Returns to Education in the Albanian Labor Market

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Abstract

The issue of private returns to education has received much attention in the literature and there are many studies for various countries on the issue. Nonetheless, less is known of the issue in developing countries and these studies are missing for Albania where little is known regarding private returns to education. A major characteristic of labor market in Albania is the disparity between males and females. It is well documented that women in the labor market lag behind in terms of employment and wages; they have higher unemployment rates, higher inactivity rates which translate into lower labor force participation rates, mainly due to household responsibilities. Understanding returns to education by sex, region and sector in Albania would help answer questions regarding parent's decisions on children's education as well as the allocation of the workforce in different sectors of the economy by sex and regionally. Higher returns to education are associated with higher investment of parents in children's education. This is especially important for females and females in rural areas where culture and societal norms do not always envision females as participants in the labor market. In fact, the vast majority of females in the rural areas are in unpaid family labor. Greater human capital accumulation, employment and wages improve individual's outcome and have a greater impact for female's outcomes. Better position of females in the labor market and higher earnings also mean a better position and higher bargaining power of females within the household. This paper estimates returns to education by sex, region, and sector in Albania using the 2012 Living Standard Measurement Survey Data. The econometric model used in this paper to estimate private returns to education is based on Mincer's (1974) human capital earning function. To correct for self-selection bias a two-step estimation following Casero and Seshan (2006) is estimated for each sector. The study shows that there are clear pay offs to female education. Estimation results show that females have higher returns to education overall and across regions and sectors. Returns to education for females are higher in the private sector compared to the public sector. The highest returns to education for females are in the service sector. Higher returns to education for women may improve their position in the labor market and should serve as incentives for increased labor force participation and paid employment especially for women

in the rural areas. On the other hand, it also shows that investing in education by the government is a worthy investment that brings back rewards and consequently investment in women's education should continue and it should be increased providing more and better quality education. Promoting women's entry into the private sector is important given women's already high participation in the public sector, and the generally limited capacity of the sector to absorb a large number of workers. The higher returns of education for women in the private sector should also serve as a policy incentive to direct women's participation in the private sector as to reap the rewards to education that this sector offers.

Keywords: Returns to education, Gender, Albania, Labor market.

Introduction

Private returns to education is an area that has received much attention in the literature and there are many studies for various countries on the issue. Psacharopoulos (1994) has given a global update regarding private return to education. Nonetheless, less is known of the issue in developing countries. Human capital theory, which links human capital returns and outcomes, is not straight forward in developing countries, where cultural practices and norms also come into play (Jensen, 2010). In Albania little is known regarding private returns to education. Labor market studies have generally been missing for Albania, although they have been growing in the later years measuring impact of return migrants (Azzari and Carletto, 2009), Miluka (2012, 2013) measuring the gender wage gap and its sources, and measuring determinants of female labor force participation (Miluka and Tsushima, forthcoming), etc. However, much remains to be studied and understood about labor market dynamics in Albania.

A major characteristic of labor market in Albania is the disparity between males and females. It is well documented that women in the labor market lag behind in terms of employment and wages; they have higher unemployment rates, higher inactivity rates which translate into lower labor force participation rates, mainly due to household responsibilities. On the other hand, females are having high educational attainment, especially those who participate in the labor market, and there is a continuous increase of female enrollment in universities and women graduating universities. Studies show that education is key in reducing the gender wage gap (Miluka 2012, 2013) even though it is not enough to eliminate it. As a result, there is a need to understand returns to education by sex, region, and sector in Albania.

Understanding returns to education by sex, region and sector in Albania would help to answer questions regarding parent's decisions on children's education as well as the allocation of the workforce in different sectors of the economy by sex and regionally. Higher returns to education are associated with higher investment of parents in children's education. This is especially important for females and females in rural areas where culture and societal norms do not always envision females as participants in the labor market (Jensen, 2010). In fact, the vast majority of females in the rural areas are in unpaid family labor. Greater human capital accumulation, employment and wages improve individual's outcome and have a greater impact for female's outcomes (Schultz, 2001). Better position of females in the labor market and higher earnings also mean a better position and higher bargaining power of females within the household (Thomas, 1990; Schultz, 1990).

Human capital theory suggests a direct link between the levels of education and returns to individual investment in education (Becker, 1993; Mincer, 1974). As in other redistributive economies, Albania has gone from the mainly bureaucratic allocation of resources to distribution based on economic productivity. The transition to the market economy should be associated with higher returns to education (Nee, 1989). Evidence from other countries, like China, shows that there are increasing returns to education, which are attributed to the emerging labor markets that better realize the values of human capital than before (Zhou, 2000; Wu and Zie, 2003). The market economy has provided higher returns to human capital than the centrally planned economy (Cao and Nee, 2000). Likewise, empirical evidence in other countries like rural India shows that returns to education in wage employment sectors are higher and mostly increasing, following patterns found in other studies (Duraisany, 2002; Subbaraman and Witzke, 2006). Other studies have shown gender asymmetry in returns to education, where women usually have higher returns than men. Gender estimates, however, have received less attention in the literature since the differences for many countries have not been very large (Monazza, 2005). The evidence on developing counties is mixed. Some studies find that returns to schooling do not significantly differ by gender (Behrman and Wolfe, 1984; Schultz, 1993). Other studies find lower returns to women's schooling (Kingdon, 1998), and others yet, show increasing returns to women's schooling (Behrman and Deolalikar, 1995; Asadullah, 2006). In this respect, this study contributes to the literature by documenting and empirically testing the private returns to education, where evidence is missing as is the case of Albania.

The purpose of this paper is to estimate returns to education by sex, region and sector in Albania. The remainder of the paper includes the following sectors: sector II presents data and descriptive statistics, sector III explains the econometric model, sector IV presents estimation results, and sector V concludes and provides policy recommendations.

I. Data and Descriptive Statistics

The data used in this paper is the 2012 Living Standard Measurement Survey (LSMS) conducted every three years by the Albanian Institute of Statistics. The first round of the Albanian LSMS started in 2002. The Albanian LSMS provides a wide range of information on household and individual characteristics. It is a stratified nationally representative survey for a total sample of 6,671 households. The analysis in this paper is based on wage earning individuals for a total sample of 5,151 individuals.

