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# **Business Environment and Labor Market Outcomes in European and Central Asian Countries**

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Firm entry has been proven to be fundamental for job creation in transition economies. The creation of new ventures as well as their survival and expansion depends on the business environment of the country. It is therefore important to adopt policies aimed at improving the framework conditions in which firms are created and operate. The aim of this paper is to assess which of those conditions are most important for private sector employment creation in Eastern and Central Europe and Central Asia. For that purpose we run a multivariate regression where employment creation is explained by means of the interaction of a macroeconomic shock with the set of institutions shaping the business environment of the country. The rationale is that the investment climate determines the response of the labor market to the transition shock. We find that among European transition economies, the development of the financial sector is the most important variable. Market regulation (credit and labor regulation), start-up costs and the tax burden are all found to significantly affect employment as well. Among those economies further away from a market economy, especially those in Central Asia, market regulation, corruption and the (bad) quality of the legal system are found to be the most deterrent institutions for employment creation in the private sector. Next in line comes the access to the required financial means to create and expand a business.

## **1. Introduction**

The Eastern and Central European countries and former soviet republics are all experiencing a unique process of transition towards a market economy which entails the emergence of a new private sector. Most large enterprises have closed or downsized during this transition period, reducing labor hoarding and shedding redundant labor so as to reach the

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<sup>±</sup> The opinion and analyses herein are the responsibility of the author and, therefore, do not necessarily coincide with those of the Banco de España.

economically efficient size. The result has been a reduction in the average firm size, which is becoming closer to that in market economies. But if the average firm size decreases, the only way to increase employment is through a faster pace of firm formation. Moreover, released workers must now find employment in the expanding new private sector, otherwise, unemployment will rise. The entry of new firms and survival and growth of the already existing ones is, therefore, crucial to absorb those displaced workers and should be a primary target of policy makers.

Firm entry and expansion depend on the quality of the business environment. Moreover, the set of rules and institutions which shape the investment climate of a country have been proven to amplify or dampen, depending on whether they are business friendly or not, the effect on the labor market of macroeconomic shocks such as the transition to a market economy.<sup>1</sup>

There are already some studies on the business environment of the European and Central Asian (ECA) countries, but they are all, to my knowledge, based on surveys and restricted to specific regions or countries. The most important survey is the Business Environment and Enterprise Performance Survey (BEEPS) undertaken by the World Bank and the EBRD, which explores the opinion of a sizeable number of firms' managers. Some examples of papers based on this survey are the summary of results written by Fries et al (2003), Broadman et al (2004) who use the BEEPS data and case studies to suggest institutional reforms for investment growth in SEE countries, and Bastos and Nasir (2003) who use the survey results to explore the impact of the investment climate on firm productivity. The Foreign Investment Advisory Service (FIAS) uses responses of private investors, government officials, policymakers and professionals to assess the administrative barriers to foreign investment in Croatia. The Global Entrepreneurship Monitor of Croatia (2002), on the other hand, uses responses to a questionnaire of entrepreneurs and experts to evaluate the business environment of the country. Anecdotal evidence, case studies and the opinion of the IMF teams in the region are used by the papers of Vandycke (2003) and Shiells (2003) to assess the investment climate in the Commonwealth of Independent States (CIS) countries.

The aim of this paper is threefold. First, it constructs a set of indexes meant to capture the quality of the institutions affecting firm entry and expansion in all European and Central Asian countries for which hard data is available. Second, the paper identifies which of those institutions have the largest impact on private sector employment creation. For that purpose we perform a multivariate regression analysis using the business environment summary indexes as explanatory variables. Results will be dependent on how far the country is in its transition effort to a market economy. Third, in light of the empirical results the paper evaluates the weaknesses and strengths of the business environment in European and Central Asian transition economies. The aim of the exercise is to help policy-makers to focus on the most effective market reforms to enhance firm entry and growth and, therefore, employment creation.

The paper is organized as follows. The next section defines the business environment and constructs a set of summary indexes to capture its quality. Section 3 investigates the impact of the investment climate on labor market outcomes by means of multivariable

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<sup>1</sup> Lopez-Garcia (2002) estimates for the case of Italy that the effect on unemployment of the shock resulting in a large shift of workers from the agriculture to the service sector doubles when the bad quality of the institutions governing firm entry are taken into account.

quantitative analysis. The variable to be explained is the evolution over the 90s of the employment creation in the private sector. The explanatory variables are the interaction between the transition shock and the business environment indexes constructed in the previous section. The idea is that the response of the labor market to the transition shock depends on the set of institutions shaping the business environment. This exercise will show which institution or group of institutions is most important in average for employment growth.

Section 4 uses the estimation results to evaluate the business environment in European and Central Asian countries. We can calculate the contribution of each business environment institution to the service employment creation of the period for the set of variables for which there are complete data: The EU transition economies and two CIS countries, Ukraine and Russia. This analysis shows what institution or set of institutions have fostered or penalized employment creation those countries, depending on how far they are in their transition effort. We proceed then to evaluate the business environment of other transition economies using “softer” or subjective sources of information like investment guides or EBRD reports. We pay particular attention to the Central Asian former Soviet republics. Finally, section 5 concludes.

## **2. Measuring the Business Environment**

*What do we understand by business environment?* The life cycle of a firm resembles that of a person. Firms are born; if they survive birth they grow, or live at a comfortable small size; and eventually they die. This simplistic view of the entrepreneurial process can help classifying the regulations, institutions and policies that shape the business environment of one country or region into those that affect mostly the entry, and those that have an impact on the survival and growth of a firm.

Of course life is more complicated, and factors that have a direct impact on the day-to-day operations of a firm, like the tax burden, could have as well an impact on the entry decision. The reason is that expected profits net of taxes might simply not compensate the risks of a new venture and hence prevent entry. Other factors affect all stages of the firm cycle, therefore it is difficult to assess whether they belong to one or the other category. One example is corruption and red tape which make it costly and cumbersome to register a business and even more so to run it every day. Lastly, there are factors that do not fit in any of the categories suggested above. One of those factors is the bankruptcy law, which determines the direct cost of exit. Although it might be too simplistic, the classification of institutions into different groups, loosely related to the stages of the entrepreneurial process, helps analyzing systematically the context in which firms are created and operate.

What follows is a brief discussion of each of the institutions that shape the investment climate of a country. Although not exhaustive, the list of institutions provided is the outcome of the theoretical and empirical research carried out in the field of entrepreneurship. For a detailed description of the variables used to measure each of those institutions, as well as for an explanation about the construction of the summary indexes please refer to Appendix 2.

### **2.1. The entry decision of entrepreneurs**

*Which are the main barriers would-be entrepreneurs must overcome to create and sustain a new business?*

The two main barriers to firm creation are the administrative burdens on firm creation and the access to finance. Those two are the main obstacles identified by Europeans, according to a periodical empirical study on Entrepreneurship carried out by the European Commission.<sup>2</sup>

### ***Administrative burdens on firm creation***

Administrative burdens on firm creation might have a large impact on the labor market performance of transition economies. Burdens on firm creation have been proven to prevent job creation in the service sector, where firms are smaller and job creation depends heavily on new firm entry. Hence, in a situation of large job destruction in other economic sectors, high administrative costs on firm creation can result in high unemployment. That was the case in Spain and Italy, where many jobs were destroyed in the agriculture sector over the 70s and 80s but the service sector did not generate enough jobs to absorb those displaced workers (Lopez-Garcia 2003).

During the last decade, transition economies have also experienced a large reallocation of workers due to the significant destruction of jobs in privatized companies and in the agriculture and over-staffed industrial sector. Hence we might expect high start-up costs to prevent firm entry and therefore increase unemployment.

Administrative burdens on firm creation refer to issues such as the number of procedures to register a business, the time and cost to undertake those procedures and the minimum capital requirements. However, as explained in Box 1, other “unofficial burdens” such as informal payments or bribes required to get business licenses, can have also a large impact on the administrative entry barriers for new businesses.

#### **Box 1**

##### **What the official data on entry barriers do not show: the case of Romania**

Measurement matters. Different ways of measuring the same concept can yield different conclusions. The case of the start-up costs in Romania is a good example of that.

According to *objective* data from the World Bank, opening a business is easy in Romania: no more than 6 procedures are required to start a business, one can go through the process in less than a month (37 days in average in Europe) and the cost of the process and minimum capital requirements are among the lowest in the ECA countries.

However, when one looks at similar indicators of start-up costs based on *subjective* opinions, in this case of managers of large corporations, the situation is quite different. According to the evaluation given to the sentence “Starting a new business is generally easy” by the Global Competitiveness Report, Romania is one of the countries where starting a business is most difficult (figure 2.1).

The difference between the *objective* and *subjective* indicators could reflect the existence of corruption in Romania, which is not included in any of the objective measures of start-up

<sup>2</sup> Flash Eurobarometer 134 “Entrepreneurship”. Done by EOS Gallup Europe upon request of the European Commission (DG XXIII), 2000, 2001 and 2002. In general, around 70% of the people surveyed agree that the existing administrative procedures are complex and 76% claim that the main problem is lack of available finance.

costs compiled by the World Bank. Indeed, when one looks at the GCR's evaluation of the sentence "irregular additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan applications are very rare" (figure 2.2), Romania along with Turkey occupies the last position.

Hence objective indicators have to be complemented sometimes with subjective impressions and anecdotal evidence to get a complete picture of the business environment in each country.

### *Access to finance*

Another large concern of would-be entrepreneurs is access to finance. External finance, that is, resources other than the entrepreneur's own savings, is often necessary to start a business --one needs to rent office space, buy computers, or maybe test a prototype--. External finance is also important to expand an existing business.

However, entrepreneurs have generally difficulty securing bank loans. The reason is that banks want a positive track record and collateral --something which new firms generally do not have. Although another possible source of finance is risk capital, venture capital funds are invested mainly in the expansion phase of high growth businesses, ignoring the initial stages of firms all together. Besides, the development of venture capital goes hand in hand with that of the stock markets, which are still underdeveloped in transition economies.

A study of the entrepreneurial activity in Croatia<sup>3</sup> found out that business opportunities were exploited mostly by high-income individuals. This finding suggests that potential entrepreneurs are credit constrained. The reasons are the high cost of credit, large collateral required by banks, or lack of credit available to the private sector. Data on those indicators have been used to construct an index of access to finance in each of the countries under analysis. For more details, please refer to Appendix 2.

The lack of development of the financial sector in many of the ECA countries is the consequence, among other things, of: 1) lack of proper regulation of the banking sector; 2) lack of competition in some countries because the State still holds majority ownership in large banks; 3) low deposit rate due to the mistrust of the banking sector and 4) the risk-aversion of banks before new or small businesses.

