

## Structural Changes in Employment in Croatia

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**Abstract:** The aim of this paper is to answer questions as to: how far is the Croatian labour market from its anticipated long-term structure; what is the speed of structural change; whether it is moving in the right direction; and what is Croatia's position in relation to employment structure among other transition countries of Central and Eastern Europe. By taking the employment structure of the EU countries as a long-term target, author finds that Croatia is still a long way from that goal, and it is moving in the right direction at a considerable pace. Moreover, in comparison to other countries in transition, it appears that employment restructuring in Croatia measured by indices of speed, efficiency and job creation has been most successful during the past seven years of the transition process.

**JEL Classification:** J21, J3, P5

**Key words:** employment, labour market restructuring, transition, Croatia

### Introduction

The process of transition is characterised by deep structural changes throughout the economy. The changing economic structure – most notably a change in ownership structure and importance of different segments of the GDP - is reflected in the structure of employment. This simply is a consequence of the fact that the demand for labour is derived from the demand for goods and services that it helps to produce. Demand for goods and services, however, is not necessarily a pure market demand,

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immune from government interference, but also reflects preferences of the government. Therefore, the analysis of the labour market creates the complementary background for the analysis of the overall structure of a particular economy and its development.

So far, relatively little attention has been paid to the analysis of transitional change in the Croatian labour market, and when such an analysis is available, in principle, too much weight is assigned to the problem of unemployment. This is probably a consequence of three interconnected reasons. First, the unemployment rate in Croatia is worryingly high (16-17 per cent), according to the official method of recording<sup>1</sup> which, until the recently conducted Labour Force Survey was the only methodology applied. Second, unemployment is not only a serious economic and social problem, but also a sensitive political problem. Third, domestic economists, are often influenced by "western" literature, which in recent times has devoted a great deal of attention to the problem of unemployment in the EU.

I suggest that economists analysing transitional labour markets, might have good reasons to assign more weight to changes in the employment structure than to the unemployment problem itself. Why an analysis of changing employment structure is more important than the unemployment problem itself? The reasons being: first, the analysis of the characteristics and changes in employment covers a considerably wider spectrum of the population and nearly the entire structure of the domestic economy; second, such an analysis is especially relevant to the transition economy when a country passes through from one economic system to another, and undergoes deep structural changes in employment, and third, unemployment is by and large the reverse side of the employment story, i.e. the capability of the economy to create new jobs.

As suggested by Jackman and Pauna (1996), the first step in the analysis of structural change in employment might be to determine an end target of the transition process.

If the primary economic (and political) goal of the transition countries in Central and Eastern Europe is to join the developed countries of the EU, which also implies entry into the western economic structures such as the WTO, OECD, and eventually EMU, then it is likely that the structure of their economies, and also labour markets, will gradually adjust to become more like those of the developed countries. Therefore, employment structure in the countries of the EU/OECD can be taken as a relatively good approximation of the target for transitional change.

Taking the employment structure of the EU as an (approximate) target of the transition, this paper attempts a comparative analysis of the Croatian labour market among the transition economies of Central and Eastern Europe.

## **Fall in employment and change in its structure**

### *Fall in employment*

Undoubtedly, a dominant characteristic of the early phase of the transition process in the labour market is decreasing levels of employment and increasing unemployment, accompanied by an accelerated change in the employment structure. In Croatia, this decrease in employment seems to be dramatic. Since the beginning of transition process, total number of employed was reduced by more than four hundred thousand (see Table 2). However, to get a better picture of the absolute and relative rate of the decrease in employment, these changes should be considered in context to the pre-war hidden unemployment, the transitional recession, the war in Croatia, and the labour market changes in other transition countries.

In Vujčić (1994) - the number of "unemployed" among the employed in Croatia was determined by drawing a trend through the peaks of productivity cycles. Data for 1965-1988 shows that hidden unemployment reached its peak in 1988 with approximately three hundred thousand people employed when they were in fact redundant. Based on that one would have expected a sharp decline in employment once the real transition process starts. But, it must be noted that 1988 was already a year of recession and the first when the labour market in Croatia ceased to act asymmetric<sup>2</sup> manner for the first time, i.e. in reaction to recession, employment started to decrease. This was the beginning of declining trend in employment lasted until 1996. As can be seen in Figure 1, employment recovery reacted with a characteristic lag after the growth of GDP which began in 1994<sup>3</sup>.

In the early phase of the transition, Croatia experienced a particularly sharp decrease in GDP (as shown in Figure above) which was stronger than in most other transition countries. Only Bulgaria, Russia and Ukraine experienced stronger recessions than Croatia (see Figure 2.2). This can be attributed to the fact that transition in Croatia also coincided with the outbreak of war, and the occupation of almost one-third of its territory. Overall, employment decreased by less than the drop of GDP. Considering the estimated high rates of hidden unemployment for 1988, one could have expected a decline in employment of greater magnitude than the decline in GDP. As this was not the case, one may infer that even today there might still be a considerable degree of hidden unemployment.

The current level of registered employment has been maintained in great part by a substantial decline in real wages since 1988/89 (see Table 1). The current level of employment is also reflected in the extent of arrears and/or open subsidies (the government allocates in one way or another about half of the GDP). Where present, subsidies lead to distortions in the allocation of resources, by delaying necessary

