Human Capital and Unemployment in Transition Economies: The Case of Kosova

Avdullah Hoti

Riinvest Institute for Development Research, Prishtina and
University of Prishtina, Faculty of Economy

Address: **Str.** Regjep Mala, No.27, Aktash I, Prishtina, Kosova
Tel: +381 38 249 320, Fax: +381 38 249 321; Mob: +377 44 350 133,
Email: a.hoti@staffs.ac.uk, avdullah.hoti@riinvestinstitute.org,
Http://www.riinvestinstitute.org

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Abstract

In this paper we explore the issues of human capita in Kosova, a country which is characterised by high unemployment and large-scale emigration. Using data from the Riinvest Labour Force and Household Survey (December 2002), we estimate the probability of being unemployed for those who are of working age, are active in the labour force and reside in Kosova. Apart from this, we estimate the probability of emigrating for those of working age. There seems to be some systematic patterns: (i) those who are unemployed are not randomly selected from the labour force; (ii) those who emigrate are not randomly selected from working age population. The empirical results show that the individuals residing in rural areas face higher probability of being unemployed. Consequently, they tend to emigrate more compared to those residing in urban areas. Second, males and married people face lower probability of being unemployed. But they also tend to emigrate more compared to their respective counterparts. Third, although the more educated individuals face lower probability of being unemployed in Kosova, they tend to emigrate more than less educated individuals. These research findings might be used for developing policy proposals.

1. INTRODUCTION

It is shown that growth and schooling are highly correlated and that human capital, along with other factors, determines the economic growth (Bils and Klenow, 2000, Hanushek and Kimko, 2000). Moreover, an individual's human capital influences his productivity and therefore earnings and it explains to a great extent earning differentials among individuals. As such, human capital influences the probability of becoming and remaining unemployed. The study of human capital accumulation and issues related to it are crucial for a successful transformation of former command economies of Central and Eastern Europe. In the early phases of transition, the opinion whereby the level of human capital in transition countries was thought to be quite high prevailed. Notwithstanding, using firm level data for transition countries, it was revealed that these countries stand worse in terms of the quality of the work force.

Kosova is one of the last countries to embark on the road of transition to a market economy. Unemployment is still high, though it has been decreasing. It is particularly high for young people and females. The labour market in Kosova has some distinctive characteristics, such as a very young population and large-scale emigration. The effects of emigration on the labour market are of particular interest given its scale and the level of remittances. Though noticeable progress has been achieved in reforming the education system in Kosova, much remains to be done. The development and reform of the education and training systems should reflect these developing labour market needs.

There seems to be a systematic pattern regarding the unemployed individuals and also those who emigrate. That is to say that those who are unemployed are not randomly selected from the labour force. Similarly, those who emigrate are not randomly selected from working age population. If there was not a particular pattern, than we would not detect any significant relationship between one's unemployment status or being an emigrant and some other characteristics such as education level, residence, gender, age etc. The fact that we do find such relationships points to the need for policy considerations to tackle these issues. In this paper we explore these patterns in Kosova, a country which is characterised by high unemployment and large-scale emigration.

The structure of this paper is as follows. In Section 2, we discuss the structural adjustment during the transition process and in particular we comment on the trend and pattern of the unemployment. In Section 3, we discuss the ongoing debate regarding the human capital in transition economies. Here we review the literature that deals with the impact of human capital on economic growth and comment on the value of human capital in transition

economies. In Section 4, we turn to Kosova where we briefly describe the transition process, the labour market and the emigration patterns. Given the lack studies, this paper provides a comprehensive study of issues related to human capital and the working of labour market in Kosova. We discuss these issues in the context of South-Eastern European countries. We describe the data and methodology in Section 5. In our analyses we use data from the Household and Labour Force Survey undertaken by the Riinvest Institute in December 2002, as well as data and reports from Kosova Education Centre. Employing a Logit model, we estimate the probability of being unemployed and the probability of emigrating. In Section 6 we give some concluding remarks. Research findings might be used for developing policy proposals.