### *Exit costs*

Bankruptcy costs, and the more elusive stigma of failure, might have a large effect on the entry decision of would-be entrepreneurs. That is the reason why we have included the exit costs in the section dedicated to factors preventing firm entry.

The importance of bankruptcy costs to explain entrepreneurial activity is based on the observed large differences in the perception and the cost of failure between Europe and the US. While around 50% of the Europeans surveyed in an empirical study affirmed that "one should not start a business if there is a risk it might fail", only 25% of North-Americans thought the same.<sup>4</sup> Among the risks most feared are the risk of losing one's property and the

<sup>3</sup> Slavica Singer et al. (2003): What makes Croatia a (non) entrepreneurial country? Global Entrepreneurship Monitor 2002.

<sup>4</sup> Flash Eurobarometer 134 "Entrepreneurship". Done by EOS Gallup Europe upon request of the European Commission (DG XXIII), 2000, 2001 and 2002.

risk of going bankrupt; hence the bankruptcy law might play an important role in preventing firm creation.

Although the cost of failure is difficult to measure, the World Bank has gathered information on the time and cost of going through an insolvency process in each of the countries under analysis. For more details, please refer to Appendix 2.

## **2.2. The survival and growth of new firms**

Entrepreneurs face many obstacles. Complying with administrative regulations and their related costs is one of the most significant burdens. But also the red tape, the degree of flexibility of the labour market or the tax burden constraint business performance.

Institutions affecting the day-to-day operation of businesses are important for two reasons: first, they affect the expected benefits and costs from creating a firm, which are taken into account by would-be entrepreneurs. Moreover, even if they do not prevent entrepreneurship, they might force entrepreneurs into the informal economy, where their prospects of prospering and growing are low. Second, once the entry decision has been taken, they have an impact on survival and expansion –and therefore on job creation-- of existing businesses.

### ***Government interference***

Some governments may impose price controls and cumbersome regulations, carry out over-inquisitive tax inspections and hold or control fundamental sectors of the economy. Another important set of factors may consist in the actions governments are not taking. Some examples are poor enforcement of the law, poor protection of property rights and laissez-faire with respect to bribes and corruption.

For operational purposes, data on government interference has been organized around four big issues: the **quality of the legal system**, **market regulation** (which includes credit and labor market regulations), **size of government** and **corruption**. Please refer to Appendix 2 for detailed definitions of each of those components.

### **Box 2**

#### **Efficient but not independent judicial systems; the cases of Russia and Turkey**

The quality of the *legal system* comprises aspects of the *efficiency* of courts. But it also should take into account the *independence* of the judicial system from political and economic agents and the *protection to property rights*.

The World Bank offers information on issues related to the efficiency of courts to enforce contracts. They are derived from questionnaires answered by attorneys at private law firms. According to that information, courts in Russia and Turkey are more efficient than the European average when dealing with disputes about contract enforcement (figure 2.3).

However, when one looks at the independence from the government, impartiality and integrity of the judicial system --all provided by the 2003 Annual Report of Economic Freedom of the World, a compilation of objective and survey data--, those two countries, precisely, score last in the ECA countries ranking (figure 2.4).

Hence, it is not enough to look at the efficiency of the courts to assess the quality of the legal system. One has also to explore the independence of the courts and the protection to property rights to get a complete picture.

### ***Tax system***

Apart from the level of taxes, potential entrepreneurs may be deterred by the frequency of changes in the fiscal law, which enhances business' uncertainty. Together with the frequent and over-inquisitive tax inspections, this practice results in entrepreneurs spending the bulk of their resources, be them money or time, trying to comply with the tax law rather than to business planning.

Hence both the tax burden and the tax law (transparency and predictability) are important factors affecting the survival and growth of business.

## **3. The Impact of the Business Environment on Labor Market Performance**

A rigorous analysis of how the investment climate affects labor market outcomes requires multivariate regression modelling. Multivariate regressions have an advantage over bilateral correlations, namely, one can control for a range of variables. Hence the average impact of better access to finance on employment performance, for example, can be estimated, *given the value of the rest of the dimensions of the investment climate*. One can also control for country effects, that is, for specific characteristics of each country that are constant over time and are not explicitly taken into account. For a detailed description of the regression model used please refer to Appendix 3.

### **3.1. How do economists explain labor market performance?**

While there is wide consensus on the determinants of cyclical unemployment --namely aggregate demand and aggregate supply fluctuations caused by the demand and supply shocks hitting the economy--, the determinants of the natural rate of unemployment have been at the core of the research agenda of labor economists over the last three decades.

In the 1970s the discussion about the determinants of unemployment was dominated by a "shock story." Supply shocks of the 1970s and 1980s and restrictive macroeconomic policies to fight inflation were blamed for unemployment. But shocks across countries are not likely to vary enough to explain, first, the persistence of high unemployment and, second, the observed differences in labor market performance. The focus then moved to institutions, ignoring shocks altogether. But those institutions in many countries have not varied enough along time to explain properly the unemployment evolution over the last decades.

In consequence, labor economists are turning lately to explanations of unemployment that use the *interaction* between shocks and institutions: shocks can explain the evolution along time of unemployment, and institutions the differences across countries. The argument is that *the institutional setting of a country shapes the impact that otherwise similar shocks have upon the labor market performance*.<sup>5</sup>

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<sup>5</sup> The first economists to propose this idea were Michael Bruno and Jeffrey Sachs (M. Bruno and J. Sachs (1985): *Economics of Worldwide Stagflation*, Cambridge: Harvard University Press). In their 1985 book, *The Economics of Worldwide Stagflation*, they focused on the interaction of the 1970s oil price shocks with the nature of collective bargaining. But it was only after the publication in 2000 of Blanchard and Wolfers' model of equilibrium unemployment that the interaction of shocks with institutions became a popular explanation among labor economists for the unemployment evolution of developed countries. See O. Blanchard and J. Wolfers



Transition economies have been hit by a similar shock over the last decade, namely, a transition shock. But their labor markets have reacted differently. Some countries have managed to go through with low unemployment while others have ended up with a poor employment score. Why is that? The answer is that the impact of the shock depends on whether the institutions of the country are more or less friendly to employment creation.

### **3.2. The dependent variable**

Labor outcomes in this paper will be approximated by the evolution of the service employment rate.<sup>6</sup> The rationale for this is that service employment rate is a good proxy for employment created by the new private sector since it is the only sector increasing its share of employment in all transition countries. It is also where new business opportunities can be mostly found. To separate the effect of economic development from the direct effect of the business environment institutions on the growth of the service sector, we use a corrected measure of service employment rate which controls for the GDP per capita.<sup>7</sup>

Total employment, the sum of private and public employment, has been proven to be less sensitive to the investment climate of a country than service employment. The reason is that public employment responds to factors other than the business environment. Despite the fact that the same applies to the unemployment rate, we will also use the latter as dependent or explained variable to test the robustness of our results.

### **3.3. The explanatory variables**

We will explain the evolution of service employment with the interaction of a transition shock with a set of investment climate institutions.

#### ***Which institutions are we considering?***

The rate of creation of new firms, and therefore job creation, depends on those institutions that shape the business environment where firms operate, described in section 2 of this paper. We intend to explore the impact of each of those institutions on the labor market. The list of institutions considered in the regression model is as follows:

- Administrative burdens on firm creation (start-up costs)
- Cost of going bankrupt (exit costs)
- Access to finance (cost and availability of finance)

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(2000). The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence, *The Economic Journal* 110: C1-C33.

<sup>6</sup> The service employment level comes from the ILO database. It is the sum of the employment in the following sectors: wholesale and retail trade; repair of motor vehicles, motorcycles and personal household goods; hotels and restaurants; transport, storage and communications; financial intermediation; real estate, renting and business activities. Hence we do not include employment in public administration and defence, employment in education, health and social work and other community, social and personal services. The reason is that employment in the latter sectors does not come generally from private initiative, which is the focus of the chapter. In most cases data are from Labour Force Surveys, which ensures comparability. However, for the following set of countries the data source is official estimates: Azerbaijan, Bulgaria, Kyrgyzstan, and Uzbekistan. The service employment rate is calculated as percentage of working age population (15-64).

<sup>7</sup> To control for the economic development we run a regression of the service employment rate against the GDP per capita. The residuals from that regression represent the service employment rate NOT explained by the development of the economy. The residual is what we call the "service employment rate controlled for GDP per capita."

- Quality of the legal system (efficiency and independence of courts)
- Market regulations (credit and labor market regulation)
- Corruption (Perceived corruption level, from Transparency International)
- Tax burden (tax revenue as percentage of GDP)

For a detailed account on the construction of indexes able to capture the quality of those institutions, please refer to Appendix 2.

### ***What shocks are we considering?***

The ECA countries have been hit by a major shock over the last decades: the fall of the communism regime and transition to a market economy. We will use the EBRD transition index to size the shock across countries and to follow its evolution along time.

The EBRD transition index aims to reflect each country's moment in the transition towards a market economy. Hence it deals, among other things, with issues such as the emergence of a private sector, the size of the government and so on, that is, with some of the indicators of the business environment we have considered in section 2. Therefore we could have some multicollinearity problems in the regressions, that is, relationship between explanatory variables which could distort the estimation results.<sup>8</sup>

Partly due to this problem, partly to be able to isolate the impact of institutions from that of the transition shock on the service employment rate, we proceed in two stages: first, we estimate the model *assuming that all countries have been hit by a shock of the same magnitude*. Hence differences across countries are solely due to differences in institutions. Second, we will allow the shock to be of different magnitude in each country in order to estimate the impact of the interaction between the transition shock and the business environment on the development of the service sector. However, we must take the estimation results from this last exercise with caution due to the multicollinearity problem mentioned above.

### **3.4. Estimation results of multivariate analysis**

#### ***Common shock***

To isolate the impact of the institutions on the service employment and unemployment rate from the effect of the transition shock, we begin assuming that the shock has been the same across countries. Hence, if labor market outcomes are different that is solely due to differences in investment climate. The results of the estimation of the regression are shown in Table 1.

Imagine we had a representative country where the investment climate was exactly the average across ECA countries. Then the shock (our proxy for the transition shock) would explain an increase in service employment rate (different from the natural increase in service employment due to economic development) of 0.8 percentage points. The unemployment rate in such a representative country would increase almost 1 percentage point.

But service employment and unemployment have not changed equally across countries after the shock. Since we are assuming, for the moment, that the shock is the same for all countries, *different labor market outcomes must be due to differences in the investment climate*. Business environment institutions that impede the economy to readjust after being hit

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<sup>8</sup> However, even so, the regression estimates will still be unbiased and consistent.

by a shock might increase the negative impact of that shock. That is what the coefficients of the rest of the variables are telling us.

