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PRELIMINARY!

Employment Protection Legislation in Russia: Regional Enforcement and Labour Market Outcomes[1]

(Is Saltykov-Tchedrin's Hypothesis Still Valid?)

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«The stringency of Russian laws is offset
by their non-observance»

(Attributed to M.Saltykov-Tchedrin)[2]

1. Introduction

The famous M.Saltykov-Tchedrin's thesis if still correct has profound political and economic implications. Since the formal laws can be observed or ignored to a different degree, the actual enforcement regime is what shapes incentives and constraints. Stringent laws coupled with weak and discretionary enforcement allow for larger variation in this environment, bringing uncertainty and affecting all aspects of economic, political and social life. This paper is about that segment of the legislation that shapes labour market behaviour and outcomes.

How efficiently the labour market performs depends, among other things, on the design of its institutions, and the employment protection legislation (EPL) rules play here a special role. These regulations introduce a specific tax on firings, shifting the labour demand curve downwards. The tentative negative association between the EPL stringency and labour market performance has become a focus in fast expanding literature that started with the seminal paper of Lazear (1990).[3]

Theoretically, all EPL-related tentative effects seem obvious. However, the existing empirical arguments supporting these claims have been quite ambiguous so far. The regression coefficients for indexes reflecting EPL stringency are often of little significance or even have unexpected sign. There are different reasons for that and they include various measurement problems, potential wage flexibility, the fact that inflows into employment and outflows from it may mutually offset each other, relatively little variation in the EPL indicators across countries and over time, etc. However, one of the key issues emerging in this context is to what degree the adopted regulations are actually enforced. In other words, what is the gap between the law and its practical application? Even very strict rules embedded in formal laws may have little or no effect at all, if they are widely circumvented or ignored.[4] Most of the studies exploring EPL

[2] A famous Russian writer (1826-1889). He also served as a governor in one of the provinces of the Russian Empire.

[3] E.Lazear. Job Security and Employment. The Quarterly Journal of Economics, Vol.105, No.3 (Aug.1990), 699-726.

[4] Why this gap does emerge is an intriguing issue for study but remains largely outside the scope of this paper. Bad laws? Bad enforcement agencies? Bad culture? A mix of everything?

effects on labour market performance implicitly assume that the EPL compliance is near to complete and therefore all firms bear full adjustment costs incurred by the regulations. This seems to be a very strong assumption for any country but it sounds especially strong and hardly plausible if we deal with developing or transition economies, which are notoriously known for weak institutions and poor law enforcement in general. But if enforcement is far from being complete and the degree of compliance varies widely across regions/cities or segments of firms, then this variation in enforcement/compliance emerges as a factor ultimately causing variation in performance. In such setting, the degree of actual enforcement can emerge as a more important factor shaping labour market performance than the formal stringency of legislated rules which exist on paper only. This is what we may call the "Saltykov-Tchedrin's hypothesis".

This paper looks particularly at Russia. There are a few reasons justifying this choice. First, the EPL stringency in Russia is considered as very high while law enforcement in general tends to be low. Second, Russia is a huge country spanned across 11 time zones with very heterogeneous regions. Institutional capacity to enforce laws and culture of law compliance across regions and sub-populations vary significantly. All this may result in actual enforcement being close to non-existent in some regions and close to complete in others. The emerging variation in enforcement is likely to determine the level of rigidity in regional labour markets, affecting their performance. Third, to best of our knowledge, any EPL effects in transition countries have never been exposed to a rigorous research scrutiny.

The main idea of this paper is to reveal and describe cross-regional variation in the EPL enforcement and to explore empirically whether it is translated in regional labour markets outcomes.

The paper consists of the introduction, 6 sections, and the conclusion. Its logic and structure look as follows. Section 2 briefly overviews the literature on EPL and EPL enforcement. The 3d section discusses properties of job protection and its enforcement in the Russian Federation. Here we analyze nominal and actual stringency in the job protection institutions. In Section 4 we present our research methodology including the set of hypotheses to be tested and the empirical strategy. The data issues make the focus of Section 5. Section 6 deals with cross-regional variation in the EPL enforcement and compliance. Section 7 outlays and discusses the results of econometric estimation of impacts of the EPL enforcement on labour market performance. The conclusion summarizes main findings and suggests further research directions.

