

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

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Abstract

The paper explores human capital issues in Kosova, a country characterised with high rate of unemployment and large-scale emigration. With the help of data from the Riinvest Labour Force and Household Survey (December 2002), we estimate the probability of unemployment for the population of working age, who are active in the labour force and reside in Kosova. Furthermore, we estimate also the probability of emigration for the population 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 persons 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.

Keywords: transition, human capital, unemployment, emigration

JEL Classification: P2, P3, F22, J61, J62, R23

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1 Introduction

Growth and schooling are highly correlated and 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/her productivity, and therefore earnings, and it explains to a great extent earning differentials among individuals. The human capital, as such, influences the probability of becoming and remaining unemployed. The study of the human capital accumulation and related issues are crucial for a successful transformation of former command economies of Central and Eastern Europe. In the early stages 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 women. The labour market in Kosova has some distinctive characteristics, such as being a very young population and having a large-scale emigration. The effects of emigration on the labour market are of particular interest given its scale and the level of remittances. Though a 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 the emigrants as well. That is to say that the unemployed are not randomly selected from the labour force. Similarly, the emigrants are not randomly selected from the working age population either. If there was not a particular pattern, than we would not detect any significant relationship between one's unemployment or an emigrant status and some other characteristics such as the level of education , residence, gender, age etc. The fact that there are such relationships, points to the need for policy considerations to tackle these issues. This paper explores these patterns in Kosova, a country which is characterised by high unemployment and large-scale emigration.

The structure of the 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 on the human

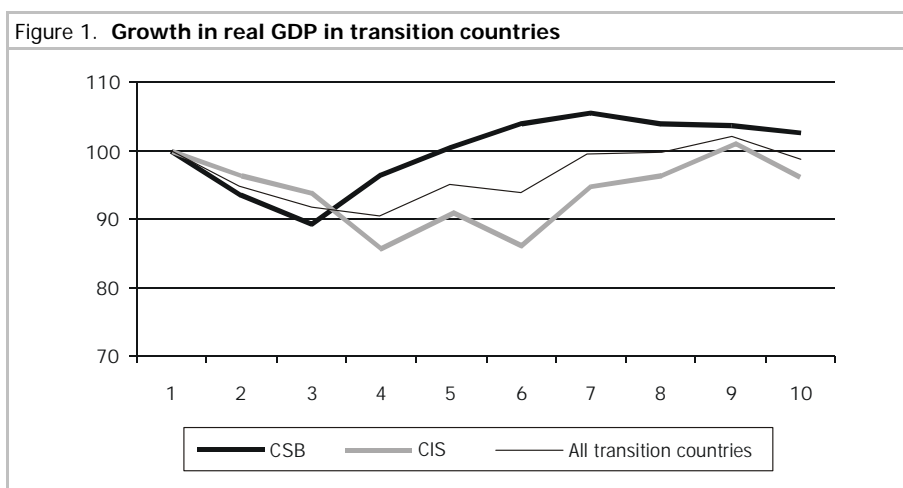
capital in transition economies. Here we review the literature that deals with the impact of human capital on economic growth and comment on the value of human capital in transition economies. In Section 4, we turn to Kosova describing briefly the transition process, the labour market and the emigration patterns. Due to the lack of 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. The data and methodology are described in Section 5. The data used in our analyses are from the Household and Labour Force Survey undertaken by the Riinvest Institute in December 2002, as well as the data and reports from the Kosova Education Centre. The probability of unemployment and the probability of emigration are estimated employing a Logit model. In Section 6 some concluding remarks are given. 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 the life of people residing there. These changes were both unique and very profound. They are still going through the process of transforming economies after more than a decade that passed since the communist system was abandoned. 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, the output has recovered to the pre-transition level (at least in most of the Central European countries), but employment is still lagging behind. The unemployment rate remains high though it has been decreasing.

Transition from a command to a market economy is being shaped by two main mechanisms, i.e. reallocation and restructuring (Blanchard, 1997). First, as transition started the 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 markets: they had only one supplier for each of their inputs and one buyer (or a certain number) of output. As transition started, these bilateral relations were destroyed, leading to a disruption in the production process.



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 employed 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 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. The SEE countries had higher unemployment rate during most of the 1990s compared to the CE and Baltic countries.

