

having lower per capita household income and living a rural area, away from

infrastructure, or in a high unemployment district all negatively impacted the likelihood

of being enrolled in secondary school. And the potential impact of many of these

variables was large, as illustrated in the discussion. An older girl, from a poor, rural

family with several younger siblings would have a very low likelihood of enrollment, for

example. But many families are poor, rural, have limited access to infrastructure and

face poor employment opportunities, and we have shown that these factors do contribute

to the low overall secondary school enrollment rates.

In some ways, Albania may appear to be a special case. Albania is the poorest

and least developed of the non-Soviet post-socialist cases. Further, the country had less

than 30 years of experience with broad access to secondary schooling. Norms and preferences supporting completion of secondary school may be weakly developed and easily eroded.

But the evidence presented here suggests that factors underlying low secondary school enrollments in Albania are similar to factors at work in other countries. As in other cases, less educated parents obtain less education for their children, even controlling for income. Lack of income also contributes to early drop out.

Further, many of the economic and social factors which we have shown to be important in enrollment outcomes in Albania are common to other post-socialist, and especially post-Soviet cases, where the economic downturn has been prolonged. Many households find themselves with increasingly limited access to schools, public transport and other public infrastructure. In many areas, employment prospects are poor and existing schools (especially in rural areas) do not prepare students for the types of employment dominant in the emerging economy (for example, in agriculture and services). School quality has declined in the face of fiscal crisis, shifting government priorities, and civil conflict. The re-emergence of traditional norms regarding schooling of girls and their role in the household is also not unique to Albania (Kuehnast, 2003) and, as seen here, plays a role in declining enrollments.

The Albanian case shows some signs of improvement in secondary school enrollments, with enrollments rising from 50.3% in 2002 and 58.7% in 2005 (Transmonee, 2007). The regression results suggest that recent changes in the Albanian context, including improving macroeconomic conditions, a reasonably effective income transfer program (the Ndihma Ekonomike), mass migration toward Tirana, and general

recovery (time) from the shock of transition probably all played a role in the improvement in enrollments. But enrollments remain well below pre-transition levels and the levels seen in other European post-socialist cases, and other factors underlying the decision not to enroll have not improved, including access to public infrastructure, the specific forms and quality of schooling available, and the social position of girls and women.

Further, there is reason for concern about a potentially persisting impact of the initial decline. As the children who dropped out of secondary school in the 1990s become parents, global evidence suggests that they will (partially) pass these poor educational outcomes on to their children (Hertz et al, 2007). As poorly-educated parents in a globalizing economy, they may also have poor earning prospects and less income to contribute to their childrens' education.

Evidence presented here thus supports other findings in suggesting some specific directions that policy makers might take to improve enrollments. Expanding access to schools is one important factor. Our evidence suggests that, at the secondary school level, improving access to transportation and other infrastructure can greatly improve access, without necessarily building more schools. Although school fees and other expenses are quite low in real terms, the important role of household income in determining enrollment suggests that some children would benefit from an educational subsidy, subsidized boarding arrangements, free public transport, or other such policies. Finally, the strong negative impact of the number of siblings under the age of 6 years suggests that expanding preschool programs could have an important impact on secondary school enrollments, especially for girls. Preschool programs offer other

benefits in terms of the long-run educational outcomes of those attending (Garces, Thomas and Currie, 2000; Spiess, Buchel Wagner, 2003) and may be a particularly effective response.

One additional policy, supported by our overall discussion more than by the regression evidence, is to re-think the massive shift of educational resources from technical to general education at the secondary level. In the context of high unemployment and growing informal and small-scale agricultural sectors, technical education may offer higher expected returns than a general secondary course, especially for those students who do not expected to attend college. Additional resources for rebuilding the human and physical capital in education are also essential. Recent rural-urban migration has resulted in crowded classrooms and falling quality of instruction, but the concentration of population may facilitate efficient use of additional educational resources, if some additional resources can be made available.

The past fifteen years have shown that the post-socialist economic downturn can have negative effects on human development indicators and on the long-term development trajectories of the affected countries. In Albania, education is one area of particular concern. The declining enrollment rates can affect educational outcomes of future generations of students, as well as patterns of investment and economic growth. Results presented here suggest that improved macroeconomic conditions alone are unlikely to restore high levels of secondary school completion. The issue of decreasing secondary school enrollments thus deserves real attention from policy makers, and we have shown that there is real potential for effective policy. Some of this will involve increasing and re-targeting resources to schools. But policies must also focus on

expanding infrastructure, including public transportation, and supporting families, including through the expansion of preschools and targeted support for schooling.

These policies will have positive spill over effects onto other problems, however, helping to promote local economic development and poverty reduction. Costs of these programs should be considered in this context of positive spillover effects and long-run benefits.

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