2. Literature on the EPL enforcement

The empirical literature dealing with the effects of enforcement is scanty. This shortage can partially be explained by the fact that developed capitalist economies are usually considered as having high degree of law observance and strictly following the rule of law. If the gap between written laws and their actual observance is small, then non-enforcement is hardly to cause any significant changes in LM outcomes at the aggregate level. But even when the law enforcement is widely considered incomplete and variable, measuring to what degree actual enforcement deviates from the normative state is always a difficult issue.

OECD experts recognize the problem but go far short beyond simply stating this fact. "Employment protection regulation, a set of rules governing the hiring and firing process, can be provided through both labour legislation and collective bargaining agreements. In addition, it is important to distinguish these rules from *practice*, which brings in the enforcement dimension. Therefore, when discussing the extent of employment protection, judicial practices and court interpretations of legislative and contractual rules have to be taken into account as well."[5] The World Bank report on job opportunities in the transition economies directly states that "EPL is not fully enforced in many of the transition countries"[6]. It suggests that such countries "need to focus more on credibly enforceable laws as opposed to "paper protections," which at best protect a limited share of formal sector workers."[7] However, the report provides little empirical evidence on this fact.

Large developing and transition economies can be a good example for studying the effects of enforcement. First, any large country is likely to have more heterogeneity in all dimensions and, therefore, more variation in enforcement and compliance than a small country may demonstrate, other things being equal. Second, developing and transition economies are known for having much weaker institutional capacities than the mature capitalists economies do. Weak institutions make a systemic feature and landmark for these economies. Often these capacities within a country depend on constellations of various regional/local political or cultural factors, which transform the country institutional context into a kind of patchwork. These factors may not just contribute to incomplete enforcement but also explain higher variation in the EPL enforcement. All this motivates choosing a developing or a transition economy as a good candidate for more scrupulous study. Not surprisingly, Russia and Brasil are probably among the top choices for such study.

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[5] Employment Outlook, OECD, 2004, p.64

[6] Enhancing Job Opportunities. Eastern Europe and the Former Soviet Union, The World Bank, 2005, p. 211

[7] Ibid, p. 213

2.1 Brasil

To best of our knowledge, the only empirical studies focusing on how variation in the EPL enforcement can influence the labour market efficiency are presented in two recent papers by Almeida and Carneiro. They both look at Brasil and test effects of non-enforcement.

In the first paper, Almeida and Carneiro (2005) investigate how enforcement of labor regulation affects the firm's use of informal employment and its impact on firm performance across Brasilian states. They conclude that in areas with stricter law enforcement firms employ a smaller amount of informal employment. But reductions in the firm's access to unregulated labor are not costless as stricter enforcement decreases average wages, productivity and investment.[8]

In the follow-up paper, Almeida and Carneiro (2007) use city level data to explore an impact of EPL enforcement on unemployment and inequality.[9] Again stricter enforcement increases proportion of formal employment and reduces income inequality. The price paid for this is in higher unemployment and lower formal wage premium.

2.2. Russia

Though Russia has been known for ages as a country where the law observance in general is highly problematic, this issue has never been a subject for in-depth empirical and econometric research by economists. This conclusion holds true whichever area of law we are taking.

There have been few special studies of the EPL enforcement in Russia so far and there is very little evidence on that dimension of enforcement.[10] Vishnevskaya and Kapeliushnikov analyzed differences in enforcement of employment protection legislation (EPL) across regions of the Russian Federation using partially the same data that we do in this paper. Authors reveal substantial differences in the effectiveness of enforcement of EPL across Russian regions. The EPL violations are more often reported in the northern territories and in the ethnic republics. The

[8] R.Almeida and P.Carneiro. Enforcement of Regulation, Informal Labor, and Firm Performance. IZA DP 1759, September 2005.