Descriptive statistics precede regression analysis and provide information on differences between men and women in terms of individual characteristics, education, wage, work experience, sector of employment, occupation. As figure 1 shows, on average, females currently present in the labor market have higher education levels than man. This positive difference in terms of education is maintained almost throughout the wage distribution peaking around age thirty. The gap starts to close after its peak at 30. This difference may be a result of the trends after the fall of communism, showing higher rates of university degree acquisition for females. Whereas during communism access to higher education was quite restricted and admission to university as well as field of study was determined by the state, after communism university enrollments increased substantially. The spurge of private universities further increased enrollment in universities, and females have higher participation in higher education and university degrees. Consequently those factors may be resulting in the larger positive education gap for younger females as illustrated in figure 1.
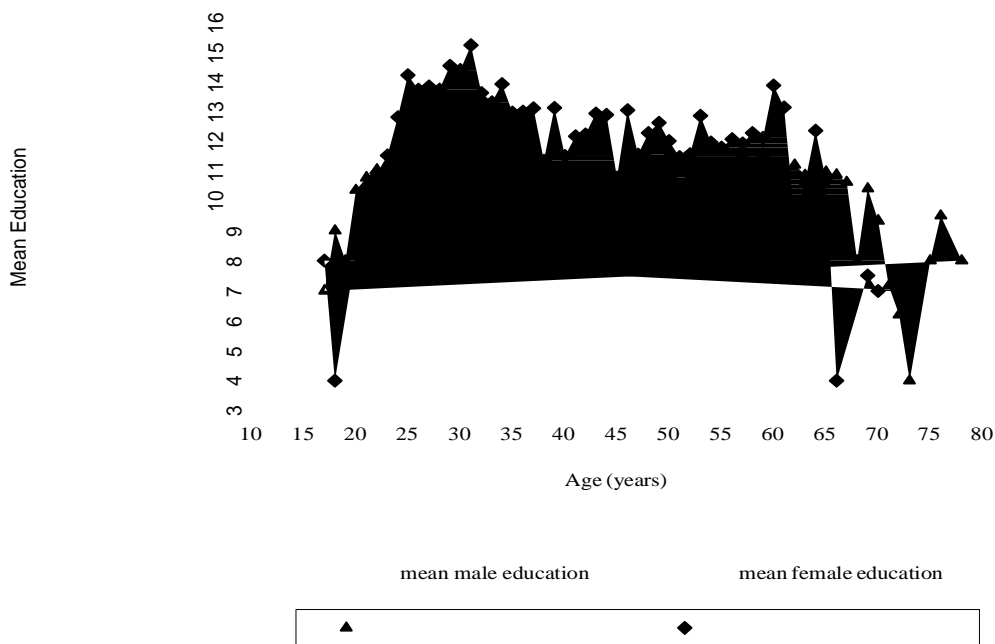
Figure 1. Education by age and sex

Regardless of the education level, females have on average lower wages than men (Figure 2). As previous studies have shown (Miluka 2012; Miluka 2013) higher levels of education for women help reduce the gender wage gap, however education alone is not enough. These studies show that factors such as lower work experience due to child caring and rearing responsibilities, occupational segregation into lower paying activities and lack of social support in child-care account for the majority of the gender wage gap. The persistent gender wage gap also present in the 2012 data may continue to exist as a result of the continuous presence of the above mentioned factors. In fact descriptive statistics in Tables 1-3 highlighting differences between males and females in terms of wages, education, experience, occupations, economic sectors, etc. show much of the problematic highlighted in the previous mentioned studies.

Kernel density estimate

Figure 2. Wages by sex
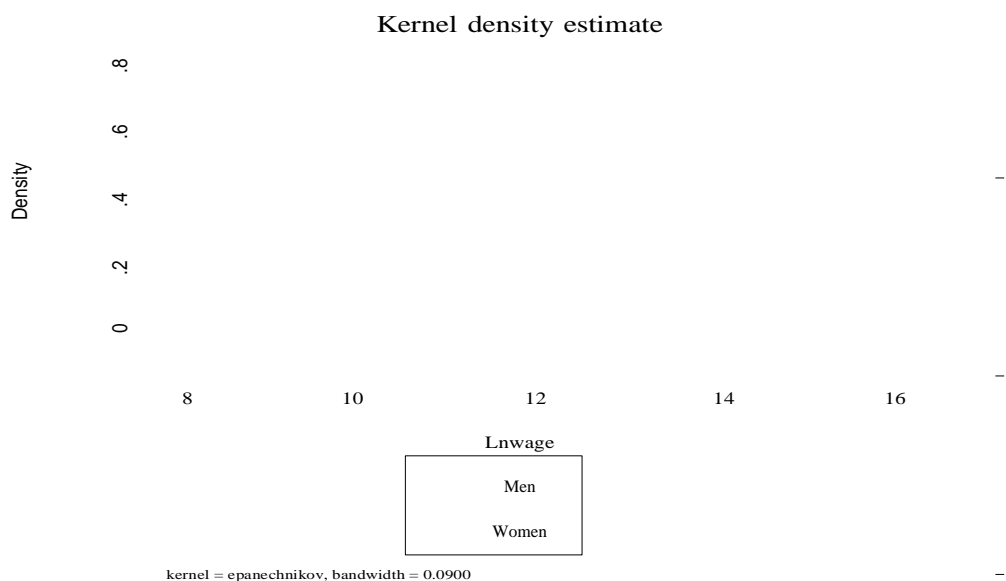
Descriptive statistics of individual characteristics by sex in Table 1 show that on average women have lower wages of about 57,000 old ALL[1]. Women have lower wages across education levels. As education levels increase the difference in wages decreases starting at the lower secondary education level, where the difference in wage between men and women is the widest. The difference in wages between male and female between primary education level and lower secondary education level increases from about 62,000 old ALL to about 104,000 old ALL for lower secondary education. This may indicate that for very low levels of education (primary level), which correspond to very low skill jobs, wage differences are low, as are returns to education. The difference of 104,000 old ALL is the highest difference in wages between men and women. The difference is reduced to about 95,000 old ALL for upper secondary education and about 67,000 old ALL for university and above.

As figure 1 also showed, women in the labor market have higher education than men. On average, women have over one year of education more than men. Average education for women in the labor market is 12.28 years versus 10.92 for men. There are fewer women than men with primary, lower secondary and upper secondary education. Over 35% of women have university and above compared to 17% for men. The large participation of women with higher education may also reveal something beyond higher levels of education in the labor market. It may show a less favorable position and lack of employment opportunities for women of lower education compared to men with that same education level. Women with

lower education have less paying and narrower-array of jobs options than men. They mainly end us as seamstress, sale workers, cashiers, and the like. Consequently, women may need the extra education to secure a position in the labor market, and higher education serves as a mechanism to push women into the labor market and give them higher rewards.

Women have about 4 years of experience less than men. This is partly due to longer years in school as well as a result of discontinued work experience due to child rearing and caring responsibilities. A lower percentage of women in the labor market is married compared to men, which may capture fewer family responsibilities for unmarried women and therefore more participation in the labor market. Married men do not have the same household responsibilities as married women therefore marriage is not impeding for them. Furthermore, 26% of women in the labor market have children between the ages of 0 and 5 compared to 40% of men. Besides the fact that less married women than married men are present, we are bound to see more women with small children outside of the labor market. This shows that women in the labor market are more likely to have older children. They return to the labor market after they have raised their children. The larger percentage of men with smaller children also shows that it is their wives who raise the children and are not present in the labor market.

Differences in occupations by sex presented in table 2 show that women work mainly as professionals and service workers. As discussed above, women have a narrower specter of occupations where they are mainly concentrated. Consequently, there are two implications. First, a narrower array of occupations shows fewer opportunities in the labor market to accommodate women, and second it shows evidence of occupational segregation. This on the other hand may also influence education decisions and choice of fields of study.