Figure 1.: Employment and GDP

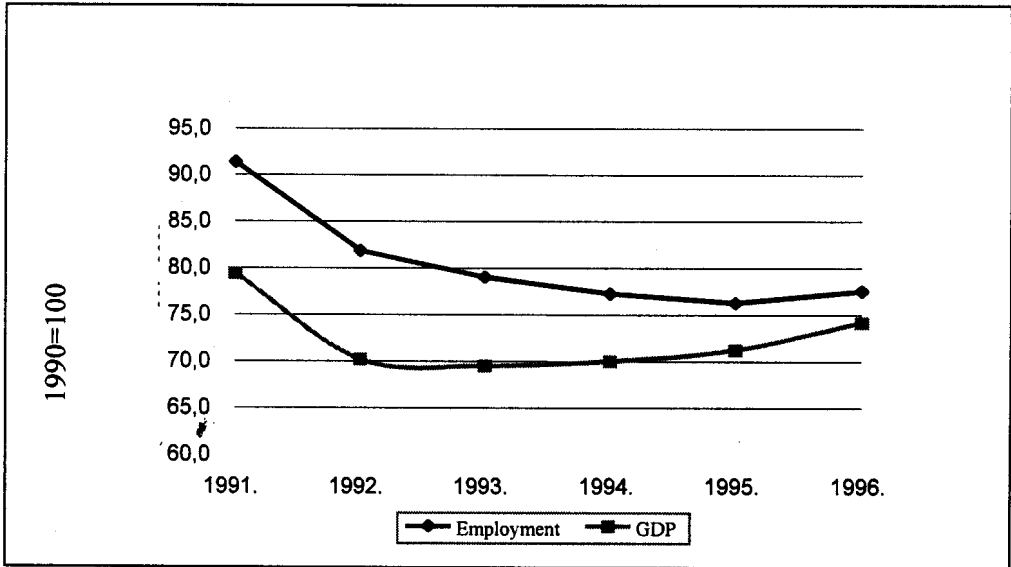


Figure 2: Fall in GDP and employment

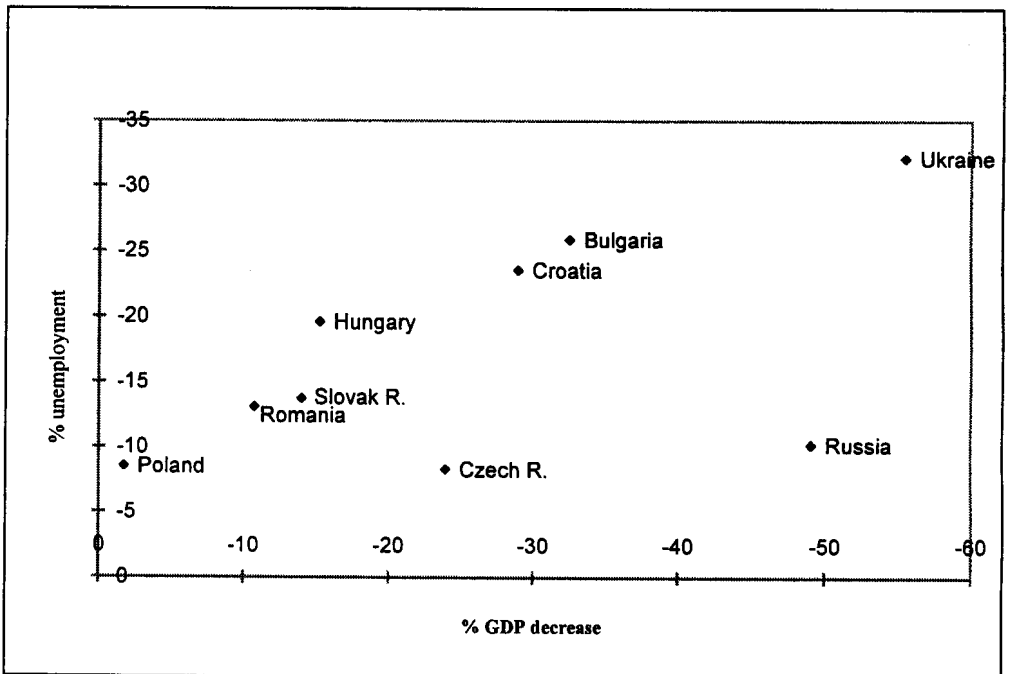


Table 1: Trends in wages and labour productivity

Real net wages		1989/1988	1990/1989	1991/1990	1992/1991	1993/1992	1994/1993	1995/1994	1996/1995	1997/1996
		123.2	83.8	75.0	56.5	99.5	114.4	140.2	107.2	112.3
(1989=100)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
	81.2	100.0	83.8	62.9	35.5	35.3	40.4	56.7	60.7	68.2
(1988=100)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
	100	123.2	103.2	77.4	43.7	43.5	49.8	69.8	74.8	84.0
Real gross wages (only employees' contributions included which account for around half of all contributions)								1995/1994	1996/1995	1997/1996
								30.9	7.6	8.3
(1994=100)	1994	1995	1996	1997						
	100.0	130.9	140.9	152.6						
Labour productivity (industry)		1989/1988	1990/1989	1991/1990	1992/1991	1993/1992	1994/1993	1995/1994	1996/1995	1997/1996
		100.4	92.8	86.8	100.3	100.3	103.0	106.6	111.3	111.9
(1989=100)	1989	1990	1991	1992	1993	1994	1995	1996	1997	
	99.6	100.0	92.8	80.6	80.8	81.0	83.5	89.0	99.0	110.8
(1988=100)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
	100.0	100.4	93.2	80.9	81.1	81.4	83.8	89.3	99.4	111.3

Source: Croatian Bureau of Statistics

structural change, slowing the creation of new jobs and preserving those for which there is no economic justification. Such policies prevent the personnel reductions and the development of efficient compensation schemes in companies and institutions that might be viable, but instead play a role which should be assigned to the welfare system.

Figure 2 reveals some additional insight into the employment-GDP relationship. First, there is a clear correlation between a decrease in employment and decrease in GDP in the first phase of the transition. This should be expected given the depth of the initial recession and the ongoing deep structural reforms. Second, the two countries which are obvious outliers from this relationship - the Czech Republic and Russia - are countries in which structural change in the labour market is lagging. Not surprisingly, these countries have the lowest rates of unemployment and are suffering from the consequences of delayed restructuring. In other words, there is no alternative to restructuring; one can not expect an efficient restructuring of the state-owned sector and significant increases in the productivity of companies without at least temporarily increasing unemployment. Third, Croatia, together with the Czech Republic, Russia, Bulgaria and Ukraine, belongs to a group of countries in which the fall in employment was smaller than the fall in GDP. In countries, where the fall in employment was greater than the fall in GDP<sup>4</sup>, the labour market adjusted downwards more strongly than the goods and services market, eliminating (a part) of

hidden unemployment. It should be noted, however, that in such a comparison, Croatia is closer to Hungary than to Russia or Ukraine.

