

**THE FAILURE OF THE LABOUR MARKET IN MACEDONIA:
A LABOUR DEMAND ANALYSIS***

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This research was supported by a grant from the CERGE-EI Foundation under a program of the Global Development Network. Additional funds for grantees in the Balkan countries have been provided by the Austrian Government through WIIW, Vienna. All opinions expressed are those of the authors and have not been endorsed by CERGE-EI, WIIW, or the GDN.

We would like to thank the Institute for South East Europe (ISEE) for providing us with the firm-level data.

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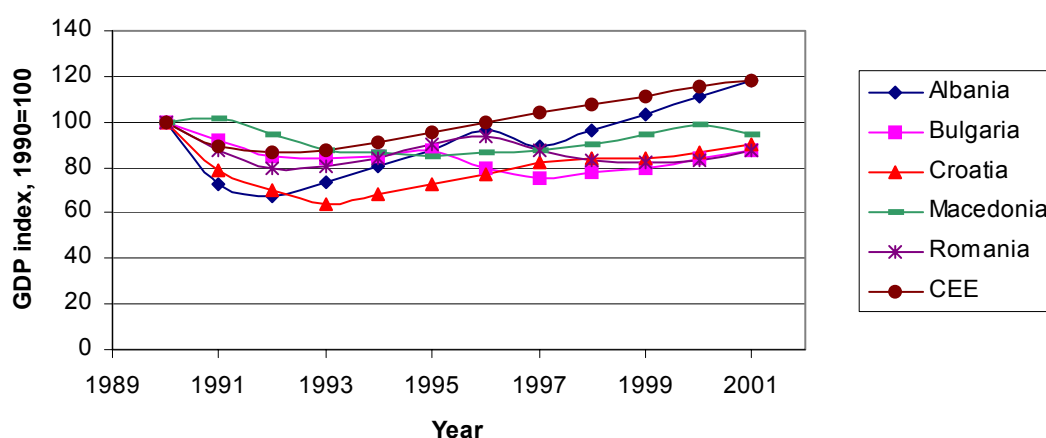
Abstract

This paper examines the failure of the labour market in Macedonia, a country with the highest unemployment rate in Europe. We describe the labour market institutions and policies in Macedonia during the transition. We also examine the job creation and job destruction using firm-level data and we estimate short- and long-run elasticities of labour demand. The results imply that the relatively speedy privatization of state enterprises in Macedonia has failed to spur a recovery of labour demand. We can also conclude that firms in Macedonia began adjusting their employment to the changing conditions later than their Central European counterparts.

1. Introduction

As the old socialist economic model was breaking apart, real output collapsed in every formerly communist country, albeit with different intensity. While in the Central European transition countries (Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia) the output has recovered after the initial decline and by 1996 reached and exceeded the 1990 level, the transition process in the Southeast European transition countries (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia and Montenegro) has been associated with a longer-lasting recession. Except for Albania, the real GDP in the Southeast European (SEE) countries still had not reach the 1990 level by 2001 (Figure 1).

Figure 1. Evolution of GDP in Eastern European Countries, 1990-2001



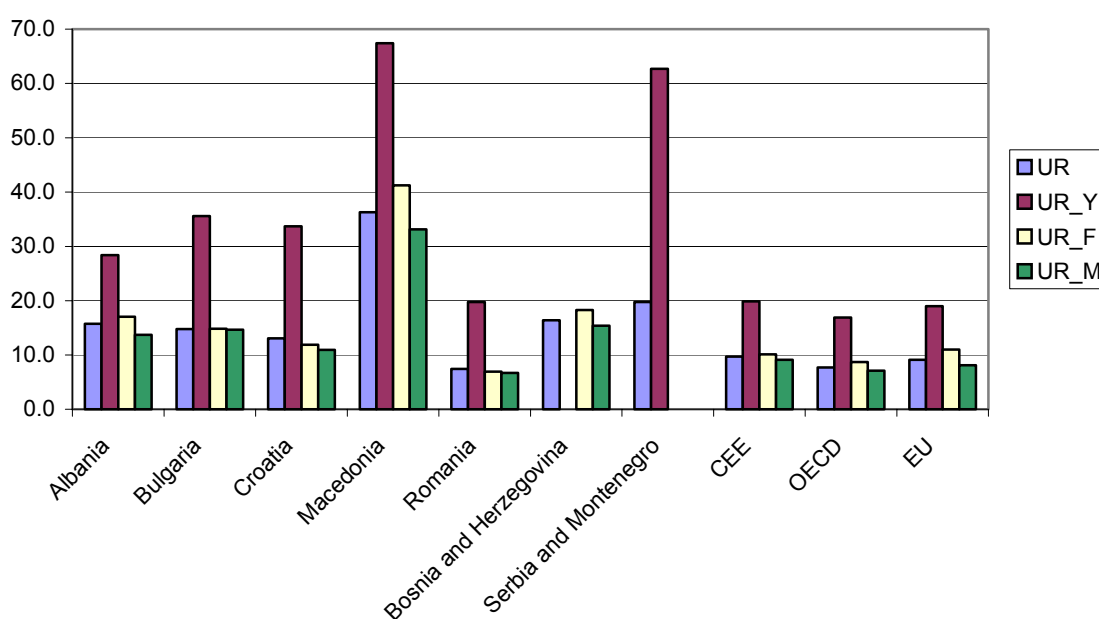
Note: CEE is an averaged index for the following Central European countries: Czech Republic, Hungary, Poland, Slovak Republic and Slovenia.