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[1] 1 dollar is about 1000.4 old AL

Table 1: Descriptive statistics by sex

Variables	Male	Female	Total	P-Value
lnwage	12.57	12.40	12.52	**0.000**
monthly wage	343415.50	286350.50	326560.20	**0.000**
age	42.73	40.24	42.00	**0.000**
experience	25.81	21.96	24.67	**0.000**

education	10.92	12.28	11.32	**0.000**
primary	3.67%	1.32%	2.97%	**0.000**
wage primary	220066.40	157600.70	211875.40	**0.000**
lower secondary	37.63%	28.01%	34.79%	**0.000**
wage lower sec.	289869.20	185828.50	265129.10	**0.000**
upper secondary	41.52%	35.19%	39.65%	**0.001**
wage upper sec.	352717.30	257847.00	327847.30	**0.000**
university	17.10%	35.48%	22.53%	**0.000**
wage university	465542.20	398757.40	434476.80	**0.000**
children 0 to 5	0.40	0.26	0.35	**0.000**
married	83.61%	78.92%	82.22%	**0.002**
full-time	89.55%	90.62%	89.87%	0.363
Total Observations	3,580	1,571	5,151	

Note: P-Values in bold show statistically significant differences.

If women are mainly concentrated in certain occupations, more women may continue to get education for those occupations, thus increasing occupational segregation as well as over saturating those areas of education and employment. Concentration of women in particular occupations puts downward pressure of wages in those occupations and may also have consequences on returns to education in those occupations.

Men on the other hand have higher participation in occupations such as legislators, managers, senior officials, craft and trade workers, plant and machinery operators, elementary occupations and armed forces. In addition men also have higher participation in paid agriculture. This result confirms the overwhelming participation of women in unpaid agriculture, which reaches about 43% (2012 Labor Force Survey). High participation of women in unpaid agriculture may also have consequences on returns to education especially in rural areas.

Table 2. Occupation and wages by sex

Variables	Male	Female	Total	P-Value
legislators/managers/senior officials	3.02%	1.66%	2.62%	**0.012**
professionals	8.42%	29.90%	14.77%	**0.000**
technicians	6.94%	6.81%	6.90%	0.901
clerks	2.17%	2.75%	2.34%	0.331
service workers	16.78%	20.13%	17.77%	**0.034**
agriculture	19.28%	13.67%	17.63%	**0.000**
craft/trade workers	20.84%	10.91%	17.91%	**0.000**

plant/machinery operators	10.67%	6.01%	9.29%	**0.000**
elementary occupations	10.11%	7.58%	9.37%	**0.021**
armed forces	1.61%	0.31%	1.22%	**0.000**
Total Observations	3,580	1,571	5,151	

Note: P-Values in bold show statistically significant differences.

Economic activity and wages by sex presented in table 3 show that women are mainly concentrated in the public sector and service private sector. Women's participation in the public sector is over twice that of men. The public sector accommodates about 34% of women and 17% of men. Participation in the private sector is larger for men than women. About 64% of men are in the private sector compared to about 51% of women. Division by sectors of the economy shows that women dominate services with a participation of about 66% compared to about 46% for men. In services, women have the largest participation in education and health. Men on the other hand are mainly concentrated in industry. About 34% of men are in industry compared to 20% of women. The vast majority of women in industry are in manufacturing, whereas men are in construction.Wages are consistently lower for women within and across sectors. Agriculture is the lowest paying sector for both sectors and especially for women. Average public sector wages are higher for men and women compared to the private sector. Wage differentials between men and women are larger in the private sector. The lower difference in the public sector may in part be as a result of Albanian legislature regarding wages in this sector. Women's wages are higher in services than industry, whereas for men it is the opposite. Wage differentials for women between services and industry are larger than those for men. Within services women's highest wages are in transport and communications followed by education and health. The former two are as a result of the continuous increases of wages in these two sectors. Higher public sector wages part of which due to the continuous increases of wages in health and education are expected to have an impact on returns to education by sector.

Variables	Male	Female	Total	P-Value
Public sector	16.54%	34.08%	21.72%	**0.000**
wage	381782.70	350194.30	367142.30	**0.003**
Agriculture private	18.80%	13.76%	17.31%	**0.000**
wage	205695.70	134108.40	188885.00	**0.000**
Private sector	63.71%	51.48%	60.10%	**0.000**
wage	375426.20	285650.10	352712.40	**0.000**
Industry	33.60%	19.95%	29.56%	**0.000**
wage	379671.90	217708.70	347391.60	**0.000**
mining	1.99%	0.10%	1.43%	**0.000**
wage	458174.50	433751.10	457695.50	0.727

manufacturing	8.41%	18.20%	11.30%	**0.000**
wage	389219.20	207896.70	302974.40	**0.000**
electricity	2.51%	0.70%	1.98%	**0.000**
wage	313840.40	241756.90	306277.90	**0.016**
construction	20.68%	0.95%	14.85%	**0.000**
wage	376219.30	366230.60	376030.50	0.861
Services	46.28%	65.57%	51.98%	**0.000**
wage	374935.90	339907.70	361883.40	**0.000**
trade	13.42%	12.77%	13.23%	0.644
wage	368287.80	291535.80	346400.80	**0.001**
hotels/restaurants	5.81%	6.16%	5.91%	0.708
wage	352036.50	306741.20	338104.20	0.262
transport/communications	7.28%	2.33%	5.82%	**0.000**
wage	373879.90	407937.00	377915.00	0.553
education	2.71%	17.16%	6.98%	**0.000**
wage	389740.10	359213.10	367560.30	**0.062**
health	1.93%	8.26%	3.80%	**0.000**
wage	380225.80	321834.00	342744.00	**0.001**
Total Observations	3,573	1,536	5,109	

Note: P-Values in bold show statistically significant differences.

Furthermore, tables 4 and 5 show differences between public and private sector and other sectors of the economy. Females in the private sector have lower wages and education compared to the public sector. Average education of females in the private sector is about 11.55 years compared to 14.75 years in the public sector. Females in the private sector have higher levels of lower (33% in private sector vs. 9% in private sector) and upper secondary education (42% in private sector vs. 25% in public sector) and lower levels of university (22% in private sector vs. 65% in public sector) compared to females in the public sector.

Descriptive statistics by sector show that private agriculture sector has the lowest wages and education level for females. Education for females is highest in services. On average females in services have about 13 years of education compared to about 11 years in industry. Services also have the highest difference in university level between males (17%) and females (42%). University level for females in private agriculture is the lowest of about 0.31% versus 11% in industry and 42% in services.