*The two most important variables explaining service employment are the access to finance and credit and labor market regulation.* The importance of those two variables is confirmed by the results of the unemployment regression, although one must keep in mind that institutions that shape the business environment have a smaller impact on total employment or unemployment than on the service (or private) sector.

*The next variable in importance is the administrative burdens on firm creation.* Administrative burdens on firm creation decrease the service employment rate. As expected, administrative burdens on firm creation have less of an important effect on total employment and unemployment. The reason is that they do not affect public sector employment.

As the public sector decreases in size, labor market outcomes will be determined by the strength of the private sector. The estimation results indicate that lower administrative costs to register a business can help creating a healthy and employment-prone private sector.

*Across countries with a similar degree of economic development, those with a lower tax burden enjoy higher service employment rates and lower unemployment.* It is important to control for the degree of economic development, otherwise, and given that more developed economies have in place better mechanisms to collect taxes and a smaller informal sector, the impact of the tax burden could not be properly estimated.

*The existence of an efficient and independent legal system and the perceived corruption level matter for employment outcomes, but their impact cannot be separated from the impact of economic development.* The quality of the legal system increases, and corruption decreases, as the country develops. Hence their effect on the service employment rate is accounted for already by the economic development variable. The importance of the corruption level in explaining unemployment, in table 1 above, seems to confirm that hypothesis, since in that regression the economic development of the country has not been explicitly controlled for. To further confirm it, we have also run the service employment regression *without* controlling for GDP per capita and got a significant negative impact of corruption levels on service employment rate.

### ***Actual EBRD transition shock***

After estimating the model assuming a common shock across countries, which was considered a proxy for the transition shock, we re-estimate everything using instead the EBRD transition shock. Thus, the state of the transition process is now taken into account.

Given the econometric problems identified earlier in the section, the purpose of this exercise is solely to check whether the investment climate institutions have had a larger impact on labor market performance due to the fact that the set of countries under analysis are undertaking a large reallocation process (of workers, skills and jobs).

The table shows the contribution of the institutions to the increase in unemployment over the period 1992-2002 in Hungary, according to the common shock and transition shock regressions.

The unemployment rate in Hungary has decreased 3.5 percentage points over the period of analysis. Of the two models considered, the one where the transition shock is identified performs better.

The transition process Hungary has undertaken so far would have increased unemployment in a country with average institutions 3.8 percentage points. But the

particularly friendly institutional setting of the country explains that, instead, the predicted change in unemployment is of -2.1 percentage points. Why is that? The main reason is Hungary's developed financial market, with easy access to finance. It is also due to the lower than average government intervention in the economy.

What is really interesting from Table 2 is that the *importance of ALL institutions* conforming Hungary's investment climate *increase if the transition shock is taken into account*. In other words, a friendly business environment is especially important in those countries where the private sector needs to create enough employment to compensate job destruction elsewhere in the economy, as it is the case in all transition economies.

#### **4. Evaluating the Business Environment in European and Central Asian Countries**

##### **4.1. EU transition economies**

The particular contribution of each of the investment climate institutions to the labor outcome in the first wave of EU transition economies (with the exception of Estonia due to a lack of data) can be calculated from the estimation results shown in the previous section. The purpose of the exercise is to review what variable or set of variables is hindering the most employment creation in the private sector of the new EU economies.

The way of reading the table above is the following. The first row reflects the actual change in service employment (corrected by GDP per capita, or not explained by economic development). All countries have experienced an increase in service employment, above the one implied by economic development, but Lithuania where the service employment is lower than the one we should expect given its GDP per capita.

The second row shows the change in service employment predicted by the model, given the impact of the time shock, country-specific effect, and investment climate in the country. In average (last column) the model performs quite well, which means that the set of institutions conforming the business environment is quite good in explaining the employment performance in the private sector.

Recall that if all countries had the same investment climate, set at the cross-country average, the impact of the shock on the labor market would be the same because the shock is assumed to be equal across countries (in table 3 that is not the case because the period of analysis is not the same for all countries). If the actual impact of the shock on labor market performance in different ECA countries is different is because institutions vary across countries.

Start-up costs are higher than the cross-country average in all countries in table 3 but in Latvia, Lithuania and Slovenia, which explains its average negative contribution to the development of the service sector. Hungary, where the cost of starting a company is well above the ECA average, is the only country strongly penalized by the high start-up costs. However, given that the estimated coefficient of start-up costs, although significant, is quite small the average contribution of that institution is quite low.

The *main contributor to employment creation in the private sector is the access to finance*. A better access to finance than the average in ECA countries can explain the good private employment performance of Hungary and Poland. Slovenia, another country where the access to finance is quite easy for entrepreneurs, would have performed much better if it was not because of the very strict labor market regulation (one of the most rigid across all ECA countries) and high tax burden. Note that, in average, access to finance can explain

about 40% of the whole increase in service employment predicted by the model. Hence, this highlights the importance of this variable.

Market regulation includes both credit and labor regulation. It is a very important variable to explain the good performance of Hungary, in spite of the high start-up costs, and the bad performance of Slovenia which, as mentioned before, has one of the strictest labor codes in the region.

In summary, the institutions that have contributed the most to the development of the service sector, in average, are in this order: the easy access to finance for entrepreneurs, the low tax burden, low start-up costs and market de-regulation. Table 4 shows the same type of exercise for the next wave of transition economies (Bulgaria, Romania and Croatia).

The model is less powerful predicting the actual service employment change in the next wave of transition countries. That may be due to the fact that corruption and the quality of the legal system play far more an important role in this group of countries than they did for the first wave of countries to become EU members. One possible indication of that is that the model fits best the case of Croatia, the country with the best legal system and lowest corruption level of the three. However, in average (considering all countries in the sample) corruption and the quality of the legal system were not significant, hence they are not included in the table.

Romania is the only country of the three with a service employment change smaller than the one we should expect given its GDP per capita. The model points quite clearly to the very poor access to finance in the country as the institution to be blamed. Indeed, Romania scores last in the access to finance ranking due to its very high real interest rates, high collateral and, above all, lack of protection to creditors (according to the World Bank, Romania is the only country with the lowest possible score in that respect).

Bulgaria has already undertaken reforms to lower start-up costs, reduce corruption and lower the real interest rates as well as increase creditors' protection, all of which explains the better than average performance of that country.

In summary, the institutions that have had a larger impact on the service sector within this group of countries, in average, are in this order: the access to finance, start-up costs, market regulation and tax burden. Note that the tax burden was the second institution in importance within the new EU members while here it is the last variable in importance. Instead, market regulation seems to be a larger problem for the second wave of EU transition economies countries.

## **4.2. Other transition economies**

### ***Russia and Ukraine***

Russia and Ukraine are the two only CIS countries for which complete data is available. We proceed to estimate, as it was done before, the contribution of each of the investment climate institutions to their labor market outcomes. The main purpose is to check whether those institutions have played in these less market-oriented set of countries a similar role as they played in the First wave of EU transition economies.

Although we do not have data on the actual service employment change in Russia and Ukraine, the one predicted by the model is larger in Ukraine than in Russia. Those two countries are particularly comparable because the time shock refers to the same period. So the differences in predicted employment are only due to different institutions. Although start-up costs are lower in Russia than in Ukraine, the access to finance and, above all, the market

regulation (recall, credit and labor market regulation) are worse. Market regulation is actually the key to explain the relatively worse performance of Russia.

*The main problems of Russia and Ukraine, in average, are the market regulation, access to finance and start-up costs, in this order.* The less developed tax-collecting system implies that the tax burden is theoretically lower in that country, which has benefited (according to the model) employment.

It is interesting to note that the importance of some of the business environment institutions varies depending on the degree of development of the economy. Market regulation, for example, becomes more important for (the lack of) employment creation as countries are further away from a market economy. That makes sense since new EU countries, maybe with the exception of Slovenia, have all done their homework with respect to market reforms. Corruption and the quality of the legal system become as well an issue only in less developed economies. Indeed, many of the CIS countries have introduced new commercial laws complying with western standards. However, the implementation of those laws is encountering difficulties given the widespread corruption, lack of know-how and independence of the judiciary system.

The other noticeable difference between the First wave of EU transition economies and Russia and Ukraine is the role of the tax burden, which only is a problem in those countries with a proper tax administration and tax-collecting infrastructure in place. It is, obviously, a secondary problem in countries where the informal sector is large or tax fraud extended.

Although the access to finance is, with little changes, the most important institution to explain employment outcomes, it comes in second place in the set of less reformed economies. Market regulation and corruption are the big issues in those countries. But once a certain degree of market reform has been achieved, as it is the case of the EU transition countries, access to finance becomes the key variable to explain employment differences. Indeed, the development of the financial sector and easy access to finance can explain about 40% of the private employment creation, according to the model, in the first wave of EU transition economies. On the other hand, the poor access to finance in Bulgaria, Croatia and, above all, Romania is the main factor behind their poor development of the private sector.

### ***Central Asian republics***

The previous section has analyzed with certain detail what should be done to improve the investment climate in the group of most advanced transition economies. However, we have seen that what needs to be done varies depending on how far a country is from a market economy. For that reason, it is important to evaluate as well the business environment of the least reformed group of countries according to the EBRD transition index shown in figure 4.1, the Central Asian transition economies: Kazakhstan, Kyrgyz republic, Uzbekistan, Tajikistan and Turkmenistan.<sup>9</sup>

Unfortunately, due to the lack of appropriate data we cannot perform for that group of countries a quantitative analysis as the one above in all countries. What we can do, however, is a benchmarking exercise to identify the main weaknesses and strengths of their business

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<sup>9</sup> There are, however, large differences among the countries of this region. Probably the most advanced nations, in terms of implementing the principles of a free-market economy, are Kazakhstan and the Kyrgyz Republic. In the other side of the spectrum one can find Uzbekistan and Turkmenistan, where private business is virtually non-existent.

environment. We will always present the average value of the index for the countries with data within a certain region: Central and Eastern Europe (CEE), Southern and Central Europe (SEE), the Commonwealth of Independent States (CIS) and those CIS countries belonging to the Central Asian region (CA).<sup>10</sup> When no other source is available, like in the case of Tajikistan and Turkmenistan, we will resort to “softer” sources of information such as investment guides, BERD reports and the like.

The set of institutions analyzed will be those found to be important in the empirical analysis of the previous section. The order of analysis corresponds to the order of importance of those institutions in Russia and Ukraine, the two CIS countries with complete hard data and, therefore, analyzed in depth.

### ***Market regulation***

According to the empirical analysis, the first variable in importance with regard to employment performance in the least advanced group of countries is labor and credit market regulation. Although in all ECA countries markets are more regulated than in the US new EU members tend to have less regulated markets than CIS and Turkey (Figure 4.2). The exception is maybe Slovenia, the EU transition economy that fares worst in the index.