Source: World Development Indicators, 2003.

The pattern of real GDP in Macedonia during transition has more or less matched that observed in the other SEE countries. The recession was less pronounced at the beginning of the transition, but subsequently output declined for 4 consecutive

years with a cumulative decline of almost 20 percent. Macedonia has performed relatively well on initial structural reforms, as measured in EBRD Transition Reports: price liberalization, trade and foreign exchange system liberalization, and small scale privatization. However, it scores less well on second phase reforms, particularly governance and enterprise restructuring, and competition policy.

Figure 2. Unemployment Rates (late 1990s)



Notes: The youth unemployment rate (UR_Y) denotes % of labour force ages 15-24. UR_F denotes the female unemployment rate, while UR_M denotes male unemployment rate.

CEE is an averaged index for the following Central European countries: Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia.

The unemployment rates are averaged using available data over the period 1995-2000, except for the figure for Bosnia and Herzegovina which is based on the 2001 LSMS.

Sources: World Development Indicators database (2003), TransMONEE database (2002) for youth unemployment in the SEE countries, and World Bank (2002) for Bosnia and Herzegovina.

Macedonia's comparative progress with the other SEE countries seems somewhat at odds with the country's poor record of labour market performance. Unemployment is particularly high, however measured, leaving Macedonia an apparent outlier in the region (Figure 2). The unemployment rate as measured in the Labour Force Surveys (LFS) hovers above 30 percent, with youths being especially

affected (the youth unemployment rate is almost 50 percent).¹ Majority of the unemployed (over 80 percent) are jobless for over one year, i.e. are long-term unemployed. High unemployment combined with a low labour force participation rate (about 60 percent) implies low employment-to-population ratio. Only 40 percent of persons of working age (age 15-65) are employed in Macedonia. Employment of women is particularly low (only about 30 percent of working age women were employed in 2001).² This entails a low level of the utilization of labour resources and translates in the lower level of output and, eventually, lower economic welfare.

The above mentioned characteristics of the composition of unemployment in Macedonia indicate that labour market rigidities might have played an important role in the dismal performance of the Macedonian labour market. For instance, Scarpetta (1996) concludes that youths are the most adversely affected by labour market rigidities, especially in a context of wage compression. In addition, as shown by Bentolila and Bertola (1990), Nickell (1997), Nickell and Layard (1999) and OECD (1999), long-term unemployment is another indicator of the presence of labour market rigidities, due to lower inflows and outflows, and longer duration of unemployment spells. Therefore, in section 2 we begin by examining the *labour market institutions and policies* in Macedonia during the transition. However, labour market institutions can be only part of the story, and are usually not the most important. To get the whole picture, one needs to consider more closely the roles of labour supply and labour demand.

¹ The LFS have been conducted since 1996.

² The labour force participation rate and the employment rates have been adjusted to match the international definition of working age population (ages 15-65). The Macedonian definition includes population aged 15-80.