Table 4. Descriptive Statistics; public-private sectors

	Public				Private			
Variables	Male	Female	Total	P-Value	Male	Female	Total	P-Value
lnwage	12.77	12.71	12.74	**0.019**	12.6915	12.42	12.62	**0.000**
monthly wage	384202.40	353125.40	369839.20	**0.003**	367569.2	291027.2	348349	**0.000**
age	46.17	41.81	44.17	**0.000**	40.98906	39.168	40.50	**0.001**
experience	26.29	21.06	23.89	**0.000**	24.19	21.62	23.51	**0.000**
education	13.88	14.75	14.28	**0.000**	10.79	11.55	11.00	**0.000**
primary	0.42%	0.49%	0.46%	0.848	4.65%	3.03%	4.22%	0.105
wage primary	218707.2	205152.8	211973.1	0.609	270090.3	171079.4	252616.5	**0.000**
lower secondary	11.94%	8.81%	10.51%	0.149	40.45%	33.21%	38.52%	**0.006**
wage lower sec.	294306.10	239889.10	273354.00	**0.016**	337335.1	237527.9	316036.9	**0.000**
upper secondary	39.45%	25.31%	32.96%	**0.000**	42.67%	42.16%	42.53%	0.851
wage upper sec.	341256.80	296257.50	325113.60	**0.002**	369169.9	260655.9	342072.1	**0.000**
university	48.18%	65.38%	56.07%	**0.000**	12.23%	21.60%	14.73%	**0.000**
wage university	442868.40	391748.50	415430.50	**0.001**	493292.2	443986.9	474945.1	0.106
children 0 to 5	0.26	0.26	0.26	0.994	0.424806	0.24193	0.376025	**0.000**
married	88.81%	83.50%	86.38%	**0.018**	81.91%	76.90%	80.57%	**0.026**
full-time	94.20%	91.27%	92.86%	0.102	89.79%	90.82%	90.07%	0.533
Total Observations	692	608	1,300		2,130	759	2889	

	Agriculture				Industry				Services			
Variables	Male	Female	Total	P-Value	Male	Female	Total	P-Value	Male	Female	Total	P-Value
lnwage	12.03	11.62	11.93	**0.000**	12.70	12.22	12.61	**0.000**	12.70	12.61	12.67	**0.002**
monthly wage	224282.70	174982.70	211554.70	**0.000**	367843.40	221502.20	338971.80	**0.000**	366382.10	331896.20	353047.00	**0.001**
age	42.02	40.99	41.66	0.184	41.09	39.13	40.70	**0.020**	41.92	41.22	41.64	0.270
experience	27.23	26.42	26.95	0.304	24.71	22.54	24.28	**0.014**	24.45	22.09	23.50	**0.000**
education	8.78	8.57	8.71	**0.065**	10.38	10.59	10.42	0.414	11.47	13.13	12.14	**0.000**
primary	5.99%	4.32%	5.41%	0.201	4.52%	5.63%	4.75%	0.561	3.51%	0.99%	2.50%	**0.006**
wage primary	184016.10	146235.60	179139.70	0.388	298825.40	171538.20	267700.70	**0.000**	264076.90	184908.60	255875.10	**0.028**
lower secondary	71.75%	79.61%	74.48%	**0.003**	45.34%	41.31%	44.53%	0.352	34.14%	20.95%	28.85%	**0.000**
wage lower sec.	229149.60	169847.70	212781.30	**0.000**	341136.80	200443.10	315090.20	**0.000**	336576.60	266935.80	318502.90	**0.001**
upper secondary	21.82%	15.76%	19.72%	**0.011**	41.50%	41.96%	41.59%	0.916	35.96%	35.96%	41.67%	**0.002**
wage upper sec.	215807.20	203144.00	212830.90	0.568	373764.40	210974.70	340874.40	**0.000**	368617.90	291910.00	343571.20	**0.000**
university	0.44%	0.31%	0.39%	0.715	8.63%	11.10%	9.13%	0.354	16.85%	42.11%	26.98%	**0.000**
wage university				**0.000**	509099.80	386560.70	482989.60	**0.014**	436724.80	391567.30	408592.40	**0.021**
children 0 to 5	0.42	0.38	0.41	0.467	0.45	0.24	0.41	**0.000**	0.40	0.24	0.34	**0.000**
married	80.19%	86.69%	82.45%	**0.006**	83.25%	78.42%	82.28%	0.183	83.24%	80.53%	82.15%	0.241
full-time	78.79%	71.37%	76.21%	**0.008**	89.07%	96.08%	90.48%	**0.000**	90.83%	87.22%	89.38%	**0.065**
Total Observations	1,074	572	1,646		1,156	267	1423		1081	830	1911	

II. Econometric Model

The econometric model used in this paper to estimate private returns to education is based on Mincer (1974) human capital earning function. Wages are a function of years of schooling, and experience. The wage equation is measured as follows:

$$lnW = \beta_0 + \beta_1 S + \beta_2 E + \beta_3 E^2 + \mu,$$

(1)

where W is hourly wage, c is a constant, S is years of schooling, E is years of experience in the labor market, and e is the error term. More specifically in this paper we also control for additional variables dimmed to have an impact on wages. The wage equation used in this paper is as follows:

$$\ln W_{ij} = \beta_{i0} + \beta_{i1}EDU_j + \beta_{i2}EXP_j + \beta_{i3}EXP^2_j + \beta_{i4}CHILD0to5_j + \beta_{i5}MARRIED_j$$

$$+\beta_{i6}FULLTIME_j + \beta_{i7}REGION_{ij} + \mu_{ij}$$

(2)

where W_{ij} is monthly wages in old ALL for individual j in sector i, *EDU* is individual's years of completed education, *EXP* is work experience calculated as age-education-6, EXP^2 is years of experience squared to capture non-linearity of experience on wages, *CHILD0to5* is the number

of children between the ages of 0 and 5, *MARRIED* is a dummy variable equal to 1 if the person is married, 0 otherwise, *FULLTIME* is a dummy variable equal to 1 if the person works 40 hours or more per week, 0 otherwise, *REGION* is a set of four dummy variables controlling for regions: Central, Coastal, Mountain, Tirana, the latter one is set as default.

Besides the usual education and experience variables, we also control for number of children under the age of six since they require child care and this is mainly a woman's responsibility in the Albania context. As a result the number of children reflects the cost of lost experience for women (Grimshaw and Rubery, 2002). Marital status is also included since a married women with children might be viewed from the employer as less productive, since she may need more time off work and be considered less dedicated to work due to her family responsibilities. This can result in lower wages offered by employers. On the other hand, a married man may be regarded as more dedicated to work given the expectation that wives will take care of the household. Married men may also just receive preferential treatment (Weichselbaumer and Winter-Ebmer, 2005). The inclusion of dummy variables for regions is to control for social and economic regional differences.

Separate Ordinary Least Square (OLS) regressions based on the above model are run to estimate the private returns for men and women, men and women in urban and rural areas, men and women in public sector, private sector, agricultural private sector, industry and services. The model is also run using education categories as dummy variables for primary education, low secondary education, upper secondary education, and university and above instead of individual's completed years of education to estimate private returns to education by education level.