On the other extreme of the spectrum, market regulation in CIS countries is regarded as inconsistent, not transparent, hard to keep track of (in some countries new regulations are not published) and cumbersome, which can help explaining the large size of the informal economy in some of them (Figure 4.4).<sup>11</sup> According to reports from the EBRD, Uzbekistan and Turkmenistan have made limited progress in privatization and structural and institutional reforms since it seems that the government is generally unwilling to sell controlling interest in enterprises. On the other hand, among the Central Asian republics, Kazakhstan has made important progress and is the lead reformer within the CIS group, although still well behind the average standards set by the new EU transition economies.

### ***Corruption***

Corruption is closely related to excessive regulations, and it has been shown to be a severe obstacle to business formation and growth, as well as to job creation in some countries. Given that corruption looms large in ECA economies, its negative impact on employment is likely to be substantial. Even the countries belonging to the first wave of new EU countries, where corruption is least widespread among ECA countries, are perceived as much more corrupt than EU15. Corruption is a severe issue in non EU transition economies (including EU accession countries) as it is in Turkey, and is perceived as widespread in CIS, especially in Central Asian republics (Figure 4.3).

Indeed, despite severe penalties and the prosecution of corruptors, bribery is widespread in Central Asia, being the most common form of corruption, especially in areas of government procurement, transfers and approvals and business-related services. This explains the large size of the informal sector (Figure 4.4) in this group of countries. Businesses operating in the grey economy have no access to credit or to public subsidies and are, in average, smaller. Hence, they have much lower probabilities of growing. It is therefore

<sup>10</sup> As far as possible we also include in the rankings the European average (for country grouping please refer to Appendix 1) and the United States.

<sup>11</sup> According to the World Bank, the informal economy in Georgia and Azerbaijan is about 60% of GNI (data for 2003). In Central Asian countries the percentage is about 40%.

imperative to easy regulations and inspections so firms find it worthwhile to emerge to the legal economy.

### ***The legal system***

We have seen that firm expansion and job creation are supported by an efficient legal system. The legal structure and security of property rights in ECA lag behind those in the US or EU15. The legal system is most developed in EU transition economies, less so in other European transition economies, and least developed in CIS and Turkey (Figure 4.5). Strengthening the legal system, that is, ensuring greater security of property rights, improving contract enforcement and improving the efficiency of dispute resolution will advance the investment climate in the group of least market-oriented countries and thus be conducive to employment generation.

Although there is no proper data for Central Asian countries, the EBRD claims that the main problem in the region is that courts and institutions which implement and administer the new commercial laws are not independent of the government, remain subject to political influence and are corrupt. Moreover, transparency in the application of laws is a major problem and the complex and sometimes contradictory norms hinder the functioning of the legal system. Contract enforcement is also relatively poor. Investment guides highlight that Kazakhstan's commercial laws are in pair with those in other CIS countries, although not so much their implementation. On the other hand, according to the EBRD, in Tajikistan the problem of corruption in the judiciary and the lack of implementation of the new laws are among the most serious constraints on the country's transition to a functioning market economy.

### ***Access to finance***

Maybe this is one of the areas where differences among the regions are largest (Figure 4.5b). Generally, access to finance is better in EU transition economies than in SEE, CIS and Central Asia. The relative good position of Azerbaijan is explained by a maximum creditors' right index, according to the World Bank. However, contrary to what the index may convey, the banking and capital markets of Azerbaijan are very underdeveloped as shown by its very low credit to the private sector. This is something common to all CIS countries with the exception of Kazakhstan, a Central Asian country who is moving rapidly towards adoption of international banking standards. However, even in that country there is still strong concentration (3 largest banks control 60% of total banking assets) and low level of deposits.

In the Kyrgyz Republic, the banking system is at an early stage of development. The government is undertaking a consolidation process of the sector by introducing prudential standards and high minimum capital requirements. The intermediation role of the banks, however, remains very small. Most banks issue short-term credit at very high interest rates and only after important securities is given. According to IMF data, the real interest rate is around 20%.

As far as we can infer from investment guides, the situation is very constraining in Uzbekistan, where the banking system is still closely controlled by the state through a complex set of regulations, and even more in Turkmenistan where state-owned banks account for more than 90% of total assets and the ratio of domestic credit to the private sector is limited to 1.4% of GDP (15% in average in CIS countries).



There are some programs in many of these countries backed by international donors to extend credit to micro-enterprises. But overall, lack of long to medium-term credit at affordable prices is a key constraint to the development of the private sector in this group of countries.

### ***Start-up costs***

While the birth of new firms is critical for job creation, in many ECA countries starting a business is not easy (figure 4.6). After all, in most ECA countries the start-up cost index is less favorable than in the US (where it is least costly to start a business) or in Europe. The EU transition economies fare best on this scale. It is also relatively easy to start a new business in the three Central Asian former soviet republics for which there is data: Kazakhstan, Kyrgyz Republic and Uzbekistan. According to World Bank data, to register a business in Kazakhstan one requires undertaking 10 procedures (7 in Europe and 9 in the CEE average) which take around 25 days, only longer than the US and Latvia. In Kyrgyzstan, the government has set an agency based in the “one-stop shop” model. The cost of the overall process and the minimum capital requirement in the Kyrgyz Republic, however, is still quite high. In those Central Asian republics there are complaints, however, about the transparency of the system, since some regulations are never published or are inconsistent with previous or local regulations.

Cumbersome procedures, unofficial payments required and disinformation about the registration process seems to be the situation in the two Central Asian republics for which there is no World Bank data, Tajikistan and Turkmenistan. The business environment survey conducted by the IFC (2003) states, for example, that 65% of SMEs in Tajikistan face difficulties obtaining comprehensive and reliable information about the registration process and 98% make unofficial payments to complete the regulatory procedures.

### ***The tax burden***

The tax burden has been shown to hamper employment creation mainly in the EU transition economies, where there are in place efficient tax-collecting systems and the informal sector is relatively small. Both the tax burden (figure 4.7) and tax regulation are regularly perceived by firm managers in ECA countries as one of the main obstacles for business (ICA Survey, World Bank).

But not only the tax burden matters. The transparency and inspection system in place are equally important. In the Kyrgyz republic, for example, there are about 19 different taxes that involve complex and time-consuming accounting. Transparency is a problem since tax rates and regulations are seldom published. That along with draconian and over-inquisitive tax inspections could explain that many businesses find it worth-while to go underground.

## **5. Conclusion**

The importance of new firm creation for job creation in the transition economies has introduced the urge to improve the framework in which firms operate. This paper aims to help policy-makers to assess which of the institutions shaping the business environment are most important to help job creation and, therefore, reduce unemployment.

To achieve that aim we have first defined and quantified what we understand by business environment. For operational reasons we have grouped the institutions affecting entrepreneurship into two groups: those institutions affecting firm entry and those affecting

business survival and growth. Indexes combining diverse information for each of those institutions were constructed. Accordingly, firm entry conditions depend on the start-up and exit costs as well as on the access to finance. Firm survival and growth depend on the size of the government, ability of the legal system to enforce contracts and protect property, market regulations and corruption. The tax burden was also considered to have an impact on the day-to-day operations of business.

After defining what we understand for business environment, the next step was to analyze the relationship between its different dimensions and the labor market performance. To control for other variables and estimate the impact of each of the institutions on employment creation, we run a multivariate regression using the interaction of the institutions with the transition shock as explanatory variables. We aimed to find whether countries with a friendlier business environment were able to go through the transition process with a better labor market performance.

The results of the multivariate analysis point at the access to finance, market regulation and start-up costs as the main contributors to employment creation in the private sector and, hence, to a lower unemployment rate. However, one of the most interesting and important results of the paper is that the relative importance of the different business environment institutions varies depending on how far the country is from a market economy. That is, the results of the paper clearly reject a “one policy for all” approach. Within the new EU countries, those most advanced in the transition process, easy access to finance for entrepreneurs and a low tax burden are the two variables that, in average, contribute the most to employment creation in the private sector. Then one has to consider in order of importance the administrative burdens on firm creation and credit and labor market regulation.

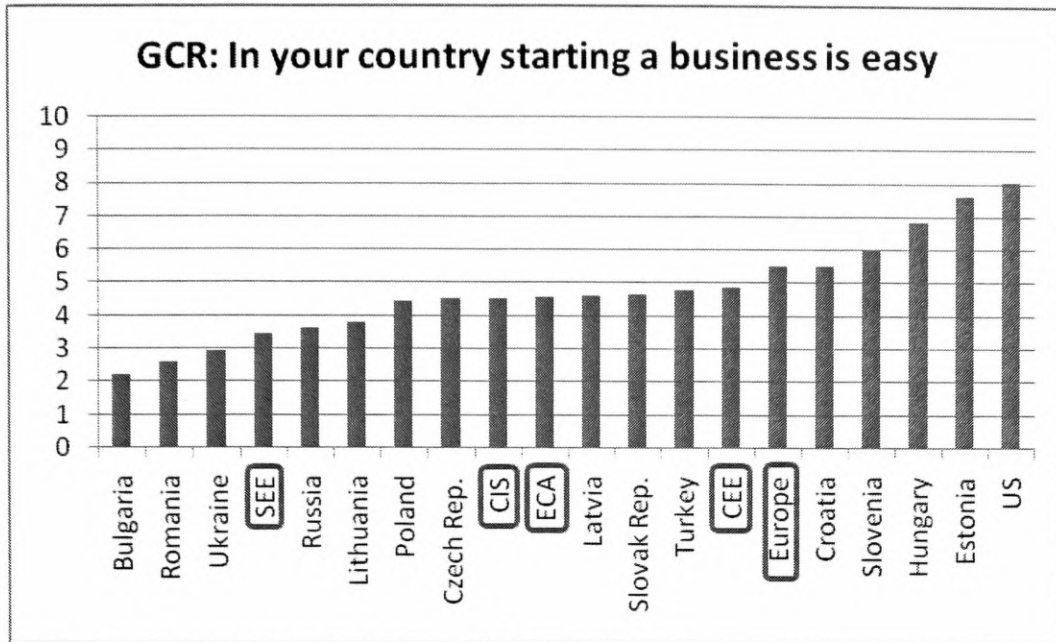
The model corresponds less to the data of Russia and Ukraine, the only two CIS countries we could analyze in detail. The reason is the importance of corruption and bad quality of the legal system in those less developed countries. We find that the further away the countries are from a market economy, the more important the quality of the legal system, lack of corruption and market de-regulation become. Hence, the priority in the countries belonging to the Commonwealth of Independent States, especially the Central Asian republics, the least developed of them all, is to strengthen the court system, guarantee the independence of the judges and reduce corruption. Market reforms come next. It is also important that regulations are transparent and stable along time, making it easy for businesses to comply. Lastly, access to finance of private firms has to improve reducing the presence and influence of the State in the banking sector, increasing deposits and normalizing the flow of credit to the private sector.