### *Changes in the structure of employment*

The intensity of structural change in employment from 1985 to 1996 is illustrated in Figure 3; structural change is given as the summation of absolute values of the annual change in the share of employment of individual sectors of the economy.

According to our calculations, the period from 1990 to 1997 was marked by a considerable change in the employment structure with an intensity three to four times greater than the pre-transition level at the end of the 1980s.

As we have accepted the employment structure of the EU countries as a good target for transitional change for the analysis of direction and effects of these changes on the employment structure, the same can be examined through the structure of Croatia's labour market before the beginning of the transition process as compared to other transition and developed countries. Figures 4-6 show the employment structure in Croatia in the primary, secondary and tertiary sectors and in a select group of transition and developed OECD countries in 1989 and 1995.

Croatia started the transition process with a relative advantage in relation to other transition economies, excluding Slovenia, (not shown in the charts). Slovenia's employment structure is considered better due to a smaller share of agricultural sector in total employment. In 1989, Croatia was the only transition country in our group with a service sector employing more than fifty percent of the work force. Croatia's favourable position in relation to other transition countries was a consequence due to historically much less forced industrialisation than in a typical planned economy; and a greater importance of services, particularly transport, catering, and hotel and tourist industries.

Development of tertiary sector in Croatian economy was extremely intense during the 1970s and 1980s and it was faster than experienced in the developed countries during the 1960s (see Vujčić, 1991). During the transition process, the share of employment in the tertiary sector increased further. Definitely, not at the expense of employment in the primary sector, which would have been desirable, but rather at the expense of employment in the secondary sector. Furthermore, this deterioration of employment in the secondary sector was so significant, that the share of employment in the secondary sector today is lower than in the OECD countries. (This does not mean that the loss of jobs in this sector was not justified, but, as will be shown later, it was not accompanied by a significant creation of new jobs in more productive areas of the secondary sector). Also, tertiary sector development was not accompanied by a rapid enough employment decrease in the low productivity sector, i.e. agriculture.