[9] R.Almeida and P.Carneiro (2007) Inequality and Employment in a Dual Economy: Enforcement of Labor Regulation in Brazil, IZA DP No. 3094, October 2007.

[10] Eamets and Masso suggest that weak enforcement is typical for all countries in the transition including the Baltics, though the latter are already in the EU. Eamets R., J.Masso, Labour Market Flexibility and Employment Protection Regulation in the Baltic States, Discussion Paper No. 1147, May 2004

regions with more diversified economy and with tighter local labour market demonstrate lower probability of reporting EPL violation.[11] Using data from a special survey of judges in all Russian regions, Gimpelson and Kapeliushnikov focused on the role of judiciary in the EPL enforcement.[12] They also underlined significant variation in applying the labour law contingent upon region, firm size, segment of the law. However, the impact of incomplete enforcement on the labour market performance has not been under scrutiny so far and remains to be studied.

Probably, the most close to the issue of variable enforcement and its outcomes is the work by Lambert-Mogilyansky, Sonin and Zuravskaya (2007) who study judicial bias in enforcement of the bankruptcy regulations across Russian regions.[13] As they show, such bias exists, tends to be politically motivated, and matters for performance of firms under re-organization.

3. Labour Market Regulations and Their Enforcement

3.1. Labour Market Regulations in Russia

Major labour market regulations that form the core of EPL are brought together and fixed in the Labour Code (LC) of the Russian Federation. The current LC was enacted in 2002 in order to replace the Code of Laws for Labour which had been in action continuously - though with multiple amendments – since the Soviet times. Despite the fact that the main motivation for reforming the labour code in 2001 was to bring more flexibility in the legislative framework for the labour market and to pull employment relations out of shadow, the new LC had basically inherited all major rigidities, which marked the previous legislation.

What do major EPL provisions say about hiring and firing costs? The LC stipulates that in case of firings on economic reasons employees have to be noticed at least 2 months in advance. Additionally, they have to be compensated with severance pay making 2-3 average monthly wages. For workers living in the Northern and other remote (Far Eastern, e.g.) regions or regions with unfavourable climate conditions, the severance pay can rise up to 6 monthly

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[11] Vishnevskaya N., Kapelyushnikov R. The EPL Enforcement in Russia: Coverage, Dynamics, Interregional Differentiation. Working paper WP3/2007/02. Moscow: State University — Higher School of Economics, 2007. — 80 p. (in Russian).

[12] Gimpelson V. and R. Kapeliushnikov. Applying Labour Law in Russia: Role of Judiciary. CLMS-HSE, 2008 (mimeo)

[13] Lambert-Mogiliansky A., K. Sonin, E. Zhuravskaya. Are Russian Commercial Courts Biased? Evidence from a Bankruptcy Law Transplant. *Working Paper No 99, CEFIR / NES Working Paper series.*

average wages. If monetary costs associated with advance notice are added to the severance pay, the employer's borne costs can make up to 9 monthly average wages (see Table A1 in the Annex). In Russia, firing costs are flat along the tenure. This makes firing a yesterday's newcomer as costly as firing a long time incumbent with large stock of firm-specific human capital accumulated over the long tenure. To remind, even in the OECD countries with the most rigid labour markets (like Italy, France or Spain) the firing costs for short-tenured workers are quite low while these costs increase exponentially for making dismissals of long-tenured employees prohibitively costly.[14] Another important EPL component regulates the use of fixed-term contracts. In Russia, the use of non-permanent labour contracts is legislatively limited with a closed list of allowed reasons. The 2001 LC brought some ambiguity in their legally allowed use providing employers with a hope for more flexibility. However, this hope was offset by new amendments to the LC adopted in 2006, which restricted employers in using more flexible contractual arrangements even further.