Comparisons of OLS estimates by sector may be inconsistent (Casero and Seshan, 2006) due to selectivity bias in sector selection. The selection process into a sector is not random, rather unobservable characteristics that determine wages might also determine sector selection, in which case OLS estimates may be biased. Workers may prefer one sector versus another, therefore sector selection is an endogenous process (Stelckner, 1989). There is a need to correct for self-selection bias as presented by Heckman (1979). To correct for self-selection bias a two- step estimation following Casero and Seshan (2006) is estimated for each sector. Sector selection follows the following equation:

$$I_i^* = \theta_i Z + \varepsilon_i \,, i = 1, 2, 3, 4, 5$$

$$I_1 = 1 \ (public \ sector) if \ I_1^* \geq 0$$

$$I_2 = 1 \ (private \ sector) if \ I_2^* \geq 0$$

$$I_3 = 1 \ (agriculture \ private \ sector) if \ I_3^* \geq 0 \qquad\qquad (4)$$

$$I_4 = 1 \ (industry) if \ I_4^* \geq 0$$

$$I_5 = 1 \ (service) if \ I_5^* \geq 0$$

$$I_i = 0 \ otherwise \,,$$

where I^* is a partially observed index describing the selection process and the outcome is observed depending on whether I^* is positive or negative. If I^* is positive the person is observed selecting one of the five sectors of interest. Z is a vector of variables that determine wages and other personal characteristics, which determine the selection process.

The first stage estimating sector selection is estimated through probit equations determining variables that affect the probability of working in a particular sector. Vector Z includes parent's education and number of children between the ages of 6 and 14 as exclusion restrictions in addition to variables that determine wages. Parent's education is a good predictor of individual's education and it is the closest variable we can get to parent's occupation choice, which may predict individual's occupation choice. The number of children between the ages of 6 and 14 in addition to number of children between the ages of 0 and 5, which is present in the wage regression, may influence choice of sector especially for women. Women with more children may be more likely to join the public sector due to job security and working hours. A selection term λ_i (inverse mills ratio IMR) is constructed and added to the wage regression in the second stage.

$$\ln W_{ij} = \beta_{i0} + \beta_{i1} EDU_j + \beta_{i2} EXP_j + \beta_{i3} EXP^2_{\ j} + \beta_{i4} CHILD0to5_j + \beta_{i5} MARRIED_j$$

$$+\beta_{i6}FULLTIME_j \ +\beta_{i7}REGION_{ij} + \beta_{i8}IMR_{ij} + \mu_{ij}$$

For robustness check regression results using OLS and two-step model correcting for selection bias are presented in sector analysis.

(5)

III. Estimation Results

Private returns to education in Albania are higher for females as presented in Table 6. On average, an additional year of education increases wages by 7.7% for females, whereas an additional year of education increases wages by about 5.5% for male. Urban-rural differences show that returns to education for male and female are lower in urban areas. On average, an additional year of education increases wages by almost 10.7% for females in rural areas compared to about 6.9% in urban areas. Within each area, females have higher returns to education. In the urban areas, private returns to education for males are 4.4%, whereas in rural areas they are 4.9%. Although trends remain the same, OLS coefficients are higher than the two- step model.

Higher returns to education for females are not symptomatic of Albania. Higher returns to education for females are well documented in the literature (Monazza, 2005). There are a few explanations also encountered elsewhere in the literature that may explain higher returns to education for females. In the Albanian context, higher private returns to education for females may be as a result of wage differences favoring males in the labor market. Given male's already higher wages, an additional year of education for females has higher returns. On the other hand, as is the case between urban and rural areas, higher returns to education for females may also be as a result of scarcity premium (Monazza, 2005). Education differences between male and female are less in rural areas and education is lower in these areas compared to urban areas. As a result there could be a scarcity premium of education in these areas, which may be greater for females in rural areas. An additional year of education for females in rural areas may have a higher value in an area where education is lower and the gender wage gap is higher. Lastly, females may have higher returns to education because they are concentrated in sectors of the economy where education is relatively highly valued, especially given women's concentration in the public sector and education and health within the public sector.

Variables	All				Urban				Rural			
	OLS		Two-Step		OLS		Two-Step		OLS		Two-Step	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
edu	0.059	0.102	0.055	0.077	0.048	0.084	0.044	0.069	0.054	0.108	0.049	0.107
	(0.003)***	(0.004)**	(0.004)***	(0.008)***	(0.004)***	(0.004)**	(0.004)***	(0.006)***	(0.006)***	(0.010)**	(0.008)***	(0.024)***
exp	0.026	0.007	0.023	-0.003	0.024	0.005	0.018	-0.002	0.024	0.004	0.02	0.004
	(0.004)***	(0.005)	(0.004)***	(0.005)	(0.005)***	(0.005)	(0.005)***	(0.005)	(0.006)***	(0.010)	(0.008)**	(0.013)
exp2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)
children_0to5	0.042	0.041	0.042	0.046	0.028	0.017	0.032	0.026	0.044	0.094	0.043	0.094
	(0.018)**	(0.026)	(0.018)**	(0.026)*	(0.022)	(0.027)	(0.022)	(0.027)	(0.028)	(0.056)	(0.028)	(0.056)*
married	0.042	-0.053	0.024	-0.02	0.039	-0.003	0.02	0.015	0.065	-0.144	0.046	-0.143
	(0.038)	(0.035)	(0.039)	(0.036)	(0.045)	(0.035)	(0.046)	(0.035)	(0.062)	(0.078)	(0.066)	(0.087)
Coastal	-0.197	-0.269	-0.202	-0.296	-0.08	-0.164	-0.101	-0.192	0.000	0.000	0.000	0.000
	(0.034)***	(0.038)**	(0.034)***	(0.039)***	(0.033)**	(0.035)**	(0.034)***	(0.036)***	(0.000)	(0.000)	(0.000)	(0.000)
Central	-0.193	-0.152	-0.189	-0.165	-0.111	-0.136	-0.117	-0.164	0.126	0.317	0.131	0.318
	(0.033)***	(0.037)**	(0.033)***	(0.037)***	(0.033)***	(0.034)**	(0.033)***	(0.035)***	(0.035)***	(0.058)**	(0.035)***	(0.063)***
Mountains	-0.118	-0.122	-0.088	-0.076	-0.121	-0.132	-0.11	-0.148	0.267	0.413	0.31	0.416
	(0.040)***	(0.049)*	(0.044)**	(0.050)	(0.043)***	(0.046)**	(0.043)**	(0.046)***	(0.050)***	(0.110)**	(0.071)***	(0.156)***
fulltime	0.397	0.24	0.078	-0.449	0.536	0.114	-0.339	-0.63	0.269	0.355	0.029	0.343
	(0.031)***	(0.042)**	(0.192)	(0.187)**	(0.041)***	(0.047)*	(0.321)	(0.218)***	(0.047)***	(0.079)**	(0.277)	(0.437)
IMR			-0.217	-0.393			-0.542	-0.415			-0.183	-0.007
			(0.129)*	(0.104)***			(0.198)***	(0.119)***			(0.208)	(0.262)
Constant	11.377	11.026	11.833	12.2	11.42	11.4	12.45	12.426	11.18	10.403	11.579	10.426
	(0.071)***	(0.096)**	(0.280)***	(0.325)***	(0.084)***	(0.100)**	(0.385)***	(0.310)***	(0.100)***	(0.192)**	(0.464)***	(0.862)***
Observations	3481	1528	3481	1528	1873	1084	1873	1084	1608	444	1608	444
R-squared	0.19	0.39	0.19	0.4	0.19	0.32	0.19	0.33	0.13	0.37	0.13	0.37

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 7 shows private returns to education by sex for public and private sector. Regressions corrected for selectivity show that male and female have similar returns to education in the public sector. The difference of about 1.2% is quite small. On average an additional year of education in the public sector increases wages by about 5.3% for both males and 6.5% for female in the public sector. OLS results are quite similar maintain the same trends of higher return to education for females. OLS results show a difference of about 0.9% favoring women in the public sector.