On the labour supply side, idle and underused labour is abundant.³ At the same time, the low replacement rate (i.e. benefit/earnings ratio), the relatively short duration of unemployment benefits, and the limited coverage (percentage of unemployed who receive benefits) imply that *labour supply disincentives are modest* and thus the unemployment benefit system is unlikely to have much influence on the failure of the formal labour market in Macedonia (see Section 2.3 for a detailed description of the passive labour market policies).⁴ In the absence of significant labour supply constraints, the poor labour market outcomes in Macedonia necessarily mean *insufficient labour demand*, in particular from the private sector. The government has limited ability to raise labour demand directly. Overall growth and job creation by the private sector will be the only long-term solution.

Thus, this paper mainly focuses on analysis of the labour market performance in Macedonia from a labour demand perspective, using firm-level data. For the purpose, in section 3 we look at the *job creation and job destruction*. We also estimate *short- and long-run elasticity of labour demand*. In section 4 we provide concluding remarks and delineate several policy repercussions.

2. Labour Market Institutions

More flexible labour markets have been the leading paradigm in most transition countries, promoted by the World Bank and IMF. Labour market institutions and policies have a role to play in improving flexibility and dynamism of

³ However, the quality of labour is questionable and could be improved through heightened human capital (i.e., more effective and useful education and training).

⁴ Worker remittances also cannot lead to significant labour supply disincentives. For instance, worker remittances per capita are much lower in Macedonia than in Albania, Croatia or Serbia and Montenegro, which have lower unemployment rates than Macedonia.

the labour market. Institutions analyzed in this paper include employment protection legislation, labour costs, features of active and passive labour market policies, and trade unions and collective bargaining structures.

2.1 Employment Protection Legislation

One of the key requirements at the start of the transition was to facilitate workforce adjustments in order to dismantle ‘job monopoly’ as a necessary precondition for restructuring and privatization. As a result, Macedonia embarked on multiple reforms of the labour code. An assessment of Macedonia’s employment protection legislation (EPL) index is provided in Table 1. This assessment uses methodology developed by the OECD that provides a systematic treatment of the labour code, covering numerous aspects of regular and fixed-term contracts and collective dismissal procedures. The comparison with the Central European countries, on the one hand, and the EU and OECD countries, on the other, shows that Macedonia’s EPL is quite restrictive. However, this rigidity is mainly a result of the regulation on temporary employment and collective dismissals. Indeed, when adopting and amending new labour legislation during the transition period, Macedonia and the other SEE countries were mainly focusing on relaxing the regular employment restrictions, while insufficient attention was paid to the benefits of adopting more flexible legislation on temporary employment and collective dismissals.⁵

⁵ A further source of inflexibility is the disincentive against use of part-time employees created by the floor set for social contributions, which is based on 65 percent of the average sectoral wage for full-time work, thereby increasing the effective payroll tax for part-timers.

Table 1. Employment Protection Legislation in Selected Countries

	Year	Regular employment	Temporary employment	Collective dismissals	EPL index
Macedonia¹	1995	2.1	4.3	4.8	3.4
	2000	2.1	4.3	4.0	3.3
	2003	2.0	3.1	4.0	2.8
SEE average	late '90s	2.2	3.9	3.6	3.1
	early '00s	2.1	2.9	3.7	2.7
CEE average	late 1990s	2.7	1.2	4.1	2.4
EU average	late 1990s	2.4	2.3	3.2	2.5
OECD average	late 1990s	2.1	2.0	2.9	2.2

Notes: Using a scale from 0-6, where a higher score indicates more restrictive legislation.

SEE is an averaged index for the following Southeast European countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia and Montenegro.

CEE is an averaged index for the following Central and Eastern European countries: Czech Republic, Estonia, Hungary, Poland, Slovak Republic and Slovenia.

1/ The Macedonian labour code was adopted in 1993 and has been amended many times since then.

Only the amendments that had an effect on the EPL index are presented in the table.

Sources: : Own calculations based on labour codes and other (mainly) national sources for SEE countries (see Micevska, 2003), Riboud et al. (2002) for CEE countries, OECD (1999) for OECD and EU countries.

Although Macedonia has achieved a significant progress in enhancing labour market flexibility, the remaining rigidities need to be further addressed. In particular, this implies allowing for flexibility in the modality of employment (temporary agencies, part-time employment, seasonal and casual labour) and streamlining the process for collective dismissals.

2.2 Labour Costs

In Macedonia the average monthly net wage of about EUR 150 is comparable or lower than in other transition economies of Central and Eastern Europe. Although a

minimum wage is stipulated in the labour laws, it was defined for the first time in 2002, only for the public sector and at a low level of about 45 percent of the monthly average wage.