Figure 3.: Indices of structural change in employment

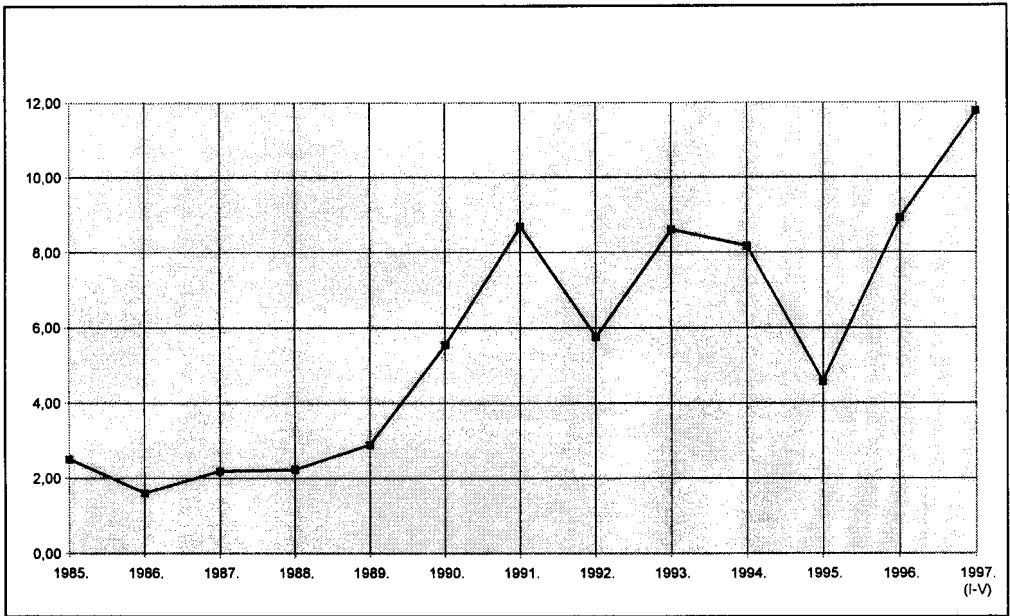


Figure 4.: Employment in primary sector

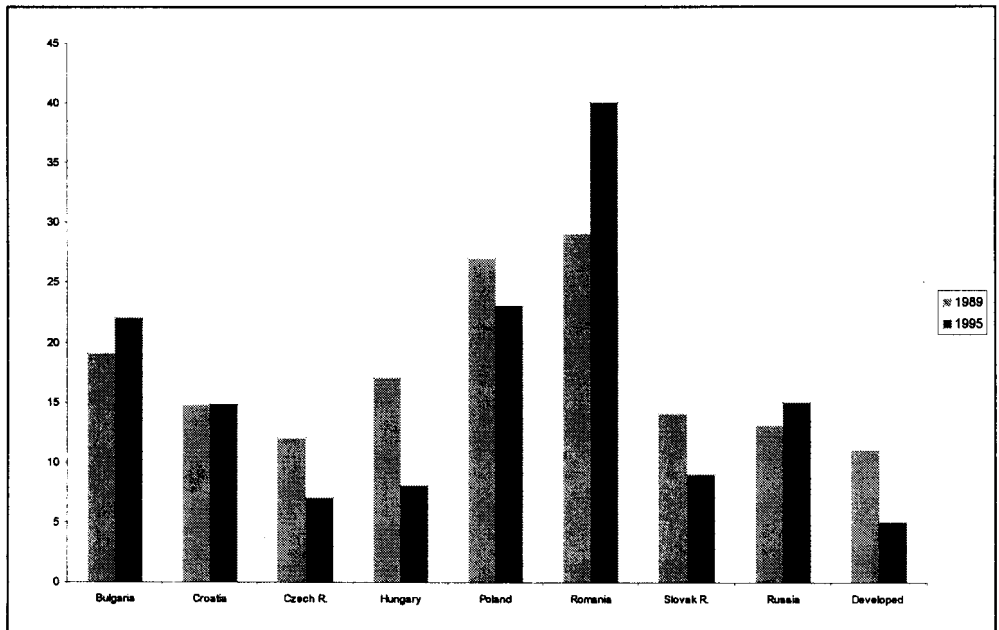


Figure 5: Employment in secondary sector

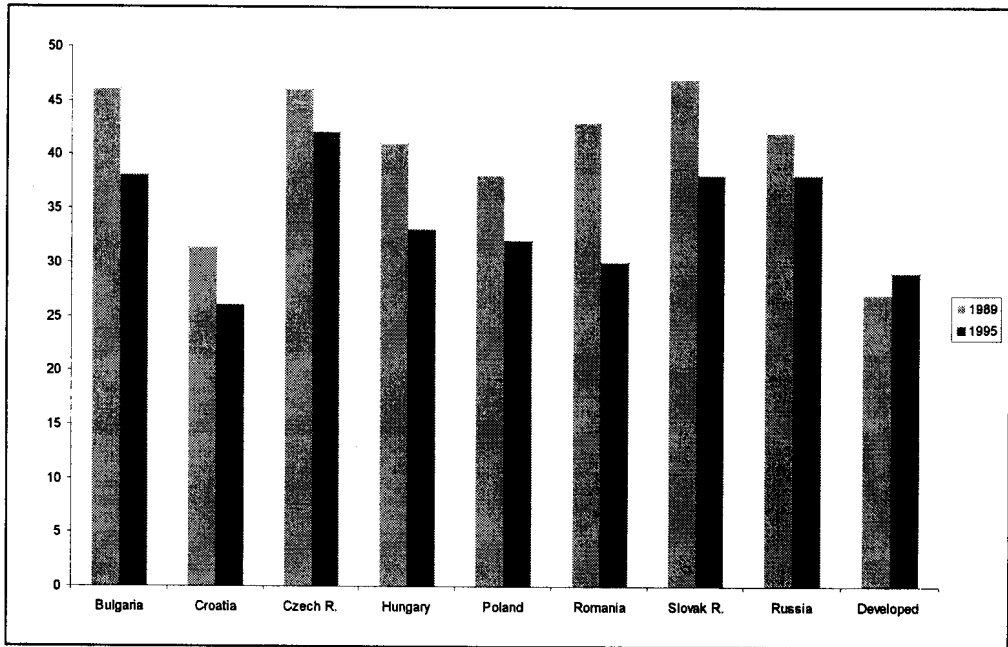
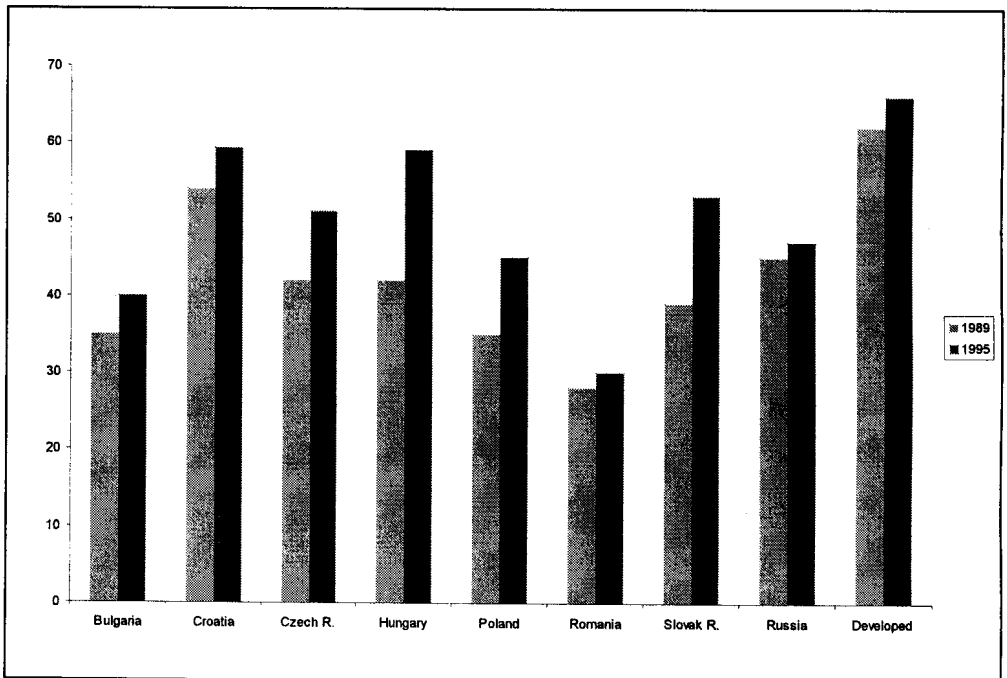


Figure 6.: Employment in tertiary sector





Sources: (for Figures 4-6) Statistical Yearbook of Croatia; and S. Commander and A. Tolstopiantenko: *Unemployment, Restructuring and the Pace of Transition*, p. 4, EDI Development Studies, The World Bank, 1995.

Only Romania, Bulgaria, and Poland have higher shares of employment in agriculture than Croatia.

### **Some measures of structural change**

With the assumption that transition process involves a transformation of economic structure to more developed (EU) forms, it is possible to analyse the structural change of employment in further detail at the industry level. Along these lines the employment structure in the EU can be used as a target against which we can measure the progress of change in employment structure in Croatia.<sup>5</sup> The results of such a comparison are given in Table 2. First two columns in the Table show employment by industry in Croatia in 1989 and 1996, respectively. The third column shows employment in Croatia, if the sectoral shares were equivalent to our EU reference countries our employment target. Due to the differing sectoral composition of employment among EU countries, most notably agriculture, the EU is divided into two groups: the southern EU (France, Greece, Italy and Spain), and the northern EU (Denmark, Germany, Great Britain and The Netherlands). The share of agriculture is significantly higher in the southern EU countries. The targeted sectoral compositions are the southern EU in 1989 and 1994 and the northern EU in 1989. The fourth column shows the change in employment between 1989 and 1996 for each industry, and the fifth column shows the difference between the actual employment in 1989 and the targeted employment. The sixth and seventh columns demonstrate the change in employment that moved either towards or away from the targeted structure respectively.