We can sum up the picture of the Russian EPL using various integral EPL indices that allow putting it in the cross-country context. Whatever of the existing indices we choose, they confirm that the Russian EPL as it written in the law is among the most stringent in the world. For example, on the OECD EPL scale Russia gets 3,6 scores against 2,0 on average for the OECD countries, 2,4 – for the EC countries, and 2,5 – for the transition countries in general (higher score corresponds to more stringent legislation).[15] The World Bank in its "Doing Business"-2007 survey estimated the rigidity of employment (rigidity of hirings, firings, and working hours) in Russia assigning 44 scores against 30,8 for the OECD.[16] The deviation from other countries emerges even stronger if we refer to indices suggested by Botero et al (2004). In this case, Russia earns a value of 0,83 against the median value of 0,44.[17] This ranks Russia first on the list of the countries with the most rigid EPL.

So far we have discussed the nominal EPL rigidity under the assumptions that these formal regulations are enforced fully and unconditionally. However, this is not always true anywhere and in the transition countries this is often quite far from being true. Assuming that countries differ in law compliance, we can suggest a simple typology presented as Table 1.

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[14] OECD Employment Outlook, OECD, 1999 (?), Paris

[15] See Employment Outlook 2004, OECD, Paris. Estimates for Russia based on the OECD methodology are provided by N.Vishnevskaya

[16] http://www.doingbusiness.org/ExploreTopics/EmployingWorkers

[17] Botero, J., S. Djankov, R. La Porta, F. Lopez-de-Silanes, A. Shleifer. The Regulation of Labor, *The Quarterly Journal of Economics,* Nov. 2004.

Table 1. The Simple Typology of Labour Markets

Formal stringency of EPL rules	Effectiveness of EPL enforcement	
	high	Low
High	1 (Germany, France, …)	**2** (Russia, CIS countries, Brasil,…)
Low	3 (USA, UK, …)	4

This table adopted from Kapeliushnikov (2004) places Russia into a group of countries with very stringent but poorly observed EPL rules. If this characterization is true (and below we will provide additional survey and statistical evidence for that), than the degree of EPL compliance gets crucial importance while formal stringency defines boundaries within which actual compliance may vary. As a result, the degree of actual compliance to laws instead of formal rigidity of legislation may become a major measure of real labour market flexibility. Then the actual degree of enforcement comes to the forefront of research efforts in evaluating the impact of employment adjustment costs.

3.2. EPL Enforcement in Russia: Dimensions and Institutions

In Russia, the EPL regulations are fixed by the federal legislation (the Labour Code) and are uniform across all the regions. However, these rules are applied and enforced always regionally (or even sub-regionally or locally). The degree of EPL observance depends on a complex constellation of regional/local factors, which are usually hard to administer from a remote centre. Among these factors are structural (some sectors of the economy show higher propensity to observe the law than the others, e.g. large firms vs small ones), cultural (culture of law obedience and the association between law obedience and education), institutional (capacity of local institutions to monitor law observance, to detect breach of the law and to punish law breakers), political (in some cases political authorities demonstrate higher propensity for political intervention into EPL enforcement that in others). All this results in the variable gap between formal rules and their actual observance.

Three major dimensions of variation in the enforcement are worth mentioning.

The first one relates to the *coverage of employed population* by the EPL. The EPL in full usually applies to formal sector firms only if they are above a particular size.[18] This takes small firms, individual entrepreneurs, self-employed, and those hired by other individuals (one may consider this heterogeneous group as the informal sector) out of the EPL regulations. High proportion of the informal sector in the economy reduces effective coverage and therefore increases actual labour market flexibility. In the Russian context, the proportion of "large and medium sized firms" (L&M firms) in the total employment can be interpreted as a measure (more precisely, the upper bound) of effective EPL coverage.[19]

The second dimension gauges the *institutional capacity of law enforcement agencies,* which determines supply and quality of enforcement-related services. Here one could mention the density of labour inspectorate offices, the number of inspectors standardized with respect to employment or population in the region. These variables affect ability of the labour inspectorate to undertake inspection missions, to detect law violations, to restore justice, and finally to punish discovered violators. Another indicator relates to the institutional capacity of courts to deal with labour disputes filed to the judiciary system. It can be measured by the number of judges available for trying labour disputes or the total costs of using judiciary for plaintiffs. Low institutional capacity reduces probability of detecting violations and therefore makes non-observance less costly, therefore increasing de-facto flexibility in the labour market.