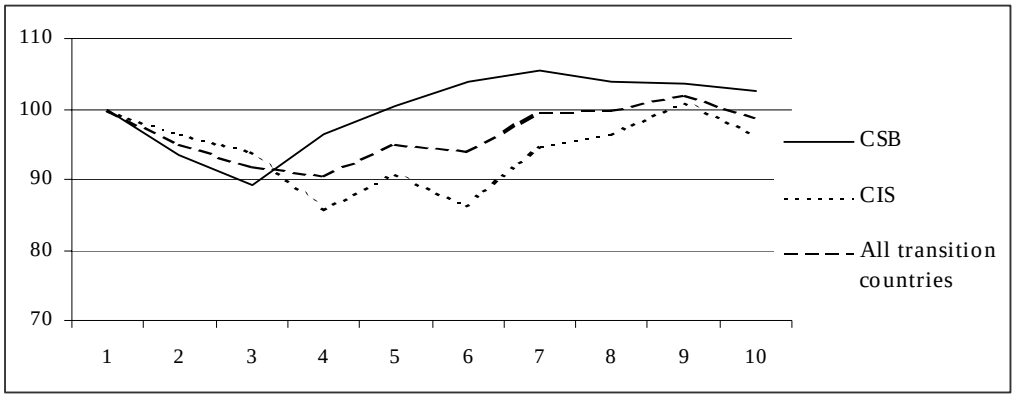
2. STRUCTURAL ADJUSTMENT AND UNEMPLOYMENT DURING THE TRANSITION

The transition process that started with the breakdown of the command economy in Central and Eastern European countries brought about deep changes in people's life residing in these countries. These changes were both unique and very profound. They are still going through the process of transforming their economies after more than a decade since they abandoned the communist system. Some of these countries have made significant progress, whereas some of them still lack the necessary steps for the foundations of a market economy. Recently, output has recovered to pre-transition level (at least in most of the Central European countries), but employment still lags behind. The unemployment rate is still high though it has been decreasing.

Transition from a command to a market economy is being shaped by two main mechanisms, namely reallocation and restructuring (Blanchard, 1997). First, as transition started governments cut down subsidies and introduced hard budget constraints to state-owned firms. Consequently, there was a disruption in the production process in large industrial state enterprises and a gradual increase in the private sector. Therefore, the behaviour of output during the transition can be described as having a U-shape – a decline initially and a recovery later on (Figure 1). Prices were liberalised making it even harder for these firms to operate. New employment moved toward the growing sectors, a process called reallocation. Part of the decline in activity was due not so much to reallocation, but rather to de-organisation. In the pre-transition period, firms were organised differently, around a central plan rather than around markets and they had only one supplier for each of their inputs and one buyer (or a certain

number) of the output. As transition started, these bilateral relations were destroyed, which led to a disruption in the production process.

Figure 1. Growth in real GDP in transition countries



Source: EBRD (1999). Years are not in calendar term, year 0 is the year before the transition process started and GDP in that year is equal to 100. This is important since not all countries started the transition process in the same year. In this way we can compare the behaviour of the GDP across countries during the transition.

The second process that shapes transition is restructuring. It implies that some of those currently working will lose their job either because of their obsolete human capital or because of the closure of some plants. Therefore, it is expected that under restructuring, some employees will be laid off. On the other side, restructuring leads also to an increase in the productivity of the remaining employees.

Full employment (zero unemployment), centrally set wages and overstaffing characterise the labour market in the pre-transition period. As the transition process started both supply and demand for labour were affected. Sectoral reallocation of labour was evident as a result of the shrinkage of some sectors (heavy industry) and the development of others (services and light manufacturing). Given these adjustments, full employment was no longer sustainable. Some six million people became unemployed in Central and Eastern Europe. Many withdrew from the labour force. (Boeri et al. 1998; Svejnar, 1999 etc.).

Table 3 provides the unemployment rates for the CE, SEE and the Baltic countries against time. SEE countries had higher unemployment rate compared to CE and the Baltic countries during most of the 1990's.

Burda (1993) argues that unemployment is not just a by-product of transition; it is necessary for the transformations. In his study, he gives three reasons to support his claim: (i) with unemployment, the bargaining power is biased toward employers, indeed unemployment will provide a worker-disciplining device; (ii) unemployment may be necessary to control the growth of real wages; and (iii) unemployment is necessary to allow the emergence of the

private sector. He contends that for new job to be created others have to be destroyed and concludes that neither 'big-bang' nor 'go-slow' is the best approach.

Table 1. Unemployment rate in transition countries (1990-2001)

Countries	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
SEE (ave.)	**9.75**	**11.1**	**18.5**	**19.8**	**17.7**	**17.7**	**10.4**	**16.4**	**17.3**	**13.1**	**19.7**	**19.62**
Albania	9.5	8.9	27.9	28.9	19.6	16.9	12.4	14.9	17.8	18	16.8	15.2
Bulgaria	1.7	11.1	15.3	16.4	12.8	11.1	12.5	13.7	12.2	14.1	17.9	17.3
Croatia	9.3	13.2	13.2	14.8	14.5	14.5	10	9.9	11.4	13.5	20.6	23
Macedonia	18.5	19.2	27.8	28.3	31.4	37.7	na	36	34.5	na	32.2	34
Romania	na	3	8.2	10.4	10.1	8.2	6.5	7.4	10.4	6.8	10.8	8.6
The Baltic (ave.)	**0.55**	**0.45**	**2.6**	**6.57**	**9.37**	**15.1**	**15.3**	**12.9**	**12.4**	**13.4**	**11.4**	
Estonia	0.6	na	na	6.6	7.6	9.8	10	9.7	9.9	11.7	14.8	na
Latvia	0.5	0.6	3.9	8.7	16.7	18.1	19.4	14.8	14	14.5	8.4	na
Lithuania	na	0.3	1.3	4.4	3.8	17.5	16.4	14.1	13.3	14.1	11.1	na
CE (ave.)	**2.55**	**8.28**	**8.98**	**11.1**	**10.7**	**9.7**	**9.34**	**8.42**	**9.78**	**10.4**	**11.7**	**12.6**
Czech Rep.	0.7	4.1	2.6	3.5	3.2	2.9	3.5	5.2	7.5	8.7	8.8	9
Hungary	1.8	8.2	9.3	11.9	10.7	10.2	9.9	8.7	7.8	7	6.5	6
Poland	6.5	12.3	14.3	16.4	16	14.9	13.2	8.6	10.4	12.5	16.7	17
Slovakia	1.2	9.5	10.4	14.4	14.6	13.1	12.8	12.5	15.6	16.2	18.9	19
Slovenia	na	7.3	8.3	9.1	9.1	7.4	7.3	7.1	7.6	7.4	7.5	12