Burda (1993) argues that unemployment is not just a by-product of transition; it is necessary for transformations. In his study, he gives three reasons to support this 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 a new job to be created other have to be destroyed and concludes that neither 'big-bang' nor 'go-slow' is the best approach.

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	18.0	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	10.0	9.9	11.4	13.5	20.6	23.0
Macedonia	18.5	19.2	27.8	28.3	31.4	37.7	na	36.0	34.5	na	32.2	34.0
Romania	na	3.0	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	na
Estonia	0.6	na	na	6.6	7.6	9.8	10.0	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	14.0	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	9.0
Hungary	1.8	8.2	9.3	11.9	10.7	10.2	9.9	8.7	7.8	7.0	6.5	6.0
Poland	6.5	12.3	14.3	16.4	16.0	14.9	13.2	8.6	10.4	12.5	16.7	17.0
Slovakia	1.2	9.5	10.4	14.4	14.6	13.1	12.8	12.5	15.6	16.2	18.9	19.0
Slovenia	na	7.3	8.3	9.1	9.1	7.4	7.3	7.1	7.6	7.4	7.5	12.0

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 the rate for young ones, because many older workers 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, advanced technologies and

new forms of organisation. Therefore, the unemployment prevails since adjusting occupational distribution of unemployed workers takes time.

3 Human Capital and Transition Economies

The role of human capital in 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 have 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% 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 stages of transition depended on the willingness and commitment of governments to implement reforms, the long run adjustment of 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 a wider process of social change that both underpins economic reforms and is needed in its own right, because transition involves the development 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 beginning of the 1990s.

In the early stages 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) based on a research that evaluates the educational attainment internationally, shows that the average years of schooling in the population aged over 15 in transition countries is found to be 9.31, with a standard deviation of 1.1. In 21 developed countries the average is 8.7 and the standard deviation is 1.8. These data reveal two facts: (i) the 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 development. The point is whether the transition countries can maintain this positive element inherited from the previous system and make further improvements. As Micklewright (1999) contends, this should constitute a major priority for economic policy.

Education acquired during the previous system is not of the type required under the open market system, and much of the skills inherited were obsolete. Spagat (2002), making use of data from an EBRD report from 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 mean that over time there will be a continuing loss of skills, leading to an even greater gap in the quality of 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 enrolment in vocational and technical schools throughout the region, and a rise in enrolment in general secondary schools and in 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

particular enterprises) to children opting for 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, since it was acquired under communism when priorities were very different from what they are today. Nevertheless, the human capital in the transition countries has an 'intergenerational' value in terms of passing the inherited human capital across generations 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

The countries of South Eastern Europe, including Kosova, are described as latecomers on the stage of transition. Among them 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 the 1990s. With the 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 recent conflicts and the resulting movements of people. The combined effect of industrial decline, privatisation and economic restructuring caused a dramatic reduction of opportunities for employment. Added the limited access to the capital market, the situation becomes even worse (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 either.

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 ageing of population in some countries (Croatia, Bulgaria etc.), and by a high birth rate in others (Albania and Kosova). To sum up, in terms of labour market developments, the SEE countries are experiencing what the CE countries went through in the early 1990s, 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 market economy (Hashi, 2001). The reason is twofold: first, the occupation by Serbia during the period 1989-1999, which started with the abolishment of the Kosova's Constitution in 1989. Kosovar experts and an ILO report claim that some 145,000 workers (managerial staff in enterprises, teachers and university professors) had been dismissed from their jobs. During this period, the Albanians in Kosova established their own institutions, including government at central and municipal levels, which functioned 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%, fell to less than US\$400 per capita.

Second, the war in 1999 displaced some 800,000 people to the neighbouring countries and to the Western Europe. After the war, the reconstruction, stabilisation and transformation policies became the responsibility of the UN Mission to Kosova based on Resolution 1244. Some progress has been achieved in terms of establishing new institutions, though their competencies are limited. GDP is recovering and was increased by 11% and 6% in 2001 and 2002, respectively, reaching the level of more than US\$1,000 per capita. The reconstruction process absorbed a considerable number of unemployed people. Some 65,000 people are working in the newly established state institutions and in the public sector.