High payroll taxes and social security contributions, which increase the cost of labour, are often a particularly acute problem for SMEs, which may choose to remain informal instead, thereby limiting their potential for growth. These taxes are lower in Macedonia than other transition countries in Europe, with social contributions set at 32 percent of gross wage.⁶ By way of comparison, the payroll tax rate ranges from 33 percent in Estonia to 60 percent in Romania.⁷ The relatively low payroll tax rate is a positive factor, as high payroll taxes negatively affect labour demand.

2.3 Passive and Active Labour Market Policies

Registered unemployment in Macedonia has been rising since the early 1960s, standing at about 20 percent at the time of independence in 1991.⁸ Registered unemployment rate continued to rise during transition, reaching over 50 percent (about two-thirds higher than the respective LFS unemployment rate) by 2000. This reflects a relatively high propensity to register at the Employment Bureau, which may seem at odds with parsimonious unemployment benefits. Namely, relatively few unemployed receive unemployment benefits. The benefit coverage rate (percentage of unemployed who receive benefits) has been about 10 percent of registered unemployed, reflecting two factors: *(i)* a large proportion of new entrants to the labour market, who do not have insurance record to qualify for unemployment benefits, and *(ii)* a large proportion of long term unemployed, who are no longer eligible for the

⁶ The overall rate consists of the following components: Pension and Disability Fund (21.2 percent), Health Care Fund (9.2 percent), and Employment Fund (1.6 percent).

⁷ However, the average payroll tax in the EU is 23.5 percent (Riboud et al., 2002).

⁸ The system of worker self-management in the Socialist Federal Republic of Yugoslavia allowed open unemployment.

benefit (unemployment benefit duration is capped at 14 months). The benefit replacement rate (i.e. benefit/earnings ratio) is low, as unemployment benefit accounts for only 50 percent of the last wage for the first 12 months, followed by 40 percent for the next 2 months.⁹ Although unemployment benefits are low and their duration is limited, registration rates at the Employment Bureau are high because eligibility criteria are not enforced and many of the registered unemployed are working informally and register to receive free health insurance.

The amount spent on regular unemployment benefits is only 0.3 percent of the GDP. However, in addition to regular cash benefits, some older workers are eligible for a cash benefit until retirement (about 8 percent of the unemployed) and pension contributions are paid for all those receiving cash benefit. In addition, as mentioned above, health insurance is paid for all who choose to register as unemployed. Together, all these benefits cost about 2.5 percent of GDP, about double the OECD average, and most is financed out of the budget (World Bank, 2003).

There have been a number of active labour market programs in Macedonia, most supported by donors and focused on job counselling, training, public works, and measures that encourage the start up of businesses. Funding has been extremely low relative to OECD countries. Between 1996 and 2002, the amount spent on active labour market policies was less than 0.05 percent of GDP, compared with 0.7 percent in OECD countries (OECD, 2002). Taking into account the role that active market policies can play in fighting unemployment (e.g., Boeri and Burda, 1996), fiscal resources should probably be shifted from passive to active labour market programs.

⁹ Until very recently (April 2003), the maximum duration was set to 18 months, with 50 percent of the annual average wage for the first 12 months and then 40 percent for the following 6 months. Despite the reduction, the current duration of unemployment benefits in Macedonia is still high compared to the duration of at most 12 months in most of the countries in the region.

2.4 Trade Unions and Collective Bargaining

During the course of transition, the bargaining power of trade unions has declined at the national, branch and enterprise level. In the public sector and in large privatized companies, union coverage and union power remain important and wages tend to be determined mostly through collective bargaining. In the private sector, however, trade unions are almost nonexistent and wage levels are mostly determined at the enterprise level, reflecting the firm's ability to pay and worker bargaining power. This has been followed by a sharp decline in unionization rate to only 45 percent of the salaried workers.¹⁰ Nevertheless, trade unions retained their influence on creation of new labour legislation in the process of negotiations and coordination with employer associations and the government.