The third dimension concerns the *demand for enforcement,* which comes from workers (or trade unions) and employers. It corresponds to their propensity to raise voice for better enforcement. The enforcement activity of labour inspectorate and that of courts can be initiated by voice of those whose rights are (or were) violated. For example, the number of legal cases on labour disputes filed to courts is one in the family of such measures. Stronger voice calling for better enforcement increases the degree of EPL observance. The activity of trade unions also partially contributes to better enforcement through the monitoring of law observance, activating workers' voice against EPL violations, providing legal assistance to workers whose rights were violated, etc.

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[18] Boeri, T. and Jimeno, J. (2005), "The Effects of Employment Protection: Learning from Variable Enforcement", *European Economic Review*, 49(8).

[19] So called large and medium sized firms make a special group which is more closely monitored by regulatory and tax authorities. They are also obliged to fill in monthly statistical reports. The strict definition of these firms is quite complex but, roughly speaking, these are largely those employing 50+ workers.

In sum, the probability of being caught for non-compliance depends on institutional capacity of special agencies responsible for monitoring law compliance by firms (detecting and punishing violators by incurring them monetary penalties), and on firm characteristics (such a size, sector, and legal status), and activities of labour market players (employers and employees).

In Russia, such agency called the State Labour Inspectorate (LI) is a part of the Federal Service for Labour and Employment (*Rostrud*). Given the size of the country, the LI has its offices in all regions, and then its activity is further decentralized to the local level. Rights and obligations of the LI are regulated by the Labour Code; the latter contains a special chapter that describes functions and authority of the labour inspectorate.

The main LI objective is to monitor the enforcement of all labour regulations concerning hirings, firings, pay, and safety. However, the Labour Code provides the inspectorate with executive authority extending far beyond simple monitoring. The LI runs regular (planned in advance) and extraordinary control missions and any firm is obliged to execute orders or requests issued by the LI. Otherwise, the LI inspectors can file the case to a local court office or to involve the prosecutor's office into the conflict. The LI enjoys significant discretion in deciding what labour regulations to monitor, in what firms, and when. The LI decides what firm and when to check but it may allocate inspectors after workers' complaint or after prosecutor's office call. According to the law, all firms regardless of the size, ownership and legal status are accountable to the LI for any labour related issues. All this endows the labour inspectorate with significant powers in enforcing labour regulations and in intervening in employer-employee relations.

Jurisprudence can potentially play a very important role in enforcing the EPL provisions because employers can be sanctioned in case of non-respect to these rules. However, this role is conditional upon a number of factors.

First, judicial intervention assumes that workers are ready to defend their rights and interests in courts. Opportunity costs of appealing to judiciary can strongly affect the propensity of workers to file their case to a court. For example, total costs of filing a case (including proximity to court office, complexity of filing the case, duration of waiting for judge's decision, belief in fairness of the court, etc,) affect workers' propensity to apply to judiciary. Moreover, the costs are likely to vary considerably across localities.

Second, these provisions are subject to court interpretations and this may constitute a major (but often hidden) source of variation in the EPL strictness both across regions and over time. As some recent studies suggest, the jurisprudence may be affected by the underlying labour

market conditions. For instance, judge's decisions may tend to be particularly unfavourable to employers when unemployment is high.[20]

Third, in some countries compensation for unfair dismissal set by courts can deviate widely from the minima set out in the legislation, since judges may account in their final decision for damages corresponding to past and expected future financial losses and psychological damage.[21]

Fourth, politisation of the judiciary system may introduce a bias to decision making in courts. This can be due to ideological bias in the nomination of judges[22] as well as due to administrative interventions from regional or local governments into independent judiciary decision making.