Source: 1990-98 OECD (2000); 1999-2000 KILM, ILO (2002); 2001 WIIW, Vienna (2002).

Boeri et al. (1998) show that the most vulnerable groups to become unemployed are those with low education. The unemployment rate for older workers is lower than that for young workers, because many older worker took early retirement and, therefore, withdrew from the labour force. Burda (1993) and Nesporova (1999, 2001) argue that one of the causes of unemployment during the transition is 'skill mismatching' – many skills have become obsolete due to changes in production, advance technologies and new forms of organization. Therefore, unemployment prevails since adjusting occupational distribution of unemployed workers takes time.

3. HUMAN CAPITAL AND TRANSITION ECONOMIES

The role of human capital for economic growth is widely recognised in economics literature. Hanushek and Kimko (2000) show that labour force quality has a consistent, stable, and strong relationship with economic growth. The macro effects of human capital has been analysed by regressing the economic growth on human capital as well as on other variables. Bils and Klenow (2000) show that growth and schooling are highly correlated across countries. Using empirical data, they show that greater schooling enrolment in 1960 consistent with one more year of attainment is associated with 0.30 percent faster annual growth over 1960-1990. Moreover, human capital accumulation seen from an individual viewpoint explains to a great extent earning differentials among individuals in the labour market. Consequently, the level of

human capital is important from both macro and micro aspect. Given these facts, governments throughout the world pay increasing attention to the quality of education delivered by schools.

As the Central and Eastern European (CEE) countries progress with their reforms toward market economies, the role that human capital has to play gains importance. While the progress toward the market economy in the early phases of transition did depend on the willingness and commitment of government to implement reforms, the long run adjustment of the transition economies depends primarily on the ability of human capital to absorb and to exercise the knowledge that is necessary to compete internationally. Human capital that is able to adjust to technological changes and to the principles of market economy is a prerequisite to bring economic prosperity for the nation as a whole. Moreover, as Micklewright (1999) argues, the education system [i.e. human capital] is also vital to wider process of societal change that both underpins economic reforms and which is needed in its own right, because transition involves the developments of new nations. The twenty-seven countries in the region today (including former Soviet Republics) were born from only eight countries that existed at the start of the 1990s.

In the early phases of transition, the opinion whereby the level of human capital in transition countries was thought to be quite high prevailed (Druska et al., 2001; Spagat ,2001). This opinion was grounded on simply comparing enrolment rates in educational institutions in transition countries to those in the developed countries. Duczynski (2001), using the data set from Barro and Lee (1993) which data set is based on a research that evaluates the educational attainment internationally, shows that the average years of schooling in the population aged more than 15 in transition countries is found to be 9.31, with a standard deviation of 1.1. In 21 developed countries this average is 8.7 and the standard deviation is 1.8. This data reveals two facts: (i) that transition countries have higher educational attainment (the average years of schooling is higher compared to the developed countries); and (ii) inequality in educational attainment among different groups in transition countries is lower compared to that in the developed countries. Micklewright (1999) shows that comparing enrolment rates (or in this case the average years of schooling) provides limited information since it neglects the quality of education obtained by the learning actually achieved. Hanushek and Luque (2002) show that one academic year of schooling in the USA is not directly comparable to one academic year in, say, the developing or transition countries and that schools and tertiary educational institutions are far from being the only avenue for education. However, it is apparent that the stock of human capital inherited from the socialist period was high compared to other countries at similar levels of economic developments. The point is whether the transition countries can maintain this positive element inherited from the previous system and make further

improvements of it. As Micklewright (1999) contends, this should constitute a major priority for economic policy.