Given the trend toward the knowledge-based economy, the human capital embodied in the Kosovan population is the nation's most important economic asset. As in other countries, the success of the Kosovan education system in developing high levels of attainment in the key competences will be an important determinant of future national economic development. Equal access to a modern education system is also a major factor in promoting equity and social welfare, as well as raising the well-being of minority and disadvantaged groups.

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 out of 1,210,000 economically active (Riinvest, 2003). This is largely due to the low activity rate among women (just over 40%). Such low activity rate, in turn, reflects very high unemployment rate (49%). When adjustments

for seasonal factors and the existence of the informal sector are made, the estimated unemployment rate falls below 40%. Currently, these rates are approximately three times the rates 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 the CEECs. Kosova faces chronic youth unemployment, estimated at 72% for those aged between 15-24, and with over 40% of all unemployed coming from this age group this problem is more severe than in any other CEE country. The lack of job creation and the resulting strongly negative duration dependence of unemployment is reflected in Kosova by having the highest proportion of long-term unemployed (estimated at 83%), with this proportion even higher for women (Adnett 2003).

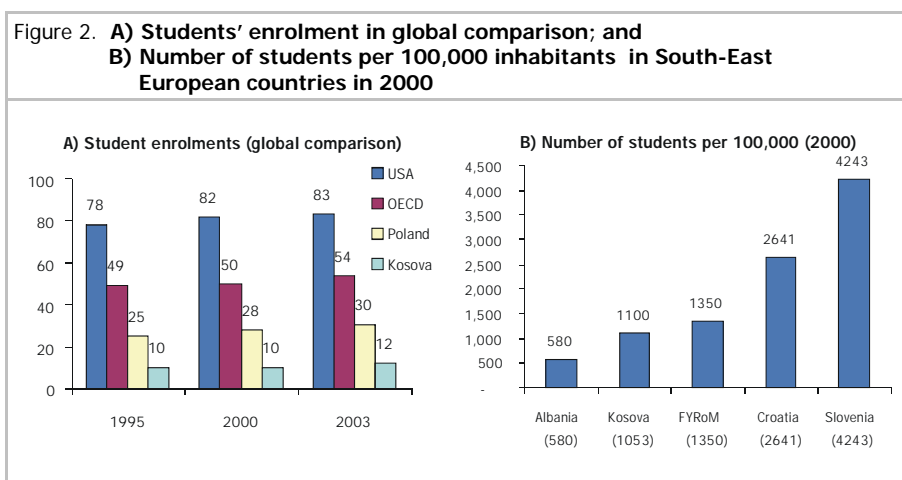
Out of the estimated 36% of the population aged between 15-64 who are employed, about two-thirds are now in the private sector. Agriculture accounts for nearly a quarter of total employment; other main sectors are wholesale/retail trades (12%), health and education (14%) and construction (7%), where 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 the total employment.

4.2 Education System in Kosova

Based on the data from the Riinvest Households and Labour Force Survey (December 2002), only 13% of the Kosovan population in the 25-64 age range hold higher education qualifications (18% of men and 8% of women), compared to 23% of men and 20% of women in the EU, 36% of men and 32% of women in Japan, and 37% of the US overall population. Such low percentage of people with higher education qualifications and an increasing demand in the labour market for these qualifications will put pressure on the education system in Kosova to increase its capacities.

The education system in Kosova is undergoing a 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 involves the organisation of education as well as the institutions. The new 5+4+3 educational structure (primary, lower secondary and upper secondary education, respectively) is being introduced, with additional 3+2 for higher education (university and postgraduate

respectively). Less is known for the participation rate in education. According to the data from the Riinvest Labour Force and Households Survey (December 2002), the participation rate in secondary education is around 70% of the relevant cohort. Due to the growing importance of higher education for economic development, policies that target increasing participation in education in general, and in secondary and higher education (HE) in particular, are urgently needed. For the sake of comparison, the enrolment in higher education institutions in Kosova in 2003 was around 10-12%, whereas in a post-communist country such as Poland it was 30% (in the USA 80% and in the OECD countries 54%, (see *Part A*, Figure 2 below). There are roughly 1,000 students per 100,000 inhabitants enrolled in higher education in Kosova (Riinvest 2004), compared to 1,350 students in Macedonia and 4,243 in Slovenia (see *Part B*, Figure 2 below). Both of these countries have similar populations to Kosova's. Due to the fact that the majority of new jobs require a higher education degree, it is even more important to increase the number of students. The increase of enrolment in higher education should be given priority if it is to raise the competitiveness of the Kosovan economy.