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**Figure 2.1**

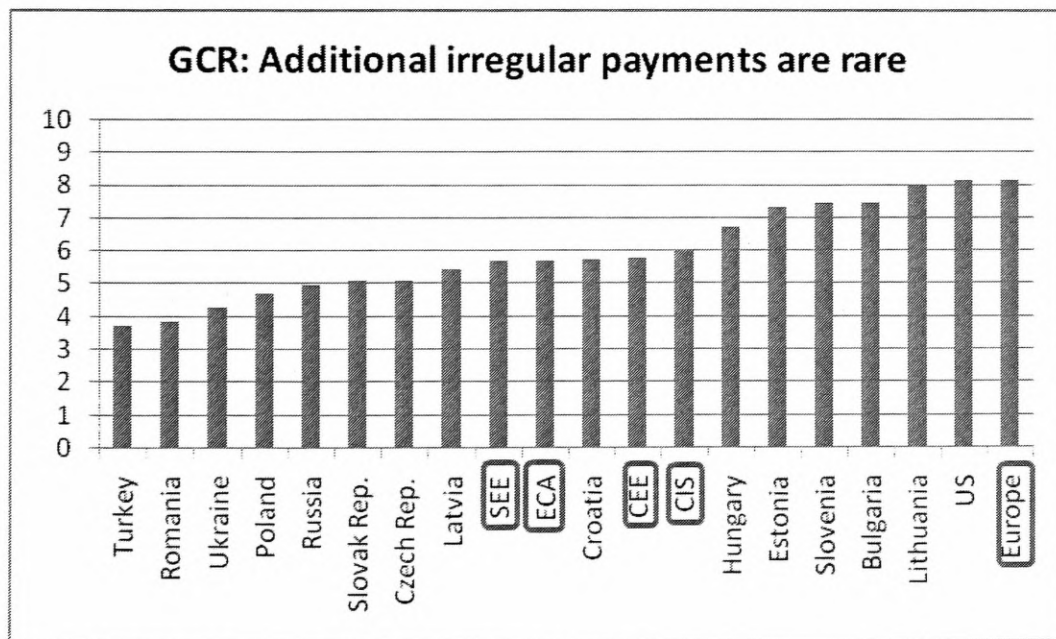
*Subjective perception of how easy (or difficult) is to start a business*



Source: Global Competitiveness Report (2002)

**Figure 2.2**

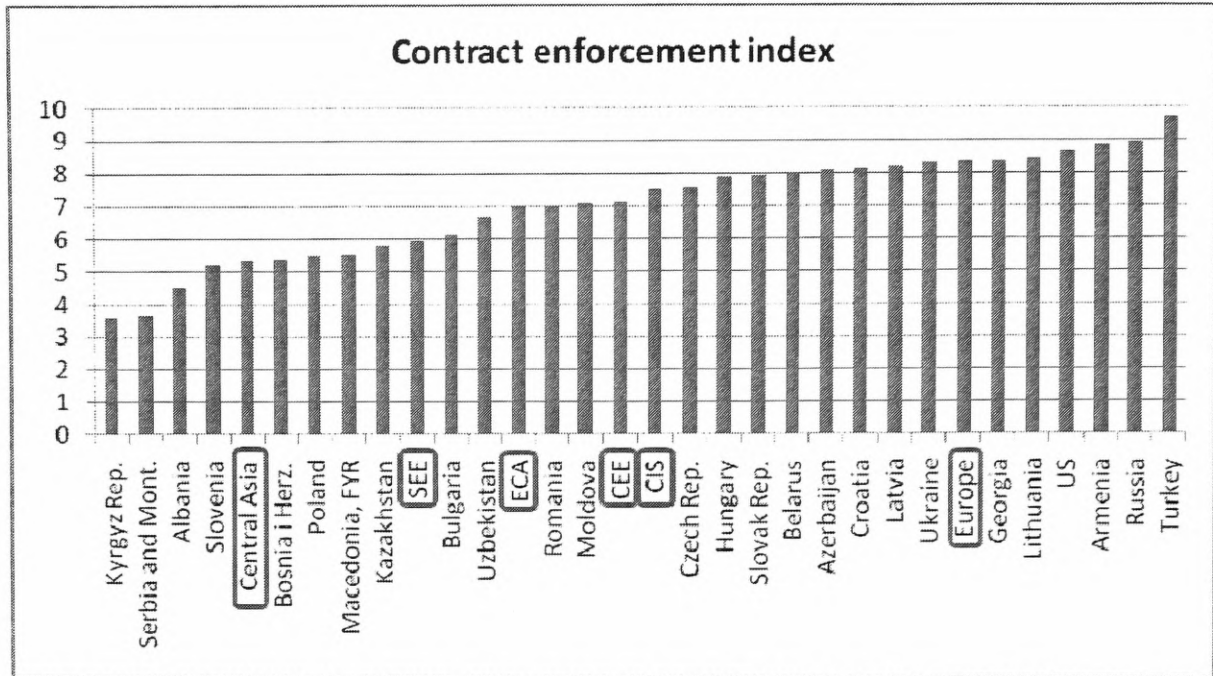
*Bribes are rarely needed to obtain business licenses*



Source: Global Competitiveness Report (2002)

**Figure 2.3**

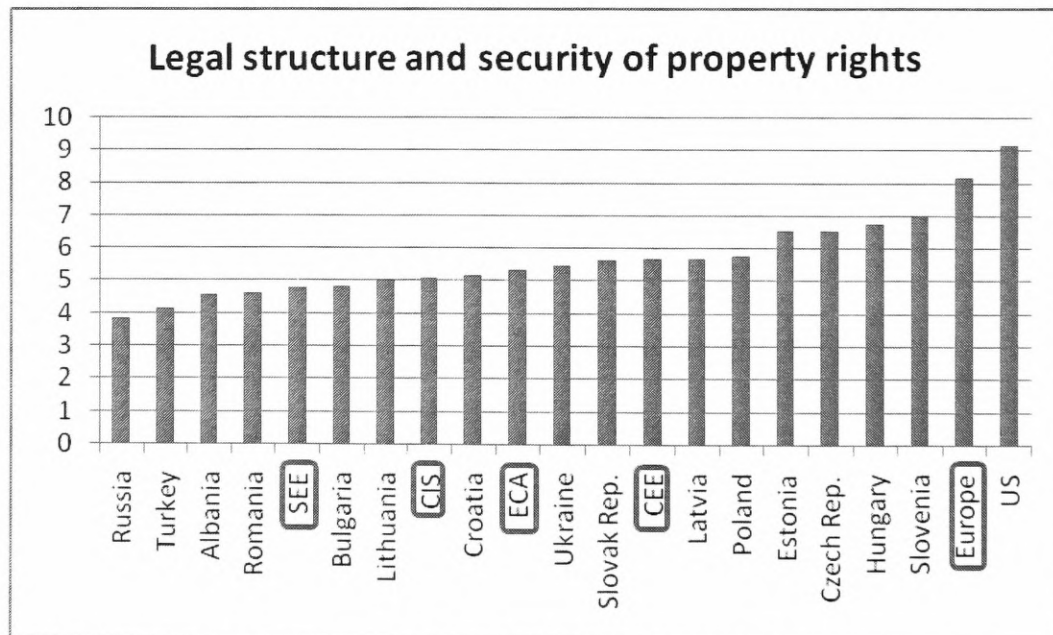
*Ranking of countries according to the efficiency of courts to enforce contracts*