Education acquired during the previous system is not that which is required under an open market system and much of the skills inherited were obsolete. Spagat (2002), making use of data from an EBRD report in 2000, concludes that firms in transition countries lag behind advanced industrialised countries in terms of the quality of their workforce. The lack of successful reforms and high unemployment means that over time there will be a continuing loss of skills, leading to an even greater gap in quality of the workforce. The educational system under the communist regime was biased toward producing graduates with very narrow skills. Those who graduated from vocational schools were generally over-represented among the number of total graduates. When the transition started, it was revealed that the marketability of these types of skills was low, with diplomas from vocational schools often being very poorly rewarded (Boeri and Terrel, 2002, Orazem and Vodopivec, 1997). This was reflected, as Boeri and Terrell (2002) and Micklewright (1999) show, by a decline in the enrolment in vocational and technical schools throughout the region and a rise in enrolment general secondary schools and tertiary education. This is a reflection of a mix of demand and supply factors, ranging from enterprise-based schools closing down (i.e. where graduates from vocational schools were trained for the enterprises) to children opting other types of skills or dropping out of the education system altogether (Micklewright, 1999).

To sum up, much of the human capital in the transition economies would have low market value, having been acquired under communism when priorities were very different from what they are today. Nevertheless, human capital in the transition countries has an 'intergenerational' value in terms of passing the inherited human capital across generation and creating better chances and choices for the young generation. Therefore, it is crucial to note that *"while a Russian rocket scientist might earn very low wages, he still can do much to facilitate his children's human capital"* (Spagat, 2001).

4. KOSOVA AMONG OTHER SOUTH-EAST EUROPEAN COUNTRIES

Countries of South Eastern Europe, including Kosova, are described as latecomers on the stage of transition. Among these countries are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosova, Macedonia, Romania, and Serbia and Montenegro. The transition process in these countries is described as a 'retard transition', since it was disrupted by conflicts throughout 1990's. With total GDP of US$50 billion and 50 million people, this is the poorest region in Europe. The labour market in these countries has been affected substantially by the

recent conflicts and resulting movements of people. The combined effect of industrial decline, privatisation and economic restructuring caused a dramatic reduction of employment opportunities. Added to this the limited access to the capital market, the situation become even worst (Grootings, 2001). New employment has been driven mainly by self-employment, such as small businesses and farms. The informal sector's share in employment is not to be neglected in these countries.

A double-digit unemployment rate has become an accepted reality, especially among the young and less-educated people. The concern is that unemployment seems to stabilise at high levels. Though data on unemployment are not very reliable especially when the informal economy is taken into account. Participation rates have been affected by the ageing of population in some countries (Croatia, Bulgaria etc.), and by a high birth rate in some others (Albania and Kosova). To sum up, in terms of labour market developments, SEE countries are experiencing what CE countries went through in early 1990's, but on a much more dramatic scale (Grootings, 2001).

Kosova has a unique recent history reflected in its current uncertain status (Adnett and Hoti, 2003). It is one of the last countries to embark on the road of transition to a market economy (Hashi, 2001). The reason is twofold. First, the occupation by Serbia during the period 1989-1999, which started with the abolishment of Kosova's Constitution in 1989. The Kosovar experts and a report by the ILO claim some 145,000 workers (managerial staff of enterprises, teachers and university professors) to have been dismissed from their jobs. During this period, the Albanians in Kosova established their own institutions, including a government at central and municipal level, which did function until 1999. The international isolation of Serbia and together with that of Kosova aggravated the economic situation furthermore. During the period 1990-1995, GDP contracted by 50%, falling to less than US$400 per capita.

Second, the war in 1999 displaced some 800,000 people to neighbouring countries and to the Western Europe. After the war ceased, the reconstruction, stabilisation and transformation policies became the responsibility the UN Mission in Kosova based on the Resolution 1244. Some progress has been achieved in terms of establishing new institutions, though their competencies are limited. GDP is recovering and has increased by 11% and 6% in 2001 and 2002 respectively, reaching the level of more than US$1000 per capita. The reconstruction process absorbed a considerable number of unemployed people. Some 65,000 people are working in newly created state institutions and in public sector.

4.1. THE LABOUR MARKET IN KOSOVA

Activity rates in Kosova are very low by European standards, with only 58% of the resident population of working age of 1,210,000 economically active (Riinvest, 2003). This is largely due to the low activity rate among females (just over 40%). In turn this low activity rate reflects very high unemployment rates (49%). When adjustments for seasonal factors and the existence of the informal sector are made the estimated unemployment rate falls below 40%. These rates are currently approximately three times those of Albania and Bulgaria. The unemployment rate is especially high for women (estimated at 64%), with only the Czech Republic and Albania approaching this degree of a gender gap in unemployment rates in CEECs. Kosova faces chronic youth unemployment, estimated at 72% for those aged 15-24, and with over 40% of all unemployed being in this age group this problem is more severe than in any other CEEC. The lack of job creation and the resulting strongly negative duration dependence of unemployment is reflected in Kosova having the highest proportion of long-term unemployed (estimated at 83%), with this proportion being even higher for women (Adnett 2003).