Source: CEPES/UNESCO, Bucharest, Romania, 2002 (mimeo).

The majority of the new jobs created in Kosova during the last four years have been created in the sector of small and medium sized enterprises (SMEs), for which the entrepreneurship skills are essential. Consequently, an education system that equips the new graduates with such skills ensures faster employment, and economic growth.

Kosova has now a 5 + 4 +3 system of primary and secondary schooling from the age of 6. Recent structural changes have been introduced with the objective of making the Kosovan education system compatible with education systems in the EU and of other developed countries. Nearly a quarter of the Kosova's population is participating in education. In the 2002/2003 school year there were 973 primary schools with 315,089 students enrolled and 20,352 teachers. In that year there were 140 secondary schools (in 72.5% of these schools the teaching is provided in Albanian, in 22% in Serbian, in 4.5% in more than one language, and in one secondary school in Turkish which makes 0.7%). The total number of students enrolled in the secondary education is 86,830 (55.1% are men). The University of Prishtina had 23,175 students enrolled in 2002/2003. There are also some private providers of higher education, but they are still in the initial stage of development.

Several previous reports on the Kosovan education system describe the system and point out the key characteristics and weaknesses before the 2001 elections (OECD 2003a). In short, the system offered little pre-school provision, suffered from high pupil absenteeism in compulsory schooling, and low participation rate in post-compulsory secondary and tertiary education. Buildings and equipment were in poor condition, and low salaries of teachers and lecturers and the lack of in-service training resulted in multiple job-holding, and a slow and uneven implementation of modern curricula and teaching and learning methods. In the old system the evaluation and assessment was not carried out centrally, all the responsibility for these was devolved to schools. There was no standardisation of assessment to enable comparison between schools and teachers, respectively. The undergraduate studies lasted for a minimum of four years; only 1,600 students graduated in 1999/2000, a quarter of these in science and engineering. Such low graduation rate, together with high non-completion rates and a long average duration of studies have been persistent characteristics of the University of Prishtina. Tuition fees were introduced in 2002/2003 and a commitment was made to reform structures and curricula in line with the Bologna process.

The education in Kosova is mainly public, and participation in private education is still low. Secondary and primary education is financed through grants from the central budget, which are transferred to the municipalities; higher education is financed directly by the Kosovan budget and by students' contributions in the form of tuition fees. Private secondary education, such as private colleges licensed by the Ministry of Education, Science and Technology, are financed through private sources. Until now there have not been developed any mechanisms that would enable a broader portfolio of financial

sources for education, such as combined private and public financing, partnership forms and use of external financial sources. Education expenditure in the 2004 Kosova budget accounts for about 15% of the total budget expenditures. Table 3 shows how spending in education in Kosova has evolved during the period 2000-2004. Spending in education is presented in absolute figures and as percentages of the total public expenditure (Hoti et al., 2004).

	2000	%	2001	%	2002	%	2003	%	2004	%
Preschool, primary and secondary	49,493	87.3	52,241	87.0	61,740	83.5	61,444	76.8	72,814	78.6
Special needs education institutions	642	0.2	469	0.8	816	1.1	956	1.2	1,112	1.2
Higher education	6,155	10.9	6,395	10.6	9,891	13.4	11,591	14.5	12,943	14.0
National University Library	140	0.2	242	0.4	265	0.4	1,125	1.4	1,385	1.5
Education administration	251	0.4	732	1.2	1,012	1.4	4,499	5.6	2,812	3.0
Teacher training					192	0.3	230	0.3	1,280	1.4
Curriculum Development					65	0.1	200	0.2	273	0.3
Total	56,681	100.0	60,079	100.0	73,981	100.0	80,043	100.0	92,620	100.0
Total Kosova Budget	285,600		288,200		383,708		556,900		619,000	
% of total budget	20%		21%		19%		14%		15%	

Source: MEF and Riinvest (2004).

4.3 Emigration in Kosova

Emigration and the following impacts, both economic and social, have been widely analysed. It is shown that decisions about emigration 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 was strictly supervised and allowed only with a special permit. The 1974 Constitution of the former Yugoslavia introduced some elements of market economy, the reforms that made it thus different from 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 as financial and cultural ones, attitudes etc.