Several conclusions can be drawn from the above data. First, the employment structure, today, is much more similar to the targeted structure than at the beginning of the transition process.

Second, adjustment in the structure of employment occurred primarily by a fall in the overall level of employment, i.e. by job destruction, and much less by job creation. From 1989 to 1996, total employment declined by 413.000. A part of this decline can be attributed to a substantial decline in population (by estimated 200-250 thousand) and migrational consequences associated with the war. Among the sectors where net creation of jobs occurred was trade and, to a much smaller degree, finance and utilities (electricity, gas and water).

If the EU countries are a good indicator, it seems that trade and finance are sectors with the greatest employment creating potential. In contrast, agriculture and, to a lesser extent, public services and transport sectors appear to be areas where further reductions should occur. With a southern EU target, the Croatian agriculture sector would need to reduce employment by 26.4 percent, or 66 percent if we use a northern EU target. Similarly, to meet the EU target, the transport industry would need to reduce jobs by 18 percent and public services by 6 percent (most economists would, however, agree that the public administration is too large even in the EU countries). The share of employment in manufacturing is lower than the EU target. Therefore, a room for further (significant) employment reductions in this industry appears to be small. Nevertheless, employment reduction in manufacturing seems to have been, overall, a positive structural change<sup>6</sup>.

Third, judging by its structure and changes in the labour market, Croatia lies nearly midway between those transition countries more similar in structure to the northern EU (smaller share of agriculture) and those more similar in structure to the southern EU (larger share of agriculture) (see Figure 4). In comparison to countries of similar economic characteristics and a similar level of development, Croatia has a relatively high share of employment in agriculture, primarily at the expense of employment in manufacturing. This, as stated earlier, does not mean that Croatia's enduring deindustrialisation is considered a bad characteristic of the Croatian labour market restructuring, but rather, that further decreases in employment in the processing industry can hardly be considered as a desirable feature of labour market restructuring in the medium-term. Here, however, it is important to distinguish between two processes - the job creation and the job destruction. Both processes should proceed parallelly; a desirable medium-term result would be an increase in the number of jobs in the processing industry (at a lower rate) and services (at a relatively higher rate), and the decrease of the number of people employed in agriculture.

Fourth, as Jackman and Pauna (1996) point out, since the EU countries are themselves continuously changing, an EU target for the employment structure in the long-run is a "moving target". This can be seen from the data for the Mediterranean EU countries for 1989 and 1994, and will be illustrated in greater detail below. In other words, if a transition country wants to catch up with EU countries, it should restructure itself considerably faster than the EU countries. It is useful to note that the EMU is likely to speed up this restructuring process within the EU.

Table 2 enables us to distinguish three measures of structural change in employment: the speed of restructuring, efficiency of restructuring, and an index of job creation. To measure the speed of restructuring we must ask: how much of the "required" reallocation of employment between industries occurred during the first

Table 2.: Structural changes in employment

Thousand of employed persons	1989	1996	Referent country (Southern OECD, 1989)	Change in employment (89-96) (2)-(1)	Differential of employment 1989 (3)-(1)	Change towards target	Change away from target
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Agriculture	260.1	160.7	143.8	-99.4	-116.3	-99.4	
Mining	10.4	7.9	5.4	-2.5	-5.0	-2.5	
Manufacturing	574.9	315.3	295.7	-259.6	-279.2	-259.6	
Electricity, gas and water	20.1	22.2	12.1	2.1	-8.0		2.1
Construction	128.2	93.7	108.9	-34.5	-19.3	-19.3	-15.2
Trade	166.1	200.6	259.4	34.5	93.3	34.5	
Transport	127.2	98.4	80.7	-28.8	-46.5	-28.7	
Finance	28.9	35.0	82.0	6.1	53.1	6.1	
Public and other services	441.2	410.4	356.2	-30.8	-85.0	-30.8	
<b>Total</b>	<b>17,757.1</b>	<b>13,344.2</b>	<b>1,344.2</b>	<b>-412.9</b>	<b>705.8</b>	<b>480.9</b>	<b>17.3</b>
Thousand of employed persons	1989	1996	Referent country (Southern OECD, 1994)	Change in employment (89-96) (2)-(1)	Differential of employment 1989 (3)-(1)	Change towards target	Change away from target
Agriculture	260.1	160.7	118.3	-99.4	-141.8	-99.4	
Mining	10.4	7.9	5.4	-2.5	-5.0	-2.5	
Manufacturing	574.9	315.3	275.6	-259.6	-299.3	-259.6	
Electricity, gas and water	20.1	22.2	10.8	2.1	-9.3		2.1
Construction	128.2	93.7	111.6	-34.5	-16.6	-16.6	-17.9
Trade	166.1	200.6	262.1	34.5	96.0	34.5	
Transport	127.2	98.4	80.7	-28.8	-46.5	-28.8	
Finance	28.9	35.0	96.8	6.1	67.9	6.1	
Public and other services	441.2	410.4	383.1	-30.8	-58.1	-30.8	
<b>Total</b>	<b>1,757.1</b>	<b>1,344.2</b>	<b>1,344.2</b>	<b>-412.9</b>	<b>740.7</b>	<b>478.3</b>	<b>20.0</b>
Thousand of employed persons	1989	1996	Referent country (Southern OECD, 1989)	Change in employment (89-96) (2)-(1)	Differential of employment 1989 (3)-(1)	Change towards target	Change away from target
Agriculture	260.1	160.7	55.1	-99.4	-205.0	-99.4	
Mining	10.4	7.9	13.4	-2.5	3.0		-2.5
Manufacturing	574.9	315.3	357.6	-259.6	-217.3	-217.3	-42.3
Electricity, gas and water	20.1	22.2	14.8	2.1	-5.3		2.1
Construction	128.2	93.7	86.0	-34.5	-42.2	-34.5	
Trade	166.1	200.6	233.9	34.5	67.8	34.5	
Transport	127.2	98.4	80.7	-28.8	-46.5	-28.8	
Finance	28.9	35.0	116.9	6.1	88.0	6.1	
Public and other services	441.2	410.4	385.8	-30.8	-55.4	-30.8	
<b>Total</b>	<b>1,757.1</b>	<b>1,344.2</b>	<b>1,344.2</b>	<b>-412.9</b>	<b>730.7</b>	<b>451.4</b>	<b>46.9</b>