Of the estimated 36% of the population aged 15-64 who are in employment, about two-thirds are now in the private sector. Agriculture accounts for nearly a quarter of total employment, other main sectors are wholesale/retail trades (12%), health and education (14%) and construction (7%), manufacturing accounts for less than 4% of employment. There are over 300 state owned enterprises employing approximately 30,000 workers with a further 30,000 on unpaid leave. Riinvest estimates that informal employment accounts for about a fifth of total employment.

4.2. EDUCATION SYSTEM IN KOSOVA

The education system in Kosova is undergoing reform involving every level of the system. Reforms are being undertaken in a number of key areas, with various international bodies acting as lead agents. Apart from the curricula, the reform has involved the organisation of education and the institutions. The new 5+4+3 educational structure (primary, lower secondary and upper secondary respectively) is being introduced, with additional 3+2 for higher education (university and postgraduate respectively). Less in known for the participation rate in education. Using data from the Riinvest Labour Force and Households Survey (December 2002), participation rate in secondary education is around 70% of the relevant cohort. In higher education participation rate is only 12% of the relevant cohort compares with an OECD average of around 40% in similar institutions. A third of students are

studying science and engineering. Only 1,600 students graduated in 1999/2000, with a quarter of these in science and engineering, which indicates for a low graduation rate (Adnett, 2003).

In 2001 government expenditure on education in Kosova was approximately 3.8% of GDP, which is comparable to that found in low and middle-income countries (IMF, 2002) but below the 5% average of EU countries. On the other side, 16% of the Kosova Consolidated Budget in 2001 and 2002 is spent on education, whereas for 2003 around 22% of the total budget is attributed to the expenditure on education. Yet the Small and Medium Enterprises survey data shows that the education system is not producing graduates with appropriate skills (Riinvest, 2003). Therefore, additional reforms are necessary and these reforms should be based on the demands of the labour market.

4.3. EMIGRATION IN KOSOVA

The emigration decisions and the following impacts, both economic and social, have been widely analysed. It is shown that emigration decisions depend on: (i) the cost of emigration; (ii) relative wage levels at home and abroad; (iii) the level of, and eligibility criteria for, unemployment benefits and social assistance; (iv) the unemployment rate at home; and (v) the level of education of those tending to emigrate.

Restrictions on people's movement both within and across countries prevailed in almost all of the former socialist countries. In some countries, for example in Albania, every movement were strictly supervised and allowed only with a special decree. With the Constitution of 1974, the former Yugoslavia did introduce some elements of the market economy, which reforms made it different from the other socialist countries. People were allowed, to a considerable degree, to move freely and to choose their residence according to their preferences. Nonetheless, other constraints prevailed such financial, cultural, attitudes etc.

As a consequence of young population and persistent high unemployment, Kosova has experienced both temporary and permanent mass emigration in recent years, with approximately half a million Kosovars living abroad whose remittances account for about a quarter of National Income. Emigration in Kosova has taken place during two distinctive time periods. The first one started during the 1980s and continued during the 1990s until the war in 1999. Emigration during this time is estimated to be around 250,000 people. The second wave of emigrants consists of the massive emigration/movements of the population, which started during the conflict in 1998 and culminated during the open war in 1999.

Emigration in Kosova has had a strong impact on two aspects. First, the emigration waves of the 1980s and 1990s have had an impact on population growth, which decreased from 46,000 persons per annum in the early 1980s to 36,000 in the 1990s. Second, in terms of the

labour market and private sector development, emigration can be thought of as having two effects: (i) it puts downward pressure on unemployment since it reduces the labour supply for a given level of the labour demand and, assuming a fixed number of vacancies, those who remain in Kosova have a higher chance of getting a job; (ii) emigration induces private employment creation due to remittances that emigrants send back home not only in cash but also in the form of machinery. It is estimated that remittances that emigrants working in Western European countries send back in Kosova are around $500 million per annum. This amount is around a quarter of Kosova's GDP and given the lack of social benefits/assistance, remittances are an important source of providing income for families residing in Kosova as well.

5. DATA AND METHODOLOGY

5.1. DATA AND SOME DESCRIPTIVE STATISTICS

Data used in this analysis come from the Household and Labour Force Survey conducted in December 2002 by Riinvest Institute. The survey was constructed to provide data for the labour market in Kosova as well as to provide some demographic and household expenditure data. The unit of observation in this survey was the household, but data were collected for each family member. In total, data exists for 8552 individuals, of whom some 4937 are of working age and reside in Kosova (i.e. they are not emigrants), while 2861 of latter group are in the labour force. Table 1 summarises the main characteristics of the labour force in Kosova in general and for the employed and the unemployed in particular.