Selectivity corrected regressions show females have higher returns to education in the private sector that are almost twice as much as those of males in this sector. On average an additional year of education increases wages by about 7% for females in the private sector versus about 4.6% for men. Hence returns to education for females are higher in the private sector than the public sector. OLS results also show higher returns to education for females in the private sector.

Public-private differences in returns to education for females show that females have higher private returns to education in the private sector, however these differences, at 0.5 %, are

not very large. Compared to men, the private sector may award higher returns to education for females not only by placing higher value to education, but also due to higher wage differentials between men and women in this sector. For the public sector, difference in returns to education between men and women may not be as large due to a concentration of higher educated females in the public sector as well as continuous increases of wages by the government in this sector especially heath and education, where females in the public sector are mainly concentrated. On the other hand, equal reward between males and females in the public sector may be due to similar education levels in this sector as well as less wage differentials compared to the private sector.

| | Public | | | | Private | | | |
| | OLS | | Two-Step | | OLS | | Two-Step | |
Variables	Male	Female	Male	Female	Male	Female	Male	Female
edu	0.064	0.073	0.053	0.065	0.041	0.073	0.046	0.070
	(0.005)***	(0.005)**	(0.030)*	(0.018)**	(0.004)***	(0.006)**	(0.008)***	(0.013)**
exp	0.020	0.002	0.020	0.002	0.023	0.004	0.022	0.004
	(0.006)***	(0.004)	(0.006)***	(0.005)	(0.005)***	(0.007)	(0.005)***	(0.007)
exp2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)
children_0to5	-0.001	0.041	0.001	0.037	0.031	-0.003	0.032	-0.009
	(0.029)	(0.025)	(0.029)	(0.027)	(0.021)	(0.040)	(0.021)	(0.046)
married	-0.033	-0.01	-0.036	-0.007	0.033	0.018	0.032	0.018
	(0.055)	(0.030)	(0.055)	(0.031)	(0.044)	(0.053)	(0.044)	(0.053)
Coastal	-0.039	-0.160	-0.044	-0.169	-0.114	-0.182	-0.081	-0.197
	(0.043)	(0.035)**	(0.045)	(0.040)**	(0.038)***	(0.052)**	(0.058)	(0.080)*
Central	-0.12	-0.122	-0.126	-0.135	-0.117	-0.18	-0.068	-0.196
	(0.041)***	(0.033)**	(0.044)***	(0.044)**	(0.036)***	(0.051)**	(0.076)	(0.084)*
Mountain	-0.117	-0.168	-0.138	-0.196	-0.121	-0.079	-0.079	-0.105
	(0.045)**	(0.038)**	(0.072)*	(0.071)**	(0.046)***	(0.085)	(0.074)	(0.135)
fulltime	0.134	-0.020	0.126	-0.022	0.441	0.165	0.428	0.172
	(0.051)***	(0.038)	(0.055)**	(0.038)	(0.039)***	(0.070)*	(0.043)***	(0.076)*
IMR			-0.064	-0.049			-0.172	0.046
			(0.174)	(0.107)			(0.236)	(0.190)
Constant	11.655	11.723	11.918	11.909	11.613	11.506	11.616	11.521
	(0.118)***	(0.105)**	(0.721)***	(0.419)**	(0.084)***	(0.146)**	(0.084)***	(0.157)**
Observations	686	607	686	607	2055	689	2055	689
R-squared	0.28	0.36	0.28	0.36	0.14	0.25	0.14	0.25

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Results by sex for private agriculture, industry and service sector are presented in Table

8. Across models there are no significant results for private returns to education in the private agriculture sector. Females have higher returns to education in industry and service sectors. The highest returns to education for females are in the service sector. The OLS coefficient

on private returns to education for females in services is lower than the corrected coefficient. However the trend remains the same.

On average, an additional year of education for females in industry increases wages by about 6.4%, whereas it is about 4.2% for men. In the service sector, on average an additional year of education for female increases wages by almost 9% compared to 5.5% for men. The service sector provides higher returns to education for females and males alike compared to industry sector. Females in industry are mainly concentrated in manufacturing industry, where wages and education levels are lower than those in service sector. Females in manufacturingmainly work as seamstress in manufacturing of shoes and garments. On the other hand, in services they are mainly concentrated in education, trade and health. These sectors within the service sector offer higher wages and require higher education levels. Consequently, this may help explain the higher rewards of females in the service sector.

Table 8. Private returns to education by sector

	Agriculture				Industry				Service			
	OLS		Two-Step		OLS		Two-Step		OLS		Two-Step	
Variables	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
edu	0.013	0.037	0.025	0.036	0.031	0.058	0.042	0.064	0.057	0.067	0.055	0.087
	(0.013)	(0.027)	(0.029)	(0.032)	(0.006)***	(0.008)**	(0.011)***	(0.013)**	(0.005)***	(0.005)**	(0.012)***	(0.021)**
exp	0.026	0.004	0.03	0.004	0.004	0.001	-0.008	-0.005	0.035	0.009	0.036	0.013
	(0.012)**	(0.018)	(0.014)**	(0.019)	(0.007)	(0.010)	(0.012)	(0.013)	(0.006)***	(0.005)	(0.006)***	(0.006)*
exp2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	-0.001	0.000
	(0.000)**	(0.000)	(0.000)**	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)
children_0to5	0.086	0.047	0.086	0.044	0.031	-0.014	0.035	-0.002	0.029	0.029	0.029	0.035
	(0.044)*	(0.079)	(0.044)*	(0.098)	(0.028)	(0.054)	(0.029)	(0.058)	(0.027)	(0.029)	(0.027)	(0.030)
married	0.073	-0.255	0.074	-0.256	0.025	-0.148	0.01	-0.129	0.059	0.023	0.059	0.02
	(0.113)	(0.129)*	(0.113)	(0.131)	(0.059)	(0.062)*	(0.060)	(0.070)	(0.058)	(0.039)	(0.058)	(0.039)
Coastal	-0.706	-0.759	-0.81	-0.743	-0.079	-0.131	-0.105	-0.127	-0.114	-0.162	-0.109	-0.148
	(0.389)*	(0.451)	(0.450)*	(0.557)	(0.058)	(0.071)	(0.062)*	(0.072)	(0.046)**	(0.042)**	(0.056)*	(0.045)**
Central	-0.454	-0.346	-0.577	-0.332	-0.089	-0.06	-0.085	-0.057	-0.158	-0.174	-0.151	-0.148
	(0.388)	(0.451)	(0.470)	(0.533)	(0.057)	(0.067)	(0.057)	(0.067)	(0.044)***	(0.040)**	(0.060)**	(0.049)**
Mountain	-0.194	0.000	-0.314	0.000	0.034	0.23	0.053	0.298	-0.244	-0.184	-0.238	-0.112
	(0.400)	(0.000)	(0.477)	(0.000)	(0.066)	(0.139)	(0.068)	(0.180)	(0.055)***	(0.049)**	(0.062)***	(0.092)
fulltime	0.348	0.55	0.378	0.561	0.532	0.183	0.196	-0.024	0.21	-0.008	0.215	-0.035
	(0.071)***	(0.117)**	(0.096)***	(0.253)*	(0.054)***	(0.117)	(0.291)	(0.369)	(0.046)***	(0.044)	(0.052)***	(0.053)
IMR			-0.101	0.025			-0.31	-0.129			-0.045	0.208
			(0.218)	(0.519)			(0.264)	(0.218)			(0.250)	(0.224)
Constant	11.681	11.403	11.737	11.367	11.855	11.565	12.532	11.901	11.447	11.72	11.508	11.257
	(0.431)***	(0.606)**	(0.448)***	(0.962)**	(0.116)***	(0.180)**	(0.588)***	(0.596)**	(0.105)***	(0.114)**	(0.355)***	(0.513)**
Observations	706	226	706	226	1126	255	1126	255	1040	774	1040	774
R-squared	0.11	0.2	0.11	0.2	0.13	0.25	0.13	0.25	0.2	0.25	0.2	0.25