As a consequence of having young population and persistently high unemployment rate, Kosova has experienced both temporary and permanent mass emigration over the recent years, with approximately half a million Kosovars living abroad and whose remittances account for about a quarter of the national income. Emigration in Kosova took place during two distinctive time periods. The first one started in the 1980s and continued during the 1990s until the 1999 war, estimated at around 250,000 people. The second wave of emigrants consisted of massive emigration/movements of population; it started during the 1988 conflict and culminated during the open war in 1999.

The emigration in Kosova had a strong impact on two aspects. First, the emigration waves of the 1980s and 1990s had an impact on the 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, the 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 labour demand and, assuming there is 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 such remittances sent by emigrants working in Western European countries amount to around \$500 million per annum. This amount is approximately a quarter of Kosova's GDP and, given the lack of social benefits/assistance, remittances are an important source of income for families residing in Kosova as well.

5 Data and Methodology

5.1 Data and Some Descriptive Statistics

The data used in this analysis are from the Household and Labour Force Survey conducted in December 2002 by Riinvest Institute. The survey was run 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 the survey was a household, but data were collected for each family member. In total, there are data for 8,552 individuals, of whom

some 4,937 are of working age and reside in Kosova (i.e. they are not emigrants), while 2,861 of latter group are in the labour force. Table 1 summarises the main characteristics of the labour force in Kosova in general as well as of the employed and the unemployed, in particular.

	Labour force	Employed	Unemployed
Employment status (%)	1	0.510 (0.500)	0.490 (0.500)
Urban residence (%)	0.500 (0.500)	0.588 (0.493)	0.444 (0.497)
Men (%)	0.639 (0.480)	0.745 (0.436)	0.532 (0.499)
Age (average years)	33.519 (11.561)	38.082 (11.126)	29.659 (10.411)
Age less or equal 30, (%)	0.481 (0.500)	0.310 (0.463)	0.624 (0.485)
Married (%)	0.635 (0.482)	0.773 (0.419)	0.509 (0.500)
Education (%)			
No education (%)	0.017 (0.129)	0.009 (0.096)	0.019 (0.137)
Primary education only (%)	0.252 (0.434)	0.152 (0.359)	0.324 (0.468)
Secondary education (%)	0.572 (0.495)	0.553 (0.497)	0.580 (0.494)
College education (%)	0.073 (0.261)	0.135 (0.342)	0.034 (0.182)
Higher education (%)	0.081 (0.273)	0.150 (0.357)	0.036 (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)	

Note: Standard deviations in parentheses.

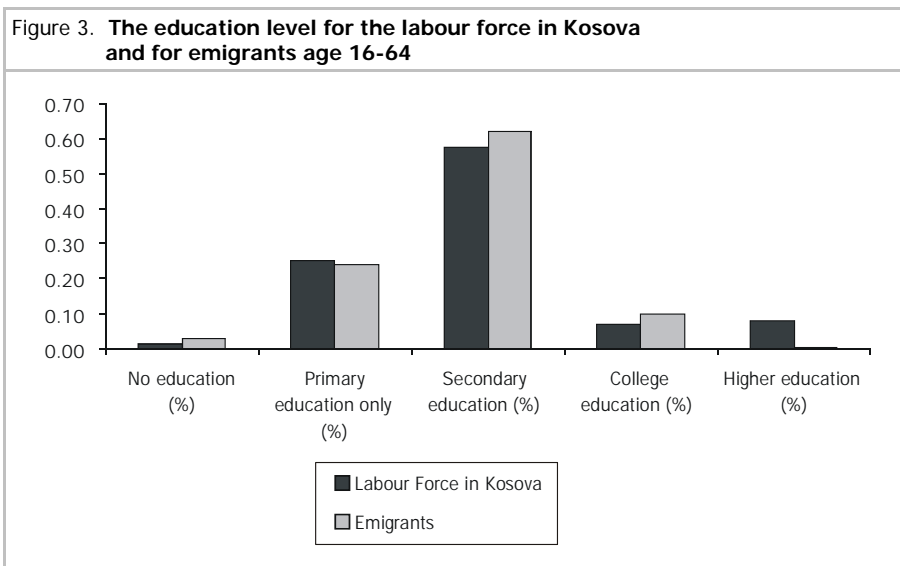
The first observation derived from Table 2 is a high unemployment rate (49%). Unemployed individuals are concentrated in rural areas (56% of the total number of unemployed live in rural areas compared with just 45% of the employed). The unemployed are younger than the employed and, as discussed below, they are also less educated. Men are over-represented, both among the labour force and the employed, the former reflecting 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 emigrants aged 16-64 (i.e. working age emigrants). From this we can get some insight about the nature and reasons for emigrating.