Table 2: Descriptive statistics for the labour force in Kosova

	Labour Force	Employed	Unemployed
Employment status (%)	1	0.510	0.490
		(0.500)	(0.500)
Urban residence (%)	0.500	0.588	0.444
	(0.500)	(0.493)	(0.497)
Male (%)	0.639	0.745	0.532
	(0.480)	(0.436)	(0.499)
Age (average years)	33.519	38.082	29.659
	(11.561)	(11.126)	(10.411)
Age less or equal 30, (%)	0.481	0.310	0.624
	(0.500)	(0.463)	(0.485)
Married (%)	0.635	0.773	0.509
	(0.482)	(0.419)	(0.500)
Education (%)			
No education (%)	0.017	0.009	0.019
	(0.129)	(0.096)	(0.137)
Primary education only (%)	0.252	0.152	0.324
	(0.434)	(0.359)	(0.468)
Secondary education (%)	0.572	0.553	0.580

	(0.495)	(0.497)	(0.494)
College education (%)	0.073	0.135	0.034
	(0.261)	(0.342)	(0.182)
Higher education (%)	0.081	0.150	0.036
	(0.273)	(0.357)	(0.186)
Private Business Ownership (%)		0.490	
		(0.500)	
Working experience			
Working experience (up to 1 year) (%)		0.181	
		(0.385)	
Working experience (1 to 5 years) (%)		0.463	
		(0.499)	
Working experience (over 5 years) (%)		0.357	
		(0.479)	
Business sector			
Agriculture (%)		0.043	
		(0.202)	
Industry (%)		0.173	
		(0.379)	
Transport and services (%)		0.484	
		(0.500)	
Education and health (%)		0.200	
		(0.400)	
Other (%)		0.094	
		(0.291)	

(Standard deviations in parentheses)

A first observation from Table 2 is the high unemployment rate (49%). The unemployed individuals are concentrated in rural areas (56% of total unemployed live in rural areas compared with just 45% of the employed). The unemployed are younger than the employed and, as discussed below, they are also less educated. Males are over represented both among the labour force and the employed, the former reflecting the low female activity rate. Almost two-thirds of the unemployed are under the age of 31. Nearly half of those who are employed work in the private sector. Employment is concentrated in transport and services.

In Table 3 we present some descriptive statistics for all Kosovan emigrants residing in other countries and for those aged 16-64 (i.e. working age emigrants). From this we can get some insight about the nature and the reasons for emigrating.

Table 3: Descriptive Statistics for Emigrants

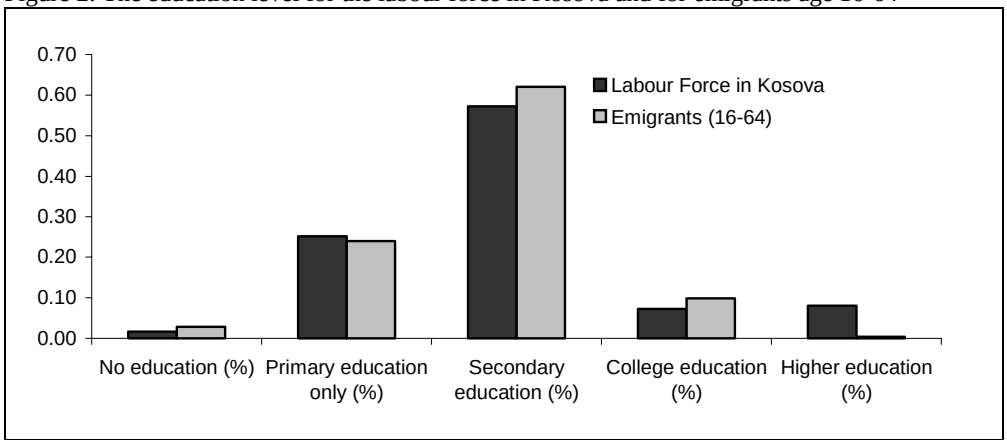
	All emigrants	Emigrants aged 16-64
Urban Resident (%)	0.37	0.38
	(0.48)	(0.49)
Male (%)	0.66	0.70
	(0.47)	(0.46)
Age (average years)	26.37	31.36
	(13.69)	(9.45)
Married (%)	0.60	0.62
	(0.49)	(0.49)
Education		
No education (%)		0.03
		(0.17)

Primary education only (%)	0.24
	(0.43)
Secondary education (%)	0.62
	(0.49)
College education (%)	0.10
	(0.30)
Higher education (%)	0.004
	(0.07)

Standard deviation in parentheses

Just above 1/3 of the Kosovan emigrants are from urban areas. This is an indication that those from rural areas are induced to emigrate more that those from urban areas, and the higher unemployment rate in urban areas might be one of the explanations for this pattern. Another observation from Table 3 is that average age of working age emigrants is lower than that for the labour force in Kosova. If we look at education, we can notice that the emigrants are more educated than the labour force in Kosova (Figure 2), which indicates that the more educated persons trend to emigrate more.