3. Job Creation and Job Destruction

The situation in the labour market is usually supported or complemented by a similar situation in the enterprise sector. In flexible labour markets, labour is allocated better, workers are changing their jobs and they are being redeployed in more productive firms/sectors, at the same time leaving the less productive ones, which thus leads to efficiency growth. Also, in a dynamic flexible market, business incentives to create jobs are higher. On the other hand, if the EPL is binding, then job and worker turnover should be low. Job destruction will be low because it is costly for the employer to close an unproductive job. Job creation will be low because employers will avoid hiring new workers in order not to incur future dismissal costs.

¹⁰ This is comparable to the average unionization rate of about two-fifths of the salaried workers in the SEE countries (Arandarenko, 2003).

The analysis that follows is based on balance sheet and income statement data provided by the Central Payment Agency.¹¹ The total sample includes 729 enterprises from all industries of the Macedonian economy that were subject to privatization, except agriculture, and covers the period 1991-99 but without any data for 1993 as firms were not obliged to report in that year.¹² Due to that and the fact that 1991 and 1992 were years of hyperinflation and macroeconomic instability, we will mainly concentrate on the 1994-99 period. However, the 1991-92 data is a valuable source of pre-privatization information.¹³

We need to point out to an important caveat of our dataset. Our data refer to registered firms which are legal persons. Since some proportion of all enterprises might be natural persons, the data presented may not be representative of all enterprises.¹⁴ However, to operate as unregistered entities in Macedonia, enterprises would have to operate entirely in cash as all bank accounts had to be registered with the Central Payment Agency. Therefore, this form of informal activity is likely to be less common than in some other transition economies. Most informal activity in Macedonia is likely to be of the second type in which officially registered enterprises underreport the number of workers they employ, the salaries they pay and the level of production in order to reduce tax liabilities. Thus, our data underestimate true employment and firm performance.

As the transition process progressed enterprises have been subject to an intensified competitive pressure, coming from the newly-formed private firms as well

¹¹ The Central Payment Agency was an institution through which enterprises had to clear all the payments, including payment orders for wages. With the reforms of the banking system in 2001, this institution was abandoned.

¹² Of the total of 1,167 enterprises, 438 were omitted from the sample because they were liquidated early in the process or had missing data in one or more years.

¹³ In addition, we use the 1991-92 data as instruments in our GMM estimation.

¹⁴ Moreover, there is likely to be discrepancy between the number of registered enterprises and the number of actually active enterprises, the latter often being substantially smaller.

as from foreign competitors. This has forced firms to reduce costs, cut employment and improve productivity. For many firms, especially the privatized ones, downsizing has become a prerequisite for a survival in a more competitive environment.¹⁵ To illustrate this process, the summary statistics in Table 2 show that an average firm size decreased from over 350 employees in 1991 to about 170 employees in 1999.¹⁶

Table 2. Means of Selected Variables

	1991	1992	1994	1995	1996	1997	1998	1999
Average # of employees	350	281	225	207	193	187	175	170
Fixed assets per employee	-	-	421636	418331	955490	649591	602500	646564
Gross wages per employee	-	-	164501	149924	145785	141483	143625	143534
Sales per employee	-	-	1594267	1327890	1147888	1296870	1217238	1345543
Profits per employee	-	-	-2610	-4238	-36076	-16433	-24564	-16634
Total costs per employee	-	-	577613	508315	506084	524273	533710	1248562
Value added per employee	-	-	1233133	1012034	857998	964345	868536	301179

Notes: The financial variables are in 1994 denars. Since 1991 and 1992 were years of hyperinflation, we do not report financial variables for these two years.

Sales per employee decreased by 28 percent between 1994 and 1996, and then increased by 17 percent in the years 1996-99. From 1994-97 gross wages per employee declined by 14 percent and subsequently showed a modest increase of 1.5 percent.¹⁷ The average firm experienced losses and declining value added during the

¹⁵ Defensive restructuring has usually been seen as the first response of firms to output drops, new market conditions, and introduction of a hard budget constraint.

¹⁶ During the period 1994-99 the average number of employees declined by 18 percent. By way of comparison, during the period 1995-2000 the representative Slovenian firm cut the average number of employees by 9 percent, while Croatian firms reduced their employment by 21 percent (Domadenik and Vehovec, 2002).