Source: For EU Jackman and Pauna (1996), and for Croatia own computations from Labour Force Survey.

seven years of the transition? Such a measure can be obtained by dividing the absolute sum of the sixth column (change in employment in direction of target) by the absolute sum of the fifth column (difference between target and actual employment). The efficiency of employment restructuring can be obtained by determining the change in employment which moved closer to the reference group. This measure can be obtained by dividing the absolute sum of the sixth column by the absolute sum of the fourth column (change in actual employment 1996-1989). The measures for the speed and efficiency of restructuring include qualitatively different changes: the loss of jobs in sectors with redundant workers and the creation of jobs in sectors with insufficient number of employees. As the elimination of jobs is normally an easier economic task than the creation of new, it is useful to construct an additional measure (job creation index). Such an index can be obtained by calculating the share of jobs created within a given sector<sup>7</sup> in relation to the total number of new jobs.

Table 3 shows indices for the employment structure of a number of transition countries and three less developed EU countries. Table 4 shows similar indices for Croatia for the period 1989-96, and for the period of *de jure* transition from socialist to market economic system between 1991 and 1996.

Comparing 1989-96 period for Croatia to the other countries in Table 3, Croatia has a two year advantage. This difference increases the index of the speed of restructuring (but not of efficiency or job creation). However, *de facto* there is actually only one year advantage as the real structural changes in Croatia started in 1990, together with the transition process (as is demonstrated in Figure 3). The period from 1991 to 1996 is not only as long as that of the other transition countries in Table 3, but also a period of the real transition, and is, therefore, better suited for comparisons of the speed of restructuring.

Comparing our data on restructuring, it seems that Croatia's employment structure adjusted more quickly and more efficiently in the direction of the EU targets than was the case in other transition countries. In five, (seven) years of transition in Croatia, between 54 and 68 per cent of the targeted labour market adjustment occurred, in comparison to an average of 40 per cent for the other transition countries. Of the other transition countries only Hungary came close with 60 percent of the targeted adjustment.

According to our calculations Croatia was not only quicker but generally more efficient in restructuring as between 84.3 and 96.5 percent of change in the structure of employment was in the "right" direction. The average for the other transition countries is 60 percent, and only the Czech and Slovak Republics achieved the same high degree of efficiency in restructuring as Croatia did. Among the more developed countries, only Portugal achieved such a high efficiency in restructuring during the period under review, while Greece and Spain were least efficient.

Table 3.: Indices of structural change in employment 1989-1994\*

	Speed	Efficiency	Job creation index
Bulgaria	40.5	70.0	3.9
The Czech Republic	44.2	90.7	28.0
Hungary	60.3	84.1	12.8
Poland	35.3	70.6	23.3
Romania	21.1	64.8	3.4
Slovak Republic	48.7	92.5	19.1
Greece**	26.3	57.0	41.9
Portugal**	70.1	85.9	89.9
Spain**	26.3	58.5	26.3

\*For Bulgaria, Poland and Romania, the reference countries for which the indices were calculated are the Southern EU countries in 1989, and for the others the Northern block of the EU countries in 1989.

\*\*For Greece, Spain and Portugal 1989-93.

Source: Jackman and Pauna (1996)

Table 4.: Indices of structural change in employment in Croatia compared to EU

	1989-1996	1991-1996
<b>Speed</b>		
Southern EU '89	68.1	59.6
Southern EU '94	64.6	55.2
Northern EU '89	61.8	54.1
<b>Efficiency</b>		
Southern EU '89	96.5	89.4
Southern EU '94	94.9	90.5
Northern EU '89	90.6	84.3
<b>Job creation index</b>		
Southern EU '89	27.8	36.5
Southern EU '94	24.8	34.1
Northern EU '89	25.6	38.0

Source: own calculation

Our last measure of labour market change is the job creation index. Our calculations show that job creation has not progressed significantly. This is consequence of the fact that in the early years of transition the labour market adjusted

primarily through job elimination rather than job creation. Compared to other transition countries, job creation in Croatia, ranging from 25 to 38 percent, was relatively high. Among other transition countries, the scores range from 3.4 percent in Romania to 28 percent in the Czech Republic. In comparison to all transition countries, Greece, and particularly Portugal, achieved much better results in job creation.

The more developed is the information on the structure of the labour market for the comparator group i. e. for the EU, the less satisfactory are the results for Croatia.

### **Adjustment in the labour market**

Through 1996 employment structure change in Croatia can be characterised by recessionary adjustment. In a period of recession the labour market adjusts by decreasing employment and/or by reducing wages and salaries. Further insight into the adjustment process in the Croatian labour market is shown in Figures 7-9.

Figure 7 relates the ratio of industrial production to employment from 1989 to 1996 for the twenty largest manufacturing branches in terms of the number of employees. An indication that the recessionary adjustment in the labour market was taking place is that all branches in the diagram are grouped in the south-western quadrant. Therefore, not only had overall employment in manufacturing declined from 1989 to 1996, but there was not a single manufacturing branch (among the top 20) in which employment increased.