Figure 2: The education level for the labour force in Kosova and for emigrants age 16-64



Source: Data from Riinvest Labour Force and Household Survey (2002)

5.2. METHODOLOGY

Our primary objective in this analysis is to explore what happens to the human capital in the post-war Kosova. Due to data limitations we cannot analyse many aspects of human capital formation and deterioration in Kososa. In particular we explore the probability of being unemployed and emigrating. Therefore our analysis consists of two parts.

First, using data for 2861 individuals that are of working age, are active in the labour force (either employed or unemployed) and reside in Kosova, we estimate the probability of being unemployed. We employ a Logit specification, which is expressed as the odds ration in favour of being unemployed (i.e. the ratio of the probability of a person in the labour force will

be unemployed to the probability that that person will not be unemployed). The dependent variable is the probability of one's being unemployed and the independent variables are: residence (urban/rural), gender, age, marital status and level of education. Due to data limitation we could not discriminate between types of education (vocational, genera etc). This would have allowed us to see whether there is any difference in one's employment status if he/she has finished a vocational or general type of education. Our first model is presented below.

$$P(U)_i = \beta_1 + \beta_2 Resid_i + \beta_3 Gender_i + \beta_4 Age_i + \beta_5 Ageless31_i + \beta_6 Married_i + \beta_7 NoEdu_i + \beta_8 SecEd_i + \beta_9 UniEd_i + \beta_{10} PostUniEdu_i + u_i \quad (1)$$

where the i subscript stands for the individual, while other variables are defined as follows:

Resid = 1 if living in urban areas, 0 if living in rural areas
Gender = 1 if male, 0 if female
Age in years
Ageless31 = 1 if age is less than 31, 0 if 31 and older
Married = 1 if married, 0 otherwise
NoEdu = 1 if the individual did not complete any education level, 0 otherwise
SecEd = 1 if the individual has completed secondary education, 0 otherwise
UniEdu = 1 if the individual has completed university education, 0 otherwise
PostUnivEdu) = 1 if the individual has completed post-university education, 0 otherwise

In the second part of our analysis we estimate the probability of being an emigrant. The model is the same (Logit Model) and the independent variables are: residence (urban/rural), gender, age, marital status and level of education. Data used for this analysis consists of data for 2301 working age individuals (16-64) regardless whether they are in the labour force or not, of whom 456 are emigrants (19%).

$$P(E)_i = \beta_1 + \beta_2 Resid_i + \beta_3 Gender_i + \beta_4 Age_i + \beta_5 Ageless31_i + \beta_6 Married_i + \beta_7 NoEdu_i + \beta_8 SecEd_i + \beta_9 Uni.\&post\text{-}uni.Ed_i + u_i \quad (2)$$

where the i subscript stands for the individual, while other variables are defined as follows:

Resid = 1 if living in urban areas, 0 if living in rural areas
Gender = 1 if male, 0 if female
Age in years
Ageless31 = 1 if age is less than 31, 0 if 31 and older
Married = 1 if married, 0 otherwise
NoEdu = 1 if the individual did not complete any education level, 0 otherwise
SecEd = 1 if the individual has completed secondary education, 0 otherwise
Uni.&post-uni.Ed = 1 if the individual has completed university or post-university education, 0 otherwise

Schooling in both models is measured by the level of education completed and as we showed above, we cannot distinguish between different types of schooling. We would expect that those with vocational education face higher probability of being unemployed compared to those with general education qualifications. The omitted category for education in both models is primary education. Note that in the second model we have combined both university and post-university types of education.

6. EMPIRICAL FINDINGS

Prior to the estimation, our expectations are that those who are less educated, reside in rural areas and are young face higher probability of becoming unemployed. Regression results for Equation (1) are presented in Table 4 below. In addition, Equation (1) is estimated for all persons in the labour force that reside in Kosova (column 1) and for males and females separately (column 2 and 3 respectively).

Table 4: Probability of Being Unemployed using Logit Maximum Likelihood Estimation

	Dependent variables		
Regressors	Incidence of unemployment (all)	Incidence of unemployment (males)	Incidence of unemployment (females)
	1	2	3
Constant	3.17*	2.37*	3.27*
	(10.20)	(6.33)	(5.95)
Urban resident	-0.27*	-0.44*	0.10
	(-3.18)	(-4.22)	(0.65)
Male	-0.80*		
	(-9.06)		
Age	-0.05*	-0.04*	-0.06*
	(-6.96)	(-5.28)	(-4.51)
Age less than 31	-0.12	-0.16	-0.09
	(-0.79)	(-0.86)	(-0.37)
Married	-0.48*	-0.66*	-0.28**
	(-4.70)	(-4.82)	(-1.74)
No education	-0.17	-0.30	-0.04
	(-0.51)	(-0.63)	(-0.09)
Secondary	-0.62*	-0.54*	-0.84*
	(-6.13)	(-4.25)	(-4.86)
Uni. Education	-1.41*	-1.39*	-1.54*
	(-7.19)	(-5.20)	(-5.18)
Post-Uni. Educ.	-1.59*	-1.33*	-2.01*
	(-8.25)	-5.39	-6.61
Sample size	2861	1829	1032
Goodness of fit	0.692	0.690	0.696
Pseudo-R^2	0.145	0.123	0.110

(t-statistics in parentheses); * significant at 5% level of significance; ** significant at 10% level of significance.