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Regression results where education is in categories as shown in tables 9-11 reinforce the idea that private investment in university pays off for females. Individual and family investment in female education pays off and it also shows that this investment is a rational response in the actual and expected returns to education. On the other hand, the following results also reinforce the idea that university education for females does make a difference when compared to other levels of education. Returns to education for lower secondary education compared to primary education are insignificant for male and female alike in urban areas. They are insignificant for lower and upper secondary education for females in rural areas and industry. This means that females need higher levels of education in the labor market, since returns to education of lower and upper secondary education are sometime insignificant compared to primary education. This may also reinforce the idea that females have fewer opportunities in the labor market and the only way to make a difference is through higher education.

Table 9. Returns to education by education categories

	All				Urban				Rural			
	OLS		Two-Step		OLS		Two-Step		OLS		Two-Step	
Variables	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lower secondary	0.126	0.061	0.12	0.009	0.087	0.111	0.055	0.102	0.17	0.003	0.17	-0.041
	(0.053)**	(0.099)	(0.053)**	(0.099)	(0.075)	(0.113)	(0.075)	(0.112)	(0.074)**	(0.182)	(0.074)**	(0.187)
Upper secondary	0.308	0.398	0.295	0.266	0.175	0.298	0.175	0.272	0.34	0.352	0.325	0.269
	(0.054)***	(0.100)**	(0.054)***	(0.103)**	(0.074)**	(0.112)**	(0.074)**	(0.111)**	(0.078)***	(0.191)	(0.079)***	(0.207)
University	0.628	0.876	0.552	0.602	0.479	0.748	0.413	0.654	0.65	0.906	0.561	0.693
	(0.058)***	(0.101)**	(0.063)***	(0.116)***	(0.077)***	(0.112)**	(0.078)***	(0.115)***	(0.090)***	(0.199)**	(0.111)***	(0.287)**
exp	0.027	0.007	0.021	-0.004	0.024	0.003	0.016	-0.003	0.025	0.009	0.019	0.002
	(0.004)***	(0.005)	(0.004)***	(0.005)	(0.005)***	(0.005)	(0.005)***	(0.005)	(0.006)***	(0.010)	(0.008)**	(0.012)
exp2	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)	(0.000)***	0.000	(0.000)***	(0.000)
children_0to5	0.035	0.037	0.035	0.044	0.021	0.018	0.028	0.03	0.039	0.069	0.037	0.069
	(0.018)*	(0.027)	(0.018)*	(0.027)*	(0.022)	(0.027)	(0.022)	(0.027)	(0.028)	(0.056)	(0.028)	(0.056)
married	0.047	-0.052	0.018	-0.015	0.05	0.003	0.027	0.019	0.062	-0.147	0.039	-0.118
	(0.038)	(0.035)	(0.039)	(0.036)	(0.045)	(0.035)	(0.045)	(0.035)	(0.062)	(0.079)	(0.065)	(0.083)
fulltime	0.397	0.242	-0.215	-0.311	0.541	0.115	-0.114	-0.194	0.27	0.364	0.000	0.000
	(0.032)***	(0.043)**	(0.034)***	(0.039)***	(0.041)***	(0.047)*	(0.034)***	(0.035)***	(0.047)***	(0.080)**	(0.000)	(0.000)
Coastal	-0.206	-0.284	-0.203	-0.187	-0.087	-0.171	-0.131	-0.179	0.000	0.000	0.128	0.336
	(0.034)***	(0.039)**	(0.033)***	(0.037)***	(0.033)***	(0.035)**	(0.033)***	(0.034)***	0.000	0.000	(0.035)***	(0.062)***
Central	-0.209	-0.18	-0.083	-0.065	-0.123	-0.156	-0.118	-0.145	0.122	0.318	0.315	0.503
	(0.033)***	(0.037)**	(0.043)*	(0.051)	(0.033)***	(0.034)***	(0.043)***	(0.046)***	(0.035)***	(0.059)**	(0.066)***	(0.139)***
Mountains	-0.135	-0.12	-0.12	-0.499	-0.133	-0.129	-0.506	-0.515	0.257	0.416	-0.045	0.032
	(0.040)***	(0.050)*	(0.175)	(0.162)***	(0.043)***	(0.046)**	(0.259)*	(0.180)***	(0.051)***	(0.111)**	(0.231)	(0.331)
IMR			-0.357	-0.442			-0.661	-0.368			-0.245	-0.212
			(0.119)***	(0.093)***			(0.161)***	(0.102)***			(0.175)	(0.205)
Constant	11.767	11.859	12.453	12.945	11.779	12.069	12.991	12.83	11.462	11.258	11.941	11.827
	(0.075)***	(0.118)**	(0.240)***	(0.258)***	(0.097)***	(0.131)**	(0.311)***	(0.248)***	(0.103)***	(0.222)**	(0.358)***	(0.592)***
Observations	3481	1528	3481	1528	1873	1084	1873	1084	1608	444	1608	444
R-squared	0.19	0.38	0.19	0.39	0.19	0.33	0.2	0.34	0.13	0.37	0.13	0.37

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 10. Returns to education public-private by education categories