Source: World Bank, Doing Business Database; own calculations

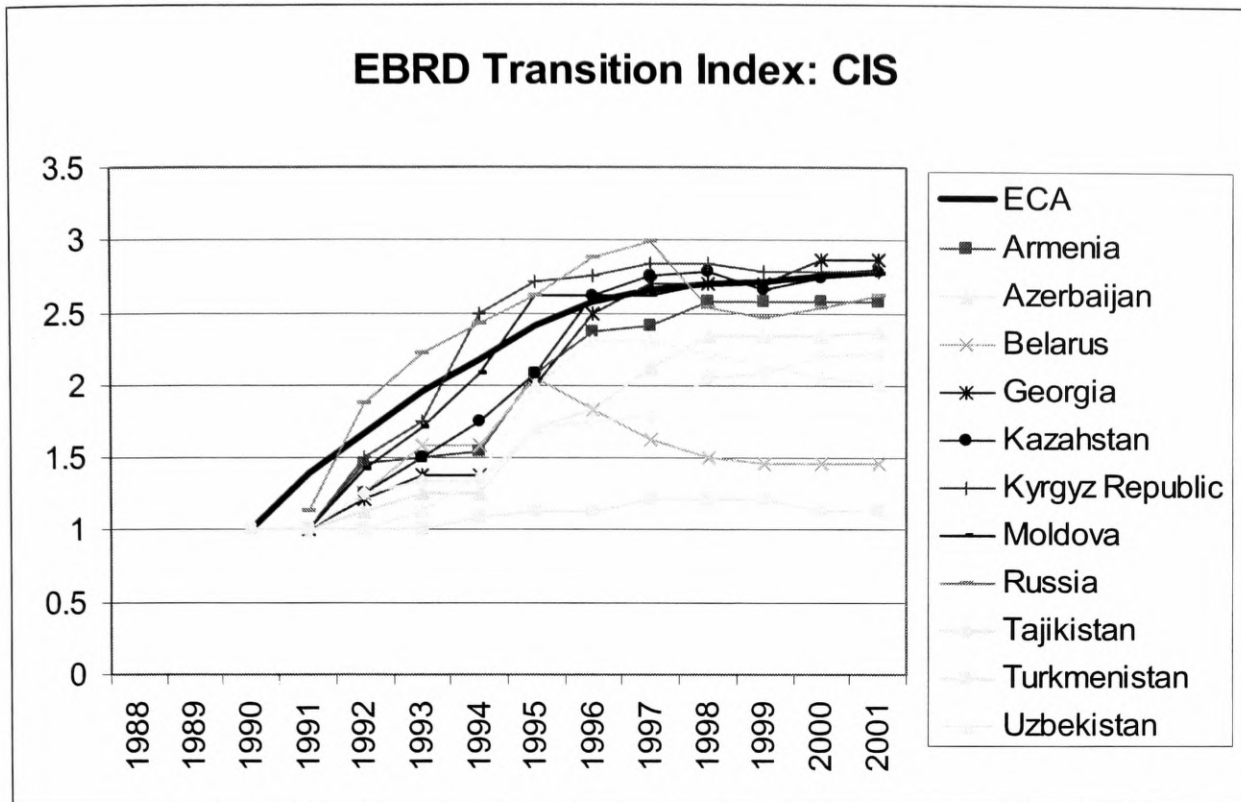
**Figure 2.4**

*However efficient, courts do not have to be necessarily independent*

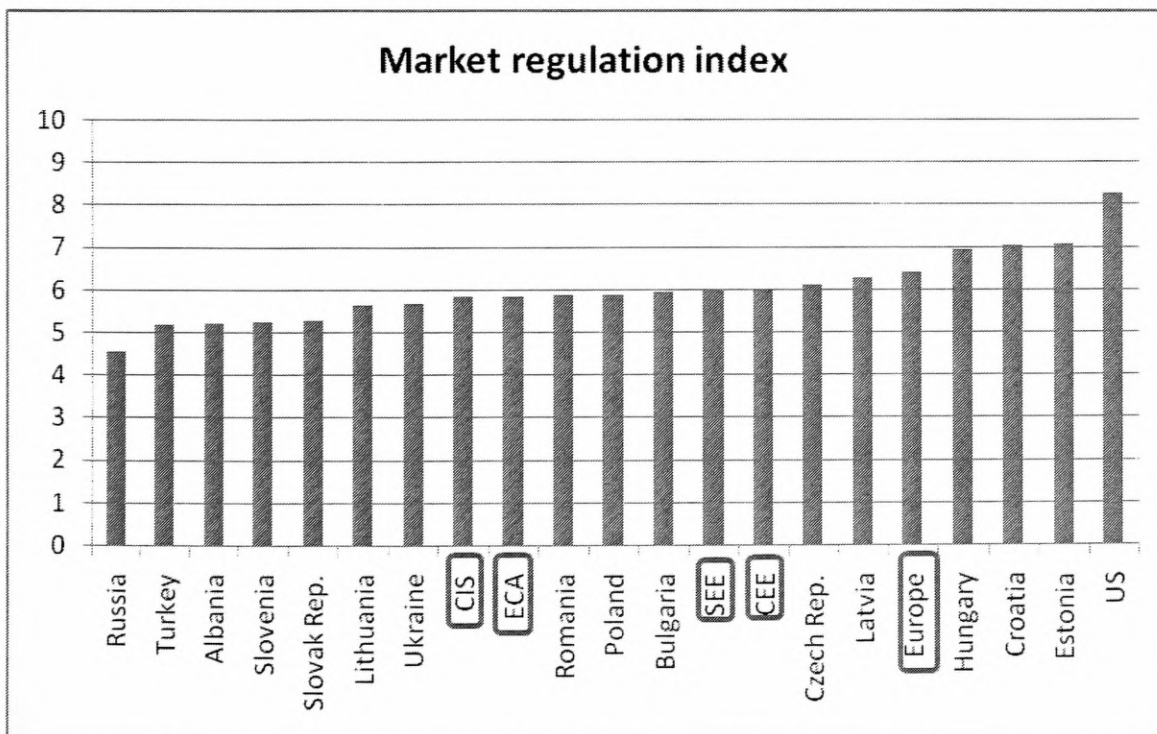


Source: Economic Freedom of the World, 2003 Annual Report

**Figure 4.1**  
EBRD transition Index: Commonwealth of Independent States



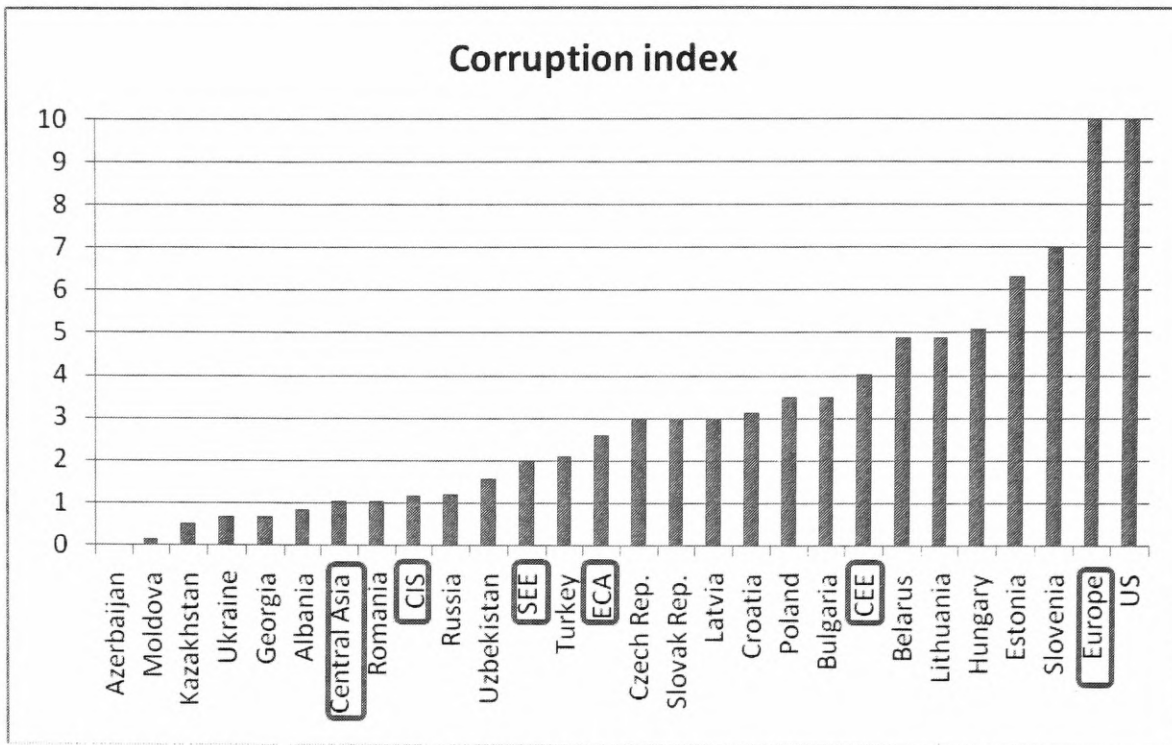
**Figure 4.2**  
*Markets in ECA tend to be overregulated which is likely to hamper job creation*



Source: Economic Freedom of the World 2003; own calculations.

**Figure 4.3**

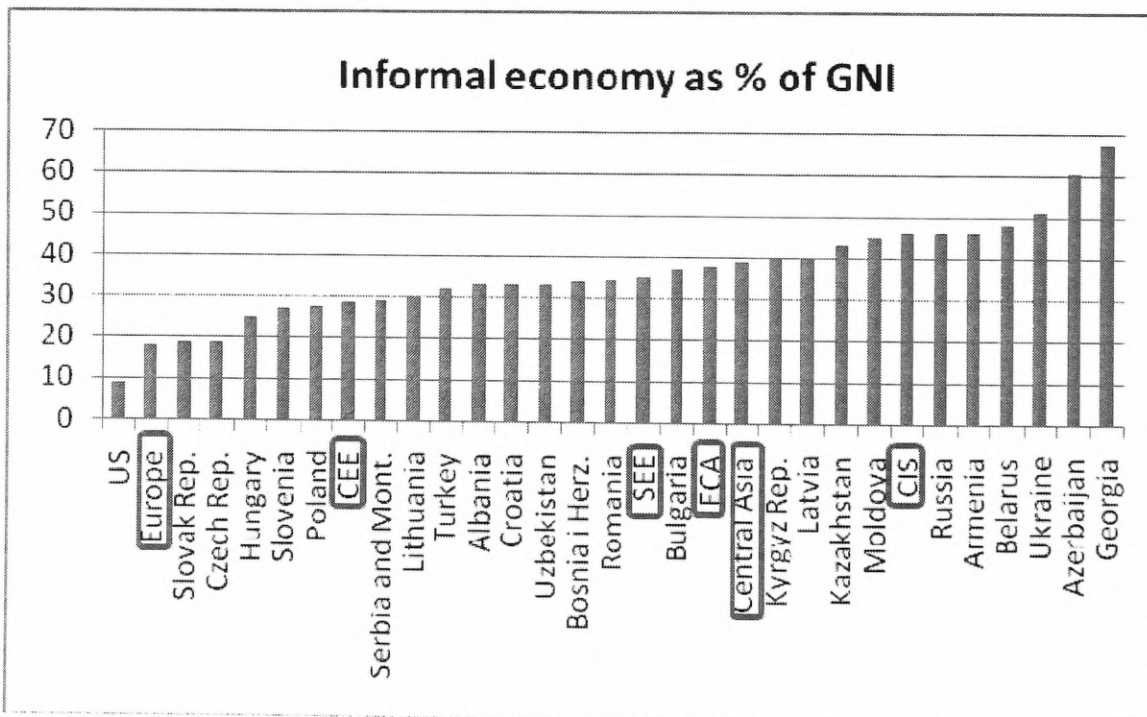
*Corruption is high in ECA raising the costs of doing business and inhibiting job creation*



Source: Transparency International (2002)

**Figure 4.4**

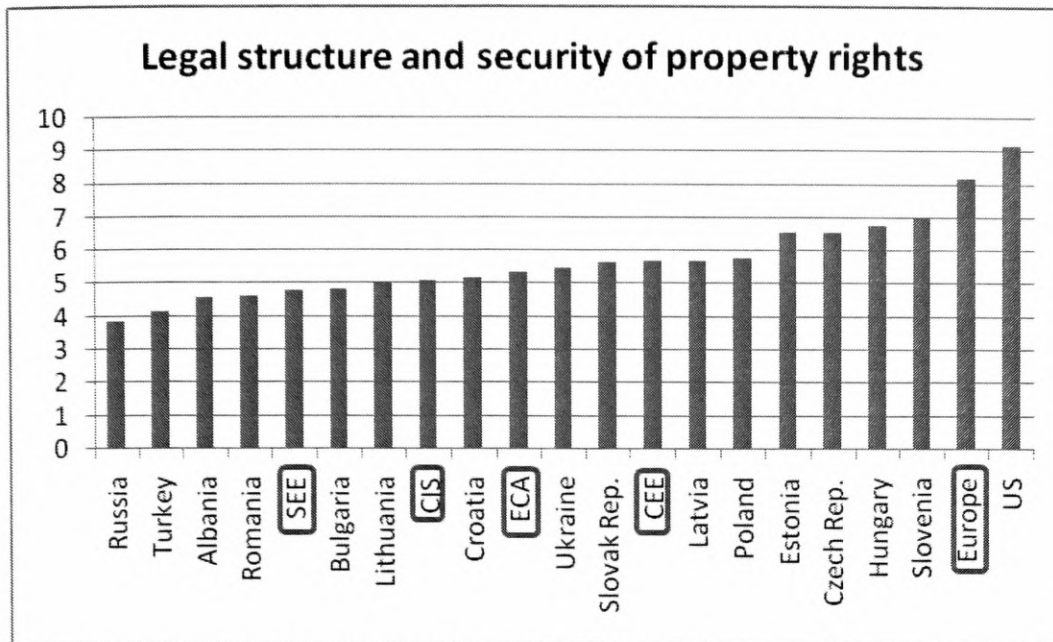
*Informal Economy as % GNI (WB: Doing business 2003)*