¹⁷ However, the values for 1994 should be taken with caution since the inflation was not under control until 1995.

whole period, which illustrates the poor performance of the Macedonian formal economy.¹⁸

Seemingly, the reason behind declining employment and rising unemployment is enterprise restructuring associated with labour shedding. However, as Table 3 illustrates, this is only part of the story. Experience shows that enterprise restructuring do not have to entail job losses as long as the economy is able to generate a sufficient number of new jobs. That is, at a deeper level the main reason for unfavourable labour market outcomes is insufficient job creation. Indeed, the job creation rate in Macedonia is the lowest among transition economies of Central and Eastern Europe. A comparison with the figures in Table 4 indicate that Macedonia creates less than half as many jobs (relative to its employment) as Bulgaria and about one-fourth as many jobs as the dynamic Lithuanian economy.

Table 3. Job Creation and Job Destruction: Macedonia

	1992	1994	1995	1996	1997	1998	1999
Job creation	2.0	2.3	0.9	1.4	1.1	3.0	2.4
Job destruction	8.4	13.4	9.1	7.4	11.4	9.9	4.9
Employment growth	-6.4	-11.1	-8.2	-6.0	-10.4	-6.9	-2.5
Job turnover	10.4	15.7	9.9	8.8	12.5	12.9	7.4
Job reallocation	4.0	4.5	1.7	2.8	2.2	6.0	4.9

Notes: Data for 1993 are not available. Therefore, the figures for 1994 indicate changes over a two-year period.

The job creation rate is defined as the sum of all employment gains in expanding firms in a given year, expressed as a proportion of total employment at the beginning of the year.

The job destruction rate is defined as a sum of all employment losses in contracting firms in a given year, expressed as a proportion of total employment at the beginning of the year.

The rate of employment growth is defined as the difference between the job creation rate and the job destruction rate.

The job turnover rate is defined as the sum of the absolute value of the change in employment in each firm, expressed as proportion of total employment.

The job reallocation rate is the difference between the job turnover rate and the absolute value of the rate of employment growth

¹⁸ Alternatively, as already mentioned, this may indicate the incentive to report negative profits in order to avoid tax liabilities.

The low rate of job creation is associated with a low rate of job reallocation. The Macedonian economy - unlike other transition economies - does not seem to have undergone a process of intensive enterprise restructuring. In 1999 only about 5 percent of all jobs were reallocated from contracting firms toward expanding firms. This is again much less than in, for instance, Lithuania where the job reallocation was over 19 percent. This clearly points to the stagnant nature of the Macedonian labour market.

Table 4. Job Creation and Job Destruction: Selected Transition Countries

	Croatia 2001	Bulgaria 2000	Lithuania 1998-99	Poland 1998-99	France 1984-91	Germany 1983-90
Job creation	3.5	6.8	9.7	5.3	6.6	6.5
Job destruction	4.9	10.8	10.7	10.1	6.3	5.6
Employment growth	-1.4	-4.1	-0.9	-4.8	0.3	0.9
Job turnover	8.4	17.6	20.4	15.4	12.9	12.1
Job reallocation	7.0	13.5	19.4	10.5	12.6	11.2

Source: Rutkowski (2003).

We can conclude that the relatively speedy privatization of state enterprises in Macedonia has failed to spur a recovery of labour demand. We can explain that in the following way. A rapid and far-reaching privatization program started in 1993 and accelerated in 1995 and 1996. By end-1995, privatization was completed for almost half of the 1,200 or so designated enterprises, with another quarter of enterprises underway, together accounting for more than 90 percent of the workers in enterprises slotted for privatization. As a result, the public sector share in value-added dropped sharply, to about 25 percent of GDP in 2001. To date, however, the impact of privatization has been rather disappointing. Despite the shift of employment to private entities, there has been little restructuring and few privatized firms became profitable as a result of the change in their ownership structure, most likely because of the

dominance of insider buy-outs but also because of improper procedures and substantial corruption during the process. However, enterprises showed somewhat improved performance in the late 1990s, mainly driven by the stronger results of newly-created private firms (Zalduendo, 2003).

3.1 Labour Demand Elasticities

We use here the Basu et al. (2000) labour demand model, where firms face an exogenous output demand (revenue) constraint, the production function is of the Cobb-Douglas form, and the exogenous variables follow an autoregressive process of the second order. In fact, we estimate a log-linear equation of the form:

$$\begin{aligned} \ln L_{it} = & \alpha_0 + \alpha_1 \ln Q_{it} + \alpha_2 \ln Q_{it-1} + \alpha_3 \ln W_{it} + \alpha_4 \ln W_{it-1} + \alpha_5 \ln L_{it-1} + \\ & \alpha_6 \ln X_t + \alpha_7 \ln X_{it-1} + \varepsilon_{it} \end{aligned} \quad (1)$$

where L is the number of employees, Q is the sales or output of the firm, W is the real wage, X is a vector of control variables that might affect the firm's demand for labour, subscripts i and t denote firms and years respectively, and ε_{it} is the error term.