	All emigrants	Emigrants aged 16-64
Urban Resident (%)	0.37 (0.48)	0.38 (0.49)
Men (%)	0.66 (0.47)	0.70 (0.46)
Age (average years)	26.37 (13.69)	31.36 (9.45)
Married (%)	0.60 (0.49)	0.62 (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)

Note: Standard deviations in parentheses.

Just above one third of the Kosovan emigrants are from urban areas. This is an indication that people from rural areas are induced to emigrate more than those from urban areas, and higher unemployment rate in urban areas might be one of the explanations for this pattern. Another observation from Table 3 is that the average age of the 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 tend to emigrate more.



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

5.2 Methodology

Our primary objective in this analysis is to explore what is happening to the human capital in the post-war Kosova. Due to the data limitations we cannot analyse many aspects of human capital formation and deterioration in Kosova. We have, in particular, explored the probability of being unemployed and emigrating. Our analysis, therefore, consists of two parts.

First, using the data for 2,861 working age individuals, who are active in the labour force (either employed or unemployed) and reside in Kosova, we estimated the probability of being unemployed. We employed a Logit specification, which is expressed as the odds ratio in favour of being unemployed (i.e. the ratio of the probability that 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 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, general etc). This would have allowed us to see whether there is any difference in one's employment status depending on whether he/she has finished a vocational or general-type of education. Our first model is presented below.

$$(1) \quad P(U)_i = \beta_1 + \beta_2 \text{Resid}_i + \beta_3 \text{Gender}_i + \beta_4 \text{Age}_i + \beta_5 \text{Ageless31}_i + \beta_6 \text{Married}_i + \beta_7 \text{NoEdu}_i + \beta_8 \text{SecEd}_i + \beta_9 \text{UniEd}_i + \beta_{10} \text{PostUniEdu}_i + u_i$$

where the *i subscript* stands for an 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 emigration. The model is the same (Logit Model) and the independent variables are: residence (urban/rural), gender, age, marital status and level of education. The data used for this analysis consist of data for 2,301 individuals of working age (16-64), regardless whether they are in the labour force or not, of whom 456 are emigrants (19%).

$$(2) \quad P(E)_i = \beta_1 + \beta_2 \text{Resid}_i + \beta_3 \text{Gender}_i + \beta_4 \text{Age}_i + \beta_5 \text{Ageless31}_i + \beta_6 \text{Married}_i + \beta_7 \text{NoEdu}_i + \beta_8 \text{SecEd}_i + \beta_9 \text{Uni. \& post-uni. Ed}_i + u_i$$

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 showed above, we cannot distinguish between different types of schooling. It would be expected 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 assessment, we expected 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 who reside in Kosova (column 1) and for men and women separately (column 2 and 3, respectively).

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

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

In general, all coefficients in three columns show consistency that the probability of unemployment is lower for urban residents, for men and for married individuals. It decreases with age and with the level of education.

Regressors	Dependent variables		
	Incidence of unemployment (all)	Incidence of unemployment (men)	Incidence of unemployment (women)
	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

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

The second part of our analysis consists 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 asterisk sign, though not all of them are significant. From the regression results, the following observations can be made: (i) urban residents are less likely to emigrate than rural residents; (ii) men are more likely to emigrate than women; (iii) the probability of emigration decreases with age, but there is no significant difference in the probability of emigration between those aged under 31 and those of 31 and above; (iv) married people are more likely to emigrate; and (v) the probability of emigration increases with education.

Table 5. Probability of emigration using logit maximum likelihood estimation	
Regressors	Incidence of emigrating
Constant	-1.45*
	(-3.86)
Urban resident	-0.38*
	(-3.40)
Men	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

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

6 Conclusions

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

In the second part we have explored the probability of emigration. The empirical results show that the probability of emigration is lower for urban residents compared to rural residents and that men 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 a better job 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, nearly 1,000 academics who 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 real concern. More educated people constitute the most productive part of the society and their emigration has a strong impact on domestic economy. From this point of view, the government should create better environment for the highly-educated people in order to stimulate them to stay and to work in their home country.