Source: Doing Business 2003, The World Bank

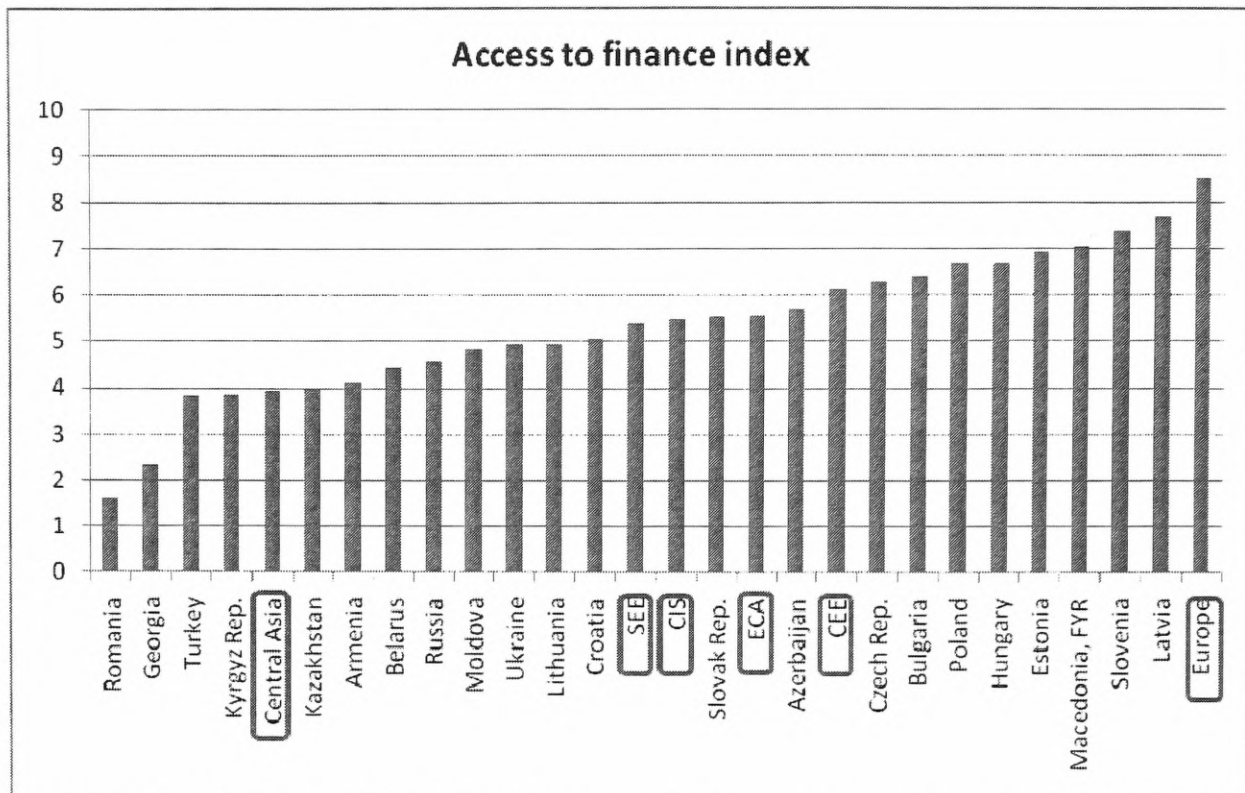
**Figure 4.5**

*ECA countries lag behind as regards the efficiency of independence of the judicial system and protection of property rights*



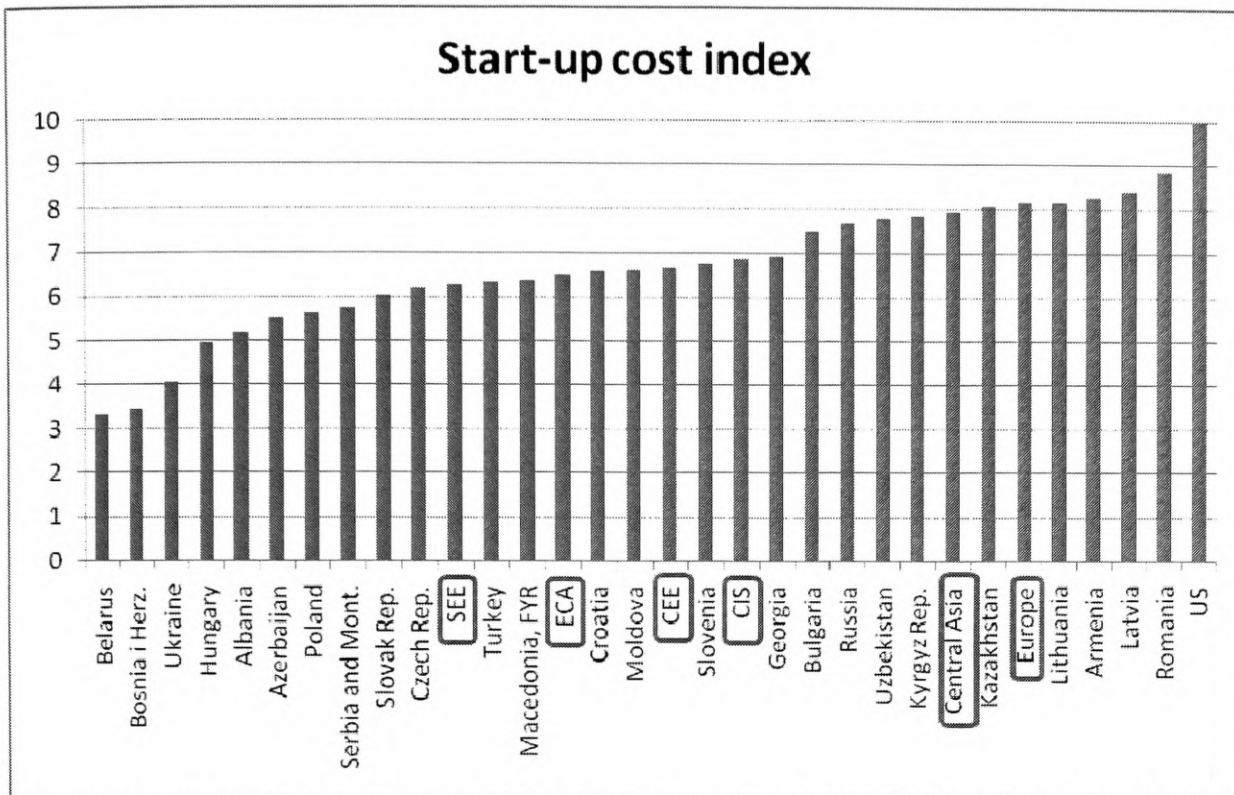
Source: Economic Freedom of the World (2003)



**Figure 4.5 b***Good access to finance is one of the main contributors to a good employment performance*

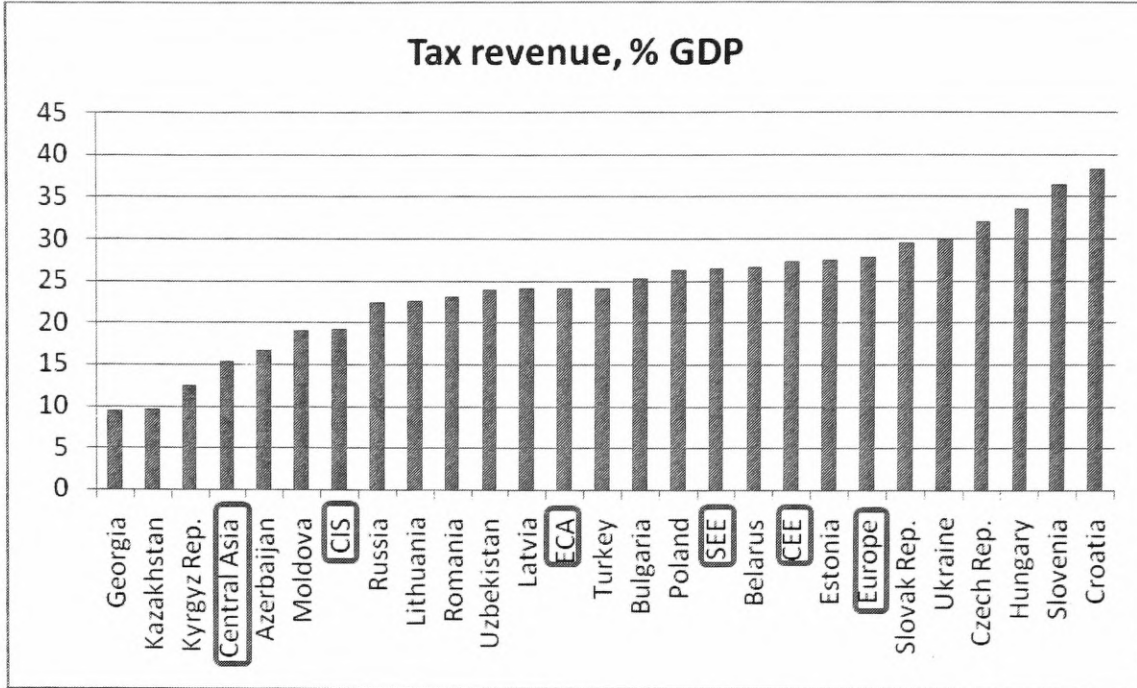
Source: World Bank, World Development Indicators (2002); IMF WP/99/54; and own calculations.