Equation (1) permits us to estimate the short-term effects as well as long-term effects. For example, the short-term elasticity of employment with respect to revenues is given by α_1 , while the corresponding long-term elasticity is given by the ratio $(\alpha_1 + \alpha_2)/(1 - \alpha_5)$. The short- and long-term employment elasticities with respect to wages and the other variables are defined analogously.

First, we estimate the basic labour demand model, using value-added per worker as a measure of Q .¹⁹ Then we extend the model by adding different control

¹⁹ Using sales per worker instead produces qualitatively similar results.

variables (X). For instance, in order to allow for the possibility that during the transition employment is influenced by the capital stock, we include one-year lagged fixed assets per employee as an explanatory variable. We also control for ownership, legal status, and industry and regional dummy variables that may affect the firm's demand for labour.

In the presence of dynamics and slope heterogeneity, the use of standard panel techniques, such as fixed effect estimator, leads to inconsistent estimates and potentially misleading inferences even for large N and T panels (Pesaran et al., 1996). Therefore, equation (1) was estimated using two different econometrics techniques: the generalized method of moments (GMM) and the pooled mean group estimator (PMGE). The GMM estimates presented in columns 1-2 of Table 5 use suitably lagged values of the endogenous variable, in orthogonal deviations and in levels, as instruments (Arellano and Bover, 1995). The validity of those instruments can be assessed using a Sargan test. If the instruments are valid, the GMM technique yields consistent estimates of all the parameters in the model. However, the asymptotic properties of the GMM technique may not be verified. Also, the total number of observations that can be used with the GMM technique drops substantially. The PMGE as suggested by Pesaran et al. (1999) is shown in columns 3-4 of Table 5. The PMGE assumes that the long-run coefficient is identical across all groups but it allows the short-run coefficients to differ between the groups.²⁰

²⁰ The Hausman test of identical long-run coefficients between the PMGE and the mean group estimator is clearly accepted.

Table 5. Labour Demand Estimation: Macedonia 1995-99

	GMM		PMGE	
	(1)	(2)	(3)	(4)
$\ln Q_t$	0.496*** (0.002)	0.309*** (0.078)	0.565*** (0.008)	0.487*** (0.075)
$\ln W_t$	-0.587*** (0.141)	-0.158 (0.217)	-0.683*** (0.046)	-0.427** (0.188)
$\ln L_{t-1}$	0.896*** (0.006)	0.821*** (0.040)	0.925*** (0.062)	0.844*** (0.037)
$\ln Q_{t-1}$	-0.387*** (0.048)	0.157 (0.383)	-0.467*** (0.095)	-0.398*** (0.076)
$\ln W_{t-1}$	0.505*** (0.074)	-0.965 (0.989)	0.476*** (0.019)	0.232** (0.127)
$\ln Assets_{t-1}$		0.031** (0.013)		-0.033 (0.014)
<i>Ownership</i>				
Private		0.123** (0.053)		0.019 (0.091)
Joint venture		0.165** (0.064)		-0.009 (0.013)
Other		-0.127*** (0.007)		-0.012 (0.091)
<i>Legal status of the firm</i>				
Limited Liability		0.165*** (0.066)		0.221*** (0.077)
Joint stock co.		0.106** (0.050)		0.017 (0.028)
Other		-0.624*** (0.105)		-0.037 (0.025)
Sargan test (<i>p</i> -value)	1.000	1.000		
Hausman test (<i>p</i> -value) ¹⁾			0.832	0.923
<i>N</i>	2920	2628	3570	3034

Notes: Standard errors are reported in parentheses.

***, ** and * denote statistically significant values at 1%, 5% and 10%, respectively.

The GMM estimates use the second and third lag of the endogenous variable as instruments.

Coefficients on industry and regional dummy variables are not reported.

1/ Hausman test of identical Pooled Mean Group Estimator and Mean Group Estimator.