The debate over the right emigration policy is still going on. It seems that this debate is balanced stating both positive and negative aspects of emigration. Given the high unemployment rate 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 another research.

If we reconcile the results from two regression equations than some interesting relationships can be found. Firstly, the individuals residing in rural areas face higher probability of unemployment. Consequently, they tend to emigrate more compared to those residing in urban areas. Secondly, men and married people face lower probability of unemployment. But they also tend to emigrate more compared to their respective counterparts. There is no straightforward explanation for this, although 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). Thirdly, although more educated individuals face lower probability of unemployment in Kosova, they tend to emigrate more than less educated individuals.

References

Adnett, N. (2002): "Labour market and unemployment in Kosova: Consultant's fact findings report", Riinvest Institute, Prishtina.

Adnett, N. and A. Hoti (2003): "Schooling in a high unemployment transition economy: The case of Kosova", Paper presented for the CERGE-EI Conference "Education in Transition Economies", Prague, 7-9 August.

Basker, E. (2002): "Education, Job Search and Migration", *University of Missouri-Columbia Department of Economics Working Paper*, No. 02-16.

Belfield, C. (2000): *Economic principles of education: theory and evidence*, Edward Elgar, Cheltenham.

Bils, M. and P. Klenow (2000): "Does schooling cause growth", *American Economic Review*, Vol. 90, No. 5, pp. 1160-83.

Blanchard, O. (1997): *The economics of post-communist transition*", Clarendon Press, Oxford.

Blöndal, S., S. Field and N. Girouard (2002): "Investment in Human Capital Through Upper-Secondary and Tertiary Education", *OECD Economic Studies*, Vol.34, pp. 41-89.

Blundell, R., L. Dearden, C. Meghir and B. Sianesi (1999): "Human capital investment: The returns from education and training to the individual, the firm and the economy", *Fiscal Studies*; Vol. 20, No.1, pp. 1-23.

Boeri, T. and K. Terrell (2002): "Institutional Determinants of Labour Reallocation in Transition", *Journal of Economic Perspectives*, Vol. 16, No.1, pp. 51-76.

Boeri, T., C.M. Burda and J. Kollo (1998): "Mediating the Transition: Labour Markets in Central and Eastern Europe", *Forum Report of the Economic Policy Initiative*, No. 4.

Burda, M. (1993): "Labour Markets in Eastern Europe – Unemployment, labour market and structural change in Eastern Europe", *Economic Policy*, No. 16, pp. 101-138.

Campos, N. and F. Coricelli (2002): "Growth in Transition: What we know, what we don't, and what we should", *Journal of Economic Literature*, No. 40, pp. 793-836.

Campos, N. and D. Jolliffe (2002): "After, before and during: Returns to education in the Hungarian transition", *IZA Discussion paper*, No. 475.

Chase, R. (1998): "Markets for Communist Human Capital: Returns to Education and Experience in the Czech Republic and Slovakia", *Industrial and Labour Relations Review*, Vol. 51, No.3, pp. 401-23.

Clark, A. (2000): "Returns to human capital investment in a transition economy: The Case of Russia, 1994-1998", Centre for Economic Reform and Transformation, Heriot-Watt University, Riccarton, Edinburgh.

Druska, V., B. Jeong, M. Kejak and V. Vinogradov (2001): "Assessing the problem of human capital mismatch in transition countries", CERGE-EI, Prague.

Duczynski, P. (2001): "On Educational Attainment in Transition Economies", *Prague Economic Papers*, No.2, pp. 163-73.

ETF (2000): "Regional seminar on youth unemployment in South Eastern Europe", Velingrad, June 2000.

Grootings, P. (2001): "A comparative Review of VET and Labour Market Developments in South Eastern Europe", *European Training Foundation*, Torino, Italy, July 2001.

Hanushek, E. (2002): "The long run importance of school quality", *NBER Working Paper*, Vol. 9071.

Hanushek, E. and D. Kimko (1995): "Schooling, labour force quality, and economic growth", *NBER Working paper*, No. 5399.