**Figure 4.6**  
*While firm formation is key for job creation, starting a business is not easy in many ECA countries*



Source: World Bank, Cost of Doing Business Database (2003); and own calculations

**Figure 4.7**  
*The tax burden becomes a problem to firm survival and growth as countries advance in their transition to a market economy*



Source: World Bank, World Development Indicators (2002)

**Table 1**  
Estimation results

<i>Type of regression: Common shocks across countries assumed</i>				
Dependent variable	Service employment (corrected)		Unemployment	
	Coefficients	t-statistics	Coefficients	t-statistics
Shocks (given average institutions)	0.8%		0.85%	
Start-up cost index	-0.29*	(-1.45)	0.09	(0.26)
Exit cost index	-0.003	(-0.28)	-0.006	(-0.24)
Finance index	<b>0.41**</b>	(2.95)	-0.18	(-0.42)
Legal system index	-0.04	(-1.13)	-0.05	(-0.86)
Mk. Regulation index	<b>-0.64**</b>	(-2.45)	<b>1.73*</b>	(1.53)
Corruption index	0.06	(0.33)	<b>1.57**</b>	(2.37)
Tax burden	-0.08	(-1.11)	<b>0.43**</b>	(2.35)
Observations	106		104	
Adjusted R-Squared	0.95		0.77	
Non-linear least square estimation				
*significant at 15%				
**significant at 1%				

**Table 2**  
*Contribution of institutions to unemployment increase according to a model with common shocks and a model with identified (transition) shock*

*Unemployment. In percentage of labor force*

Hungary	Regression with time dummies	Regression with transition shock
Actual change in unemployment	-3.5	-3.5
Predicted change by the model in unemployment. Of which:	-1.5	-2.1
Shock	1.9	3.8
Access to finance	-3.4	-8.2
Government interference	-3.9	-4.9
Tax burden	3.8	7.2

**Table 3**

*Contribution of investment climate institutions to service employment change over the last decade in the first wave of EU transition countries*

	Hungary (92-02)	Czech Rep. (92-02)	Slovakia (94-02)	Poland (94-02)	Latvia (96-02)	Lithuania (97-02)	Slovenia (93-02)	Average new EU countries
Actual change in service employment	1.11	3.78	0.66	1.33	1.89	-1.83	0.61	1.08
Predicted change by the model in service employment. Of which:	1.92	1.41	0.42	1.51	1.26	0.13	0.98	1.09
Time shock	1.42	1.33	1.08	1.08	0.44	0.10	1.33	0.97
Start-up costs	-0.57	-0.15	-0.16	-0.26	0.17	0.03	0.02	-0.13
Access to finance	0.70	0.43	0.02	0.52	0.39	-0.02	1.03	0.44
Market regulation	1.00	0.24	-0.36	0.06	0.14	-0.01	-0.53	0.08
Tax burden	-0.63	-0.44	-0.16	0.11	0.12	0.04	-0.87	-0.26

*Only the significant variables from table 1 have been included in table 3*

**Table 4**

*Contribution of investment climate institutions to service employment change over the last decade in the second wave of EU transition countries*

	Romania (94-02)	Bulgaria (90-01)	Croatia (96-02)	Average next wave
Actual change in service employment	-0.08	2.89	0.36	1.06
Predicted change by the model in service employment. Of which:	0.30	1.64	0.33	0.76
Time shock	1.08	0.92	0.44	0.81
Start-up costs	0.53	0.16	-0.01	0.23
Access to finance	-1.75	0.34	-0.08	-0.50
Market regulation	0.06	0.05	0.34	0.15
Tax burden	0.37	0.16	-0.35	0.06

**Table 5**

*Contribution of investment climate institutions to service employment change over the last decade in Russia and Ukraine*

	Ukrania (90-02)	Russia (90-02)	Average Russia- Ukraine
Predicted change by the model in service employment. Of which:	0.42	0.36	0.39
Time shock	0.81	0.81	0.81
Start-up costs	-0.49	0.18	-0.16
Access to finance	-0.19	-0.31	-0.25
Market regulation	-0.06	-0.64	-0.35
Tax burden	0.36	0.31	0.34

## Appendix 1 Country grouping

For benchmarking purposes we have grouped ECA countries in the following way:

### **CEE (CENTRAL AND EASTERN EUROPE)**

\*First wave of EU transition economies

\*\*Second wave of EU transition countries

Bulgaria\*\*

Czech Republic\*

Estonia\*

Hungary\*

Latvia\*

Lithuania\*

Poland\*

Romania\*\*

Slovakia\*

Slovenia\*

### **SEE (SOUTHERN AND CENTRAL EUROPE)**

Albania

Bosnia i Herzegovina

Croatia

Macedonia (FRY)

Serbia and Montenegro

### **CIS (COMMONWEALTH OF INDEPENDENT STATES)**

\* Central Asian republics

Armenia

Azerbaijan

Belarus

Georgia

Kazakhstan\*

Kyrgyz Republic\*

Moldova

Russia

Tajikistan\*

Turkmenistan\*

Ukraine

Uzbekistan\*

### **EUROPE**

EU-15 +Norway, Switzerland and Luxemburg when available.

## Appendix 2 Investment Climate Indicators

### *Start-up cost index:*

Data came from the World Bank database “Doing Businesses”. They are based on the work of Djankov, Simeon, Rafael La Porta, Florencio, Lopez-de-Silanes and Andrei Shleifer who measured the start-up costs of a new firm registered legally as a limited liability society and owned by residents in the country. Those costs include the number of procedures one has to undertake to register the business, the time the whole process takes, the minimum capital requirements and, finally, the monetary cost of the registration process. Both the costs of undertaking the process and minimum capital requirements are measured in percentage of GNI per capita.

To construct it we have followed the methodology used in the annual reports of the “Economic Freedom of the World” and the “Human Development Index” among others.<sup>12</sup> The Human Development Index is developed by the United Nations Development Unit. Each component (procedures, time, cost and minimum capital) is re-scaled to be between 0 and 10; 10 is assigned to the best country and 0 to the worst. Then an unweighted average is taken to calculate the overall indicator. There is data for Europe, the US and all ECA countries, with the exceptions of Estonia, Tajikistan and Turkmenistan.<sup>13</sup>

### *Access to finance*

The access to finance index is a summary of the following variables: ratio of domestic credit provided by deposit money to GDP (World development Indicators, World bank); interest rate spread and real interest rate (both from the Word Development Indicators, World Bank); ratio of deposit coverage to GDP, which is used by the IMF as a proxy to collateral<sup>14</sup>; and the World Bank’s measure of creditors’ protection index. The World Bank’s Doing Business database reports an indicator of creditor rights in insolvency, based on the methodology of La Porta and others (1998). The indicator measures four powers of secured lenders in liquidation and reorganization, such as priority access to the proceeds from liquidation. The aggregate creditor rights index sums the total score across all four variables. A minimum score of 0 represents weak creditor rights and the maximum score of four represents strong creditor rights.

Each of those variables has been re-scaled so the best is assigned the number 10 and the worst 0. The overall indicator is a simple average of all components.

### *Exit costs*

The World Bank’s database “Doing Businesses” is one of the first attempts to measure in a comparable way the exit costs. Members of the International Bar Association’s Committee on Insolvency and participating law firms or bankruptcy judges from around the world were sent a questionnaire enquiring about the number of procedures, time and cost of the process, as well as about the preservation of the priority rule to secured creditors and the efficiency of the outcome of the bankruptcy process. The index captures the summary

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<sup>12</sup> James Gwartney, Robert Lawson and Neil Emerick: Economic Freedom of the World Annual reports. The Fraser Institute, Canada.

<sup>13</sup> See appendix 1 for country grouping

<sup>14</sup> Garcia, Gillian (1999): „Deposit insurance: a survey of actual and best practices“ IMF WP/99/54



indicator “*Goals of insolvency index*” which measures whether the insolvency law achieves its goals successfully. The higher the index, the more successful is the system.

### ***Market regulation***

This is an unweighted average of the credit market and labor market regulation indexes provided by the Economic Freedom of the World’s Annual Report.<sup>15</sup> The credit market regulation captures issues such as the percentage of deposits held in privately owned banks, the degree of competition from foreign banks, the extension of credit to private sector and the interest rate controls. The labor market regulation index comprises the impact of minimum wages, hiring and firing practices, union coverage and the effect of unemployment benefits on the incentives to work. Please keep in mind that the Economic Freedom of the World indexes are constructed from hard data and survey data (such as the Global competitiveness Report). Hence there is room for subjective interpretations.

### ***Quality of the legal system***

This variable results from the multiplication of the World Bank’s objective information on the efficiency of the courts in enforcing contracts and the subjective evaluation of the 2003 Economic Freedom of the World of the independence from the government, impartiality and integrity of the judicial system.

The World Bank’s database “Doing Business” has information on issues related to enforcing contracts derived from questionnaires answered by attorneys at private law firms. The questionnaires cover the step-by-step evolution of a debt recovery case before local courts in the country’s most populous city. It covers issues such as the number of procedures required, duration and cost of process as well as an index of the procedural complexity of contract enforcement. We have summarized the four dimensions related to contract enforcement (procedures, duration, cost and complexity) in a unique index following the same methodology as before, that is, assigning a 10 to the best country, a 0 to the worst and then taking the average.

### ***Size of the government***

The size of government is approximated by the output supplied by State-Operated-Enterprises and government investment as a percentage of GDP. The hard data come from the Economic Freedom of the World 2003 annual report.

### ***Corruption Perception Index***

The Corruption Perception Index is constructed by Transparency International. The data refers to 2002 and ranks the countries according to the degree in which corruption is perceived to exist among public officials and politicians. It draws on 15 different polls and surveys from nine independent institutions.

### ***The tax burden***

Tax revenue as percentage of GDP. It comes from the World Development Indicators of the World Bank.

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<sup>15</sup> The following set of countries is excluded from the Economic Freedom Index: Kyrgyz Republic, Serbia and Montenegro, Bosnia, Macedonia, Kazakhstan, Uzbekistan, Moldova, Belarus, Azerbaijan, Georgia and Armenia

### Appendix 3 The regression model

As we stated before, Blanchard and Wolfers explain the evolution of unemployment along time and across countries by the different impact of shocks due to the specific institutional framework of countries. To capture the interaction between shocks and institutions, the simplest model is as follows:

$$u_{it} = c_i + d_t(1 + \sum_j \gamma_j X_i^j) + \epsilon_{it} \quad (1)$$

where  $u$  is the unemployment or employment rate in country  $i$  at time  $t$ ,  $c$  are the country dummies,  $d$  are time dummies, that is, unidentified shocks assumed to be equal across countries<sup>16</sup>, and  $X$  is the time-invariant value over the period of the institution  $j$  in country  $i$ . What matters in the estimation is not the value of the shock or the institution but the interaction between both of them. This is the most general specification since no specific shocks are imposed; we only assume that a number of shocks over time, of equal dimension across countries, have hit the economies. Hence, it allows isolating the impact of the (different) institutions from that of the shocks.

The next step in the analysis is to identify the shock, that is, to allow the shock to be specific to each country. We do that by substituting the time dummy in (1) by the transition shock, which differs across countries. Once we do that, we can estimate how the different institutional framework of each country has facilitated or obstructed the creation of a new private sector after the fall of the communism.

To estimate the coefficients corresponding to each of the institutions in model (1), we use an unbalanced panel of 28 ECA countries over 14 years: from 1988 to 2002. Unfortunately we have only one year of information for most of the institutions introduced in section 2. It is unfortunate because it would be interesting to explore how the reforms introduced in the business environment over the last decade have affected the capacity of the economy to respond to shocks. Given the data constraint, we have to assume that the institutional framework in which firms have operated over the period of analysis can be adequately summarized by the set of indexes introduced in section 2.

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<sup>16</sup> The first period is left out so it becomes the constant. Therefore the country dummies can be interpreted as the unemployment in the first period.