As may be seen from Table 5, the estimated equation of labour demand has good fits by the both regression methods. The short-term labour demand elasticity with respect to value-added (0.31-0.57) indicates that firms were responsive in their employment adjustment to changes in the performance. Firms were even more responsive in adjusting employment to wages.

It is interesting to compare the short- and long-run elasticity of labour demand in Macedonia with the elasticities estimated for Central European countries and Russia (Basu et al., 2000), and for Slovenia and Croatia (Domadenik and Vehovec, 2002). There does not seem to be much difference between estimated elasticities of labour demand for the former Yugoslav republics (Macedonia, Croatia and Slovenia) and those for the Central European economies.²¹ However, when comparing the estimates it is important to remember that for the former Yugoslav republics the estimates refer to the second half of the 1990s (i.e. advanced stage of transition) while for the Central European countries they apply to the early 1990s (i.e. the early transition period).²² This implies that firms in the former Yugoslav republics might have started adjusting their employment to the changing conditions much later than their Central European counterparts.

Table 6. Short and Long Run Elasticities of Labour Demand

	With respect to W		With respect to Q	
	short-run	long-run	short-run	long-run
Macedonia	0.43-0.68	1.25-2.76	0.31-0.57	0.85-1.31
Croatia	0.69	1.01	0.43	0.94
Slovenia	0.47	0.40	0.54	0.86
CEE countries	0.25-0.96	0.75-5.02	0.33-0.65	0.77-0.97
Russia	0.14	-	0.04	-

Notes: CEE countries include: Czech Republic, Hungary, Slovakia, and Poland.

Elasticities are given in absolute values

Sources: Authors' calculations for Macedonia; Domadenik and Vehovec (2002) for Slovenia and Croatia; Basu et al. (2000) for CEE countries and Russia.

²¹ Russian firms, on the other hand, displayed virtually no sign of a transition to a market-like behaviour.

²² When comparing the elasticities it should be also noted that the estimation methods used in the two studies are different from our methods. Basu et al. (2000) use IV and 3SLS estimates of consecutive two-year panels of data and then test for the stability of coefficients across the two-year periods. On the other hand, Domadenik and Vehovec (2002) perform pooled OLS regression estimations.

4. Conclusion

This paper examines the failure of the labour market in Macedonia, a country with the highest unemployment rate in Europe. We first describe the labour market institutions and policies in Macedonia during the transition. These include employment protection legislation, labour costs, features of active and passive labour market policies, and trade unions and collective bargaining structures. The Macedonian EPL seems relatively restrictive. However, this rigidity mainly stems from the legislation on temporary employment and collective dismissals, while the legislation on regular employment is quite flexible. Macedonia operates less generous unemployment insurance systems than the EU and OECD countries and spends less on active labor market policies. In comparison with other transition countries, Macedonia falls into the middle of the range in terms of union density and has relatively lower payroll taxes.

We also examine the job creation and job destruction using firm-level data. The analysis shows that the job creation and job reallocation rates in Macedonia are the lowest among transition economies of Central and Eastern Europe. This implies that the relatively speedy privatization of state enterprises in Macedonia has failed to spur a recovery of labour demand. The estimations of short- and long- run elasticities of labour demand suggest that firms were responsive in their employment adjustment to changes in the performance and even more responsive in adjusting employment to wages. However, the level of responsiveness of Macedonian firms for the period that we study (1995-99) is about the same as (or less than) the responsiveness of firms in Central European countries in the early 1990s. This confirms that firms in Macedonia

might have started adjusting their employment to the changing conditions much later than their Central European counterparts.

The implications of the findings presented in this paper for policy making cannot be reduced to a simple recipe. Nevertheless, we can delineate several policy repercussions. First of all, EPL should be monitored closely as part of the continuing process of evaluating and adjusting an overall strategy for improving labor market performance. In particular, the analysis presented here indicates that in Macedonia the limits of possible deregulation have not yet been reached as far as temporary employment and collective dismissals are concerned. As labor market conditions evolve, the focus on initiatives to relax regulation of temporary employment would contribute to eliminating some of the barriers to employment for women, youths and other labor force groups that may face difficulties in gaining access to stable jobs.

Second, taking into account the role that active market policies can play in fighting unemployment, fiscal resources should probably be shifted from passive to active labour market programs. Finally, identifying factors that encourage job formation and dynamism is central to formulating effective policies or programs to promote the investment climate, and thereby a vibrant private sector that creates employment.

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