Furthermore, a simple inspection of the chart, establishes a positive connection between a fall in production and a fall in employment. This relationship has only two obvious outliers: the iron and steel industry, and the processing of non-metal minerals, in which employment decreased significantly less than would have been suggested by an imaginary regression line. In the former, the results might be attributed to an explicit government subsidy, while the later might have had a higher disguised unemployment before the restructuring started. It is also interesting to note that employment decreased faster than production in only three branches i. e. electricity supply, printing industry and production of construction materials. The electricity supply can not be seen on the chart because this branch recorded a very high (33.5 percent) increase in production accompanied by a decrease of employment of 23 percent. The fact that employment decreased more than production in only four branches can be attributed to two reasons. First, real wages in 1996 have declined dramatically in comparison to 1989, by almost 40 per cent (see Table 1). Second, substantial labour hoarding might have continued during the war. The usual reason for labour hoarding is to avoid either the cost of the dismissal of workers, and/or the

Figure 7.: Industrial production/employment (1996 vs. 1989)

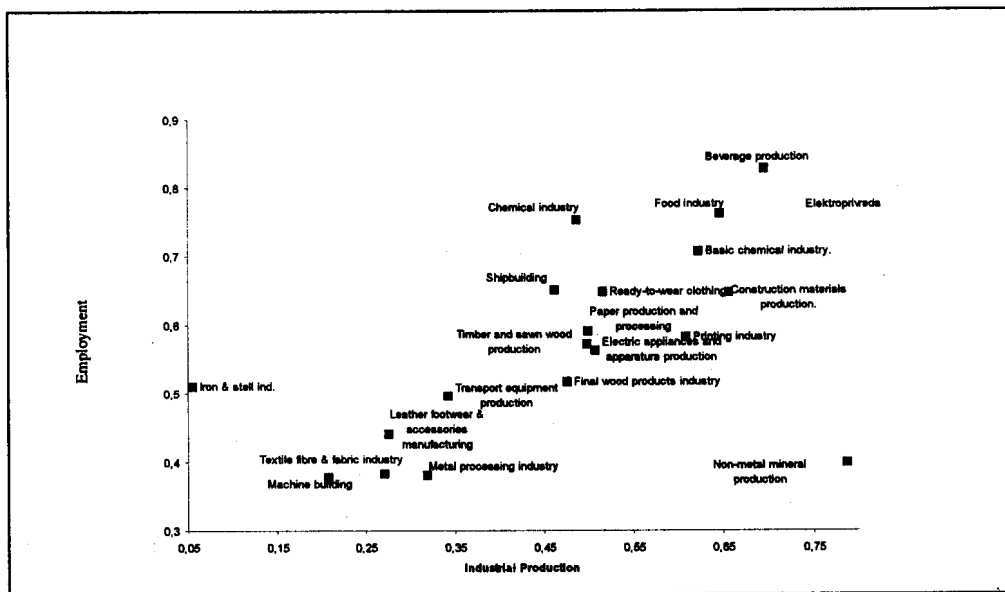
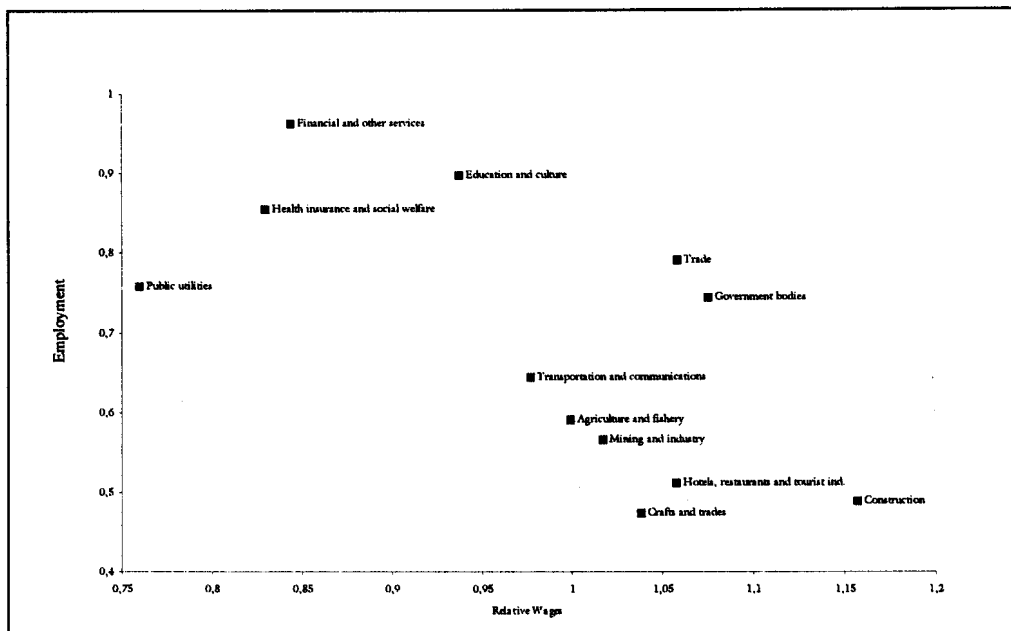


Figure 8.: Relative wages/employment (1996 vs. 1989)