All coefficients in column 1 of have the right sign and all but the coefficients on ‘age less that 31’ and ‘no education’ are not significant. Based on these results it can be said that the probability of being unemployed is lower if the person is urban resident, is male and is married. This probability also decreases with age and with level of education. These results are consistent with other statistics whereby the unemployed people are concentrated in rural areas. among females, youth and less educated individuals.

The regression results presented in column 2 and column 3 for males and females respectively show mainly the same pattern as those in column 1, except that the coefficient on urban residence for females is not significant and has the wrong sign.

In general, all coefficients in three columns show a consistent story that the probability of being unemployed is lower for urban residents, for males and for married individuals. It decreases with age and with the level of education.

The second part of our analysis consist of estimating the probability of being an emigrant from Equation (2). The results from a Logit Maximum Likelihood Estimation are presented in Table 5. All coefficients have the right sign, though not all of them are significant.

Table 5: Probability of Emigrating using Logit Maximum Likelihood Estimation

Regressors	Incidence of emigrating
Constant	-1.45*
	(-3.86)
Urban resident	-0.38*
	(-3.40)
Male	0.82*
	(6.83)
Age	-0.03*
	(-3.41)
Age less than 31	0.04
	(0.19)
Married	0.50*
	(3.59)
No education	0.30*
	(0.91)
Secondary	0.47*
	(3.60)
Uni. & post-uni. education	0.33**
	(1.658)
Sample size	2,301
Goodness of fit	0.806
Pseudo-R-Squared	0.053

(t-statistics in parentheses); * significant at 5% level of significance; ** significant at 10% level of significance.

From the regression results, following observation can be made: (i) urban residents are less likely to emigrate compared to rural residents; (ii) males are more likely to emigrate than their female counterpart; (iii) the probability of emigrating decreases with age, but there is no

significant difference in the probability of emigrating between those age less than 31 and those 31 and older; (iv) married people are more likely to emigrate; and (v) the probability of emigrating increases with education.

6. CONCLUSIONS

In this paper we have analysed the human capital, unemployment and emigration in Kosova. In particular we have analysed to issues. First, using data from the Riinvest Labour Force and Household Survey (December 2002), we have estimated the probability of being unemployed for those who are of working age, are active in the labour force and reside in Kosova. Empirical findings show that the probability of being unemployed is lower for urban residents, for males and for married people. It also decreases with age and with level of education. From these results we can show that the human capital of females, young and less educated individuals is deteriorating. Unless necessary steps are taken to reintegrate these people into employment, they will become a social burden for the society.

In the second part we have explored the probability of emigrating. The empirical results show that the probability of emigrating is lower for urban residents compared to rural residents and that males and married people tend to emigrate more. On the other side, it is also shown that more educated people have higher propensity to emigrate. This is primarily due to the fact their chances of finding better jobs and life abroad are higher along with lower emigration costs (included are searching costs). These results point to the issue of “the brain drain”, which is becoming a real concern for some of the transition countries. In Albania, there are nearly 1,000 academics that have emigrated during the 1990s created a vacuum in the academic life there. Although in Kosova this phenomenon is still not strong, there are signs that as time passes it will become a concern. The more educated people constitute the most productive part of the society and their emigration has strong impact on the domestic economy. From this point of view, the government should create better environment for the high-educated people in order to induce them to stay and to work at home country.

The debate over the right policy to emigration is still going on. It seems that this debate is balanced stating both positive and negative aspects of emigration. Given the high unemployment in Kosova, emigration is playing an important part in financing the consumption expenditure of the families in Kosova as well as financing investment expenditure by the private sector. We did not explore the latter issue and this might be an interesting topic for a next research.

If we reconcile the results from two regression equations than some interesting relationships can be found. First, the individuals residing in rural areas face higher probability of being unemployed. Consequently, they tend to emigrate more compared to those residing in urban areas. Second, males and married people face lower probability of being unemployed. But they also tend to emigrate more compared to their respective counterparts. There is no straightforward explanation for this, though one might say that emigration is also a function of the family size (i.e. individuals from larger families (married people) tend to emigrate more). Third, although more educated individuals face a lower probability of being unemployed in Kosova, they tend to emigrate more than less educated individuals.

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