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

| | Agriculture | | | | Industry | | | | Service | | | |
| | OLS | | Two-Step | | OLS | | Two-Step | | OLS | | Two-Step | |
Variables	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lower secondary	0.073	-0.2	0.004	-0.115	0.133	0.134	0.292	0.25	0.373	0.87	0.246	0.898
	(0.115)	(0.267)	(0.135)	(0.285)	(0.074)*	(0.108)	(0.146)**	(0.175)	(0.102)***	(0.220)**	(0.114)**	(0.261)**
Upper secondary	0.104	-0.03	0.187	-0.106	0.21	0.197	0.38	0.326	0.496	0.98	0.116	1.029
	(0.128)	(0.292)	(0.154)	(0.306)	(0.075)***	(0.107)	(0.155)**	(0.188)	(0.102)***	(0.220)**	(0.182)	(0.331)**
University	0.49	0.000	0.828	0.000	0.431	0.787	0.927	1.058	0.791	1.313	0.409	1.374
	(0.278)*	(0.000)	(0.448)*	(0.000)	(0.089)***	(0.121)**	(0.405)**	(0.345)**	(0.106)***	(0.220)**	(0.185)**	(0.376)**
exp	0.026	0.007	0.032	0.008	0.004	0.004	-0.013	-0.003	0.034	0.008	0.043	0.008
	(0.012)**	(0.019)	(0.013)**	(0.019)	(0.007)	(0.009)	(0.015)	(0.012)	(0.006)***	(0.005)	(0.007)***	(0.006)
exp2	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	-0.001	0.000
	(0.000)**	(0.000)	(0.000)**	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)***	(0.000)	(0.000)***	(0.000)
children_0to5	0.087	0.032	0.082	0.071	0.028	-0.029	0.032	-0.013	0.028	0.027	0.026	0.028
	(0.044)**	(0.079)	(0.045)*	(0.092)	(0.028)	(0.052)	(0.029)	(0.055)	(0.027)	(0.029)	(0.027)	(0.030)
married	0.068	-0.26	0.078	-0.221	0.026	-0.119	0.017	-0.096	0.055	0.026	0.035	0.025
	(0.113)	(0.129)*	(0.114)	(0.137)	(0.058)	(0.060)*	(0.059)	(0.066)	(0.058)	(0.039)	(0.058)	(0.039)
fulltime	-0.707	-0.753	-1.02	-0.576	-0.078	-0.096	-0.164	-0.09	-0.13	-0.176	0.015	-0.174
	(0.389)*	(0.452)	(0.508)**	(0.497)	(0.058)	(0.069)	(0.090)*	(0.069)	(0.046)***	(0.042)**	(0.074)	(0.044)**
Coastal	-0.46	-0.336	-0.825	-0.164	-0.09	-0.045	-0.115	-0.05	-0.183	-0.197	-0.002	-0.193
	(0.388)	(0.451)	(0.542)	(0.494)	(0.057)	(0.064)	(0.060)*	(0.065)	(0.044)***	(0.040)**	(0.084)	(0.046)**
Central	-0.199	0.000	-0.437	0.000	0.038	0.310	-0.041	0.404	-0.272	-0.196	-0.151	-0.179
	(0.400)	(0.000)	(0.470)	(0.000)	(0.067)	(0.133)*	(0.092)	(0.174)*	(0.055)***	(0.049)**	(0.073)**	(0.097)
Mountains	0.344	0.559	0.387	0.479	0.530	0.153	0.446	0.069	0.208	-0.001	0.308	-0.008
	(0.071)***	(0.118)**	(0.084)***	(0.150)**	(0.054)***	(0.111)	(0.086)***	(0.150)	(0.047)***	(0.044)	(0.061)***	(0.056)
IMR			-0.289	0.238			-0.696	-0.194			-0.974	0.048
			(0.301)	(0.278)			(0.554)	(0.232)			(0.386)**	(0.239)
Constant	11.722	11.858	12.362	11.368	11.991	11.898	12.781	12.106	11.66	11.556	12.719	11.462
	(0.426)***	(0.571)**	(0.789)***	(0.809)**	(0.117)***	(0.170)**	(0.639)***	(0.300)**	(0.125)***	(0.231)**	(0.439)***	(0.517)**
Observations	706	226	706	226	1126	255	1126	255	1040	774	1040	774
R-squared	0.11	0.21	0.11	0.21	0.13	0.33	0.13	0.33	0.19	0.25	0.2	0.25

Table 11. Returns to education by sector and education categories

Note: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

IV. Conclusions and Policy Recommendations

This study uses 2012 Living Standard Measurement survey data to estimate private returns to education in Albania. Estimation results show that females have higher returns to education overall and across regions and sectors. Returns to education for females are higher in the private sector compared to the public sector. The highest returns to education for females are in the service sector.

The study shows that there are clear pay offs to female education. As a result government effort in increasing educations should continue especially for rural areas given lower levels of education in these areas and high returns to education especially for women. Higher returns to education for women may improve their position in the labor market and should serve as incentives for increased labor force participation and paid employment especially for women in the rural areas. On the other hand, it also shows that investing in education by the government is a worthy investment that brings back rewards and consequently investment in women's education should continue and it should be increased providing more and better quality education.

The continuous investment of parent's or individuals in their education shows that their decisions are right and their investment brings back returns. This is especially true for women, which also reinforces the high participation of women in higher education. The same should be done for rural areas bringing them closer to the education of urban areas. This study shows that there are high returns to women's education in the rural areas and more women should be educated and join the labor market moving away from unpaid labor.

Given the higher returns to education for women, there should be increased effort to increasing employment for women and decrease inactivity rates. There are rewards to be made in the labor market especially for educated women. Consequently, increased education and participation of women in the labor market would positively impact their livelihoods and economic independence and as a result increase economic empowerment.

Promoting women's entry into the private sector is important given women's already high participation in the public sector, and the generally limited capacity of the sector to absorb a large number of workers. The higher returns of education for women in the private sector should also serve as a policy incentive to direct women's participation in the private sector as

to reap the rewards to education in the private sector and those sectors within the private sector that offer highest rewards to education. Introducing measures that exist in the public sectors, such as job security, better working hours, more flexibility especially for working mothers may increase women's participation in the private sector. Increased effort may also be undertaken in enforcing legislature against wage discrimination in the private sector.

Furthermore, given women's higher returns to education they should also be encouraged to participate in sectors which have traditionally been dominated by men as well as be in occupations where their education matches their job position. This would ensure women higher wages and also have a positive impact in reducing the gender wage gap. Efforts should also be undertaken in increasing vocational education and training into those fields and sectors that offer employment and are high paying.

The relatively small differences in returns to education for women between public and private sector warns regarding continuous wage increases in the public sector especially education and health. Among other things one of the main factors in increasing wages should be as a result of increased productivity. Wage increase initiatives in the public sector should take into account public-private differences and be cautious not to create imbalances and labor market distortions between the two sectors.

Lastly, insignificant results for the private agriculture sector may indicate low wages and low education of the workforce in this sector. As a result increased efforts are needed to better educate the workforce in this sector and provide them with more education and specific education required for this sector. This is return will also serve to make this sector more competitive.

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