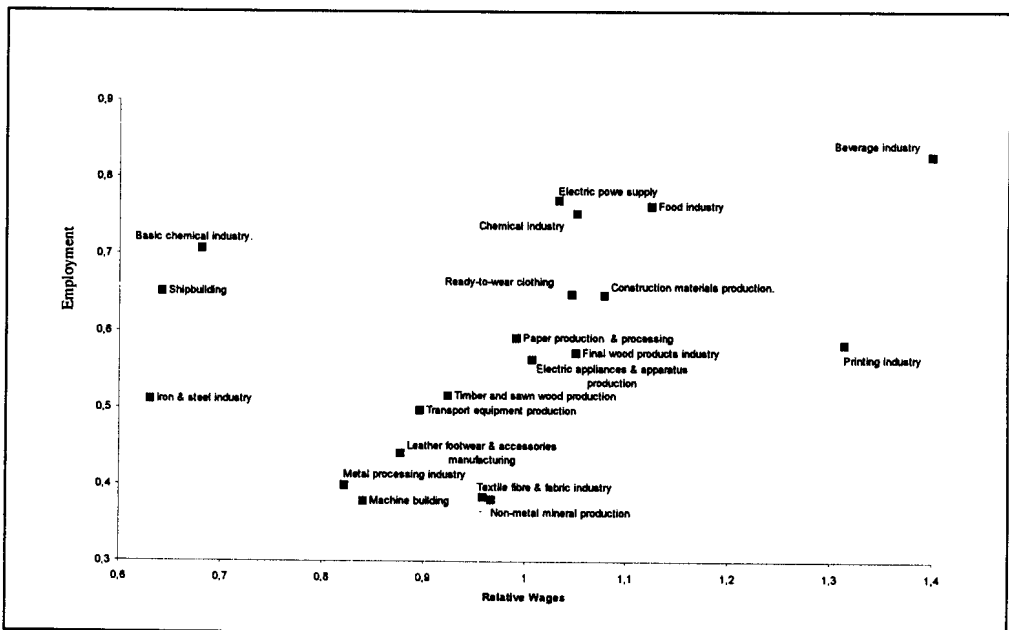


cost of recruiting them back again in the post-recessionary phase of the demand recovery. The downward adjustment in employment would normally be weaker if the downward wage adjustment is stronger, the anticipated duration of the recession is shorter, the firing and hiring costs are higher, and/or the direct or indirect subsidies granted to companies during recession are higher.

To conclude, if we take into account the previously mentioned high estimates of hidden unemployment for 1988, the analysis suggests that the rate of real unemployment in the manufacturing sector might still be substantial. Therefore, a large increase in industrial production will be necessary in the medium term to avoid a further substantial decrease in employment in this sector which, at this stage, can not be considered a positive medium-term development. Rather, a reallocation of employees within the sector itself towards new or more efficient branches would be a more desirable development.

Figures 8 and 9 demonstrate the relationship between relative wages (the average wage in the overall economy/manufacturing being equal to 1) and employment. This relationship is depicted for the main sectors of the economy and for all branches within the manufacturing sector. Although in both cases the labour market data fall within the southern or recessionary quadrant<sup>8</sup>, it is interesting to note that the relationship is not the same for the overall economy and the manufacturing branches. In the first case there is an inverse relationship between relative wage<sup>9</sup> and employment. An explanation for such a relationship is that, all else being equal, a stronger downward adjustment in employment enables better relative wage, or vice

Figure 9.: Relative wages/employment (1996 vs. 1989)





versa. The only clear outlier from this relationship is government which, given the decrease in employment, should have attained better relative wages.

Among the industrial branches, on the other hand, there seems to be a "perverse" relationship: a stronger downward adjustment of employment, in most cases, is directly correlated with a higher deterioration of the relative average wage in the branch. This connection, however, is not so strong and has the following outliers: the iron and steel industry, basic chemicals industry, shipbuilding and printing. In the case of the iron and steel industry, its position in Figure 9 might to a certain degree explain its outlier position in Figure 7: the higher downward price adjustment can explain smaller quantity adjustment. In case of the printing industry, it is just the opposite. Its improved market position, as manifested by large increases in relative prices of printing services<sup>10</sup> has enabled the branch to attain higher wages. This was even more true in the case of beverage production in which high relative wages, in spite of little downward employment adjustment, were a consequence of large increases in relative prices in the sector due to improved market conditions.

At least a part of the explanation for labour market adjustment in manufacturing sector lies in the fact that parts of it experienced the recession most severely. Therefore, the most affected branches such as the machine industry, manufacturing of metal products, the textile fiber and fabric industry, and leather footwear and accessories manufacturing had to adjust by both a drastic reduction in employment<sup>11</sup> and a deterioration of relative wages.

## Conclusions

Using the employment structure of the EU countries as a long-term target, we have found that Croatia is still a long way from that goal, but that it is proceeding in the right direction and at a considerable speed towards achieving it. Moreover, in comparison to other countries in transition, it appears that employment restructuring in Croatia measured by indices of speed, efficiency and job creation has been most successful during the first seven years of the transition.

It is, however, necessary to point out that the continued process of job destruction is still desirable, as long as hidden unemployment remains in many sectors and branches, especially in agriculture and in state-owned companies. However, unless this process is accompanied by a higher rate of job creation in the official part of the economy, such a process can not be successful: total unemployment along with employment in less productive areas in the unofficial sector would continue to grow. To avoid such a situation, continued rates of high growth with rapid job creation in the official part of the economy will be necessary.

## NOTES:

- <sup>1</sup> Counting the number of unemployed persons through the employment offices registers.
- <sup>2</sup> It means the increase of employment during the period of increase of GDP and downward rigidity of employment during the time of Yugoslav recessions. Vujčić (1991), however, demonstrated that such form of asymmetric behaviour in Croatia had value in terms of absolute number of employees, but not in terms of the rate of growth of employment which was significantly reduced in the periods of recession.
- <sup>3</sup> A part of the decrease in official employment was most likely reflected in the increase in employment in the unofficial sector of the economy. Therefore, data that we use are a better indicator of employment trend than of the level of employment.
- <sup>4</sup> There are good arguments in favour of the thesis that GDP in the transitional countries, in fact, decreased by less than shown above. That would mean that the adjustment of the labour market was relatively higher.
- <sup>5</sup> This is the method that was used by Jackman R. and Pauna C. (1996) for the following countries in transition: Bulgaria, the Czech Republic, Poland, Hungary, Romania and Slovak Republic. We are taking over from this study also the referent structure of employment for the EU countries for 1989 and 1994.
- <sup>6</sup> However, not all employment reduction was necessary. There have been problems associated with privatisation. In many such cases owners considered the company as a real estate encumbered by the employees, and not as an enterprise. Such privatization methods did not encourage the efficient company management, but, instead, the simple realisation of the quick capital gains usually accompanied by doubtful transactions.
- <sup>7</sup> Those sectors in which the share of the employment is lower than in the EU reference group.
- <sup>8</sup> Again, it is worth reminding that the employment decline was, in part, attributable to the war associated population decline, rather than the recession.
- <sup>9</sup> The same result can be obtained with the average real wages.
- <sup>10</sup> The data on relative prices, that are not shown here, can be obtained from the author.
- <sup>11</sup> In some cases, such as in companies in the war-torn regions, such adjustment was a direct consequence of the war.

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