Hanushek, E. and D. Kimko (2000): "Schooling, labour force quality, and the growth of nations", *American Economic Review*, Vol. 90, No. 5, pp.1184-1208.

Hanushek, E. and J. Luque (2002): "Efficiency and equity in schools around the world", *NBER Working paper*, No. 8949.

Hashi, I. (2001): "The International Experience of Privatisation and Lessons for Kosova", Staffordshire University Business School, Division of Economic, *Working Paper*, No. 12, 2001.

Hoti, A. (2002): "Labour Market Transformation and Implications for Unemployment in Transition Economies: Experiences From South Eastern European Countries and Lessons for Kosova", MA Dissertation, Staffordshire University Business School, United Kingdom.

Hoti, A. and N. Adnett (2004): "Schooling in a High Unemployment Economy: The case of Kosova", Staffordshire University Business School, Economics Division, *Working Paper*, No. 01.

Hoti, A., I. Mustafa and N. Adnett (2004): "Management and Funding Issues in the Education System in Kosova: Implications for Economic Development", Paper presented at the CERGE-EI Conference "Education in Transition Economies", Prague, 14 August, 2004.

ILO (2002): "Key Indicators of the Labour Market 2001-2002", *International Labour Office*, Geneva.

IMF (2002): Kosova: Institutions and Policies for Reconstruction and Growth.

Koh, T. and H. Leung (2003): "Education, technical progress and economic growth", *SMU Economic and Statistics Working paper*, series No.1.

Kosova Education Center (2001): "Education in Kosova 2000/2001", *KEC*, Prishtina.

Krueger, A. and M. Lindahl (2001): "Education for growth: Why and for whom", *Journal of Economic Literature*, Vol. 39, pp. 1101-1136.

Lee, J. and R. Barro (2001): "Schooling quality in a cross-section of countries", *Economica*, Vol. 68, p.p. 465-488.

Micklewright, J. (1999): "Education, inequality and transition", *Economics of Transition*, Vol. 7, No.2, pp. 343-376

Mincer, J. (1997): "The production of human capital and the life cycle of earning: Variations on a theme", *Journal of Labor Economics*, Vol. 15, No.1, pp. S27-S47.

Nesporova, A. (1999): "Employment and Labour Market Policies in Transition Economie", *ILO-Employment and Labour Market Policies Branch*, Geneva.

Nesporova, A. (2001): "Unemployment in transition economies", *Employment Strategy Department*, International Labour Office, Geneva.

Orazem, P. and M. Vodopivec (1995): "Winners and losers in transition: Returns to education, experience, and gender in Slovenia", *The World Bank Economic Review*, Vol. 9, No. 2, pp. 201-230.

Orazem, P. and M. Vodopivec (1997): "Unemployment in Eastern Europe, value of human capital in transition to market: evidence from Slovenia", *European Economic Review*, Vol. 41, pp. 893-903.

Riinvest (2003): "Labour Market and Unemployment in Kosova", Riinvest Institute for Development Research, Prishtina.

Riinvest (2004): "Education and economic development of Kosova", *Research report*, Riinvest Institute for Development Research, Prishtina, mimeo.

Riinvest Institute (2003): "Labour market and unemployment in Kosova", *Research report*, Riinvest, Prishtina.

SOK (2002): "Kosova Labour Force Survey 2001: Key Employment Indicators – December 2001", Statistical Office of Kosova (SOK) and the Ministry of Labour and Social Welfare (MLSW), Prishtina, Kosova, 26 June 2002.

Sorm, V. and K. Terrell (2000): "Sectoral restructuring and labour mobility: A comparative look at the Czech Republic", *Journal of Comparative Economics*, Vol. 28, pp. 431-455.

Spagat, M. (2001): "Human capital and the future of transition economies", Royal Holloway, University of London, CEPR and William Davidson Institute.

Spagat, M. (2002): "Human capital, growth and inequality in transition economies", *William Davidson Working Paper*, No. 499.

Svejnar, J. (1999): "Labour markets in transition Central and East European Countries", *Handbook of Labour Economics*, No. 3, pp. 2809-2857.

Svejnar, J. (2002): "Transition economies: Performance and challenges", *Journal of Economic Perspectives*, Vol. 16, No. 1, pp. 3-28.