Fifth, corruption clearly distorts the role the judiciary and therefore can play ??? in enforcement of the regulations. All these factors except the third may play a role in Russia.

In most cases judiciary plays mainly a threatening role in the EPL enforcement. However, if the number of cases (per 1000 of population or employment) put before the court is quite significant, sanctions for the non-observance rules are unavoidable and biting, the *likelihood in expecting particular ruling is high*, the duration of trial is short, then we may expect that the enforcement regime becomes more strict and robust.

4. Main Hypotheses and Empirical Strategy

Our empirical strategy is organized around two interconnected "Saltykov-Tchedrin's hypotheses" that can be derived from his famous phrase presented as the epigraph to this paper. As we have already argued, the Russian EPL is one of the most stringent in the world, if formally measured. The gap between the formal stringency of legislation and its actual observance tends to be larger when laws are stricter and enforcement is weaker. Such gap, if it looms large, makes the actual regulations less certain and more varying across space and over

[20] Ichino, Andrea, Michele Polo, and Enrico Rettore. "Are Judges Biased by Labor Market Conditions?" European Economic Review, 2003, 47 (5) 913 – 944; G.Bertola, T.Boeri, and S.Cazes. Employment protection and labour market adjustment in OECD countries: Evolving institutions and variable enforcement. ILO Employment and Training Papers, No.48, ILO, Geneva 1999.

[21] OECD Employment Outlook, 2004.

[22] Berger H., M.Neugart. Labour Courts, Nomination Bias, and Unemployment in Germany. CESifo Working Paper No.1752, June 2006.

time. But higher variation in the regulative regime is likely to translate into higher variation in market outcomes.

Hypothesis H1 assumes that the EPL enforcement is not complete and significantly varies across regions. Whatever enforcement measures we consider, they will show significant interregional variation. In practice this means that the actual regime of regulation varies within a wide range: from very liberal in some regions to rather stringent in the others.

Hypothesis H2 tests labour market implications of the variable enforcement. According to H2, stricter enforcement of the stringent legislation is expected to correlate negatively with regional labour market performance. This may lead to the fact that in regions with stricter enforcement employment rates tend to be significantly lower while unemployment rates – higher, if other regional characteristics are controlled for.

We start with a general description of the enforcement regime in Russian regions using all sources of data available to us. Here we document the fact that variation is large and various enforcement measures are inter-correlated though they illuminate different dimensions of the enforcement.

Several econometric techniques were used to estimate the causal effects of EPL enforcement on labour market performance. They differ in how they account for differences across regions and changes through time. Another distinction concerns the way how they treat endogeneity problem.

We start with estimating impacts of enforcement using the OLS estimation on the data pooled over the period 2000-2005. We estimate the set of relationships for various labour market outcomes based on the following equation:

$$Y_{it} = \alpha + \beta E_{it} + \gamma X_{it} + \phi_t + \varepsilon_{it}, \quad (1)$$

where $\boldsymbol{Y_{it}}$ refers to a specific labour market outcome in the i region and the moment t, $\boldsymbol{E_{it}}$ is some measure of EPL enforcement, $\boldsymbol{X_{it}}$ is the vector of exogenous regional characteristics, $\boldsymbol{\phi_t}$'s are time effects. Finally, ε_{it} is an idiosyncratic iid error term.

The pooled OLS estimation fully accounts for cross-region variation but assumes that observations for each region are independent over time. Thus, it loses some important information about the data and may produce inefficient and inconsistent estimates. We correct the OLS estimates by fitting fixed and random effects models designed to deal with panel data. More specifically, the following equations are estimated:

$$Y_{it} = \alpha + \eta_i + \beta E_{it} + \gamma X_{it} + \phi_t + \varepsilon_{it}, \quad (2)$$

where $\boldsymbol{\eta_i}$ denotes constant region-specific effects which are estimated under fixed-effects and random-effects assumptions. All other variables are the same as in equation (1). Again, we do

multiple estimations combining various dependents (LM outcomes) with various enforcement variables.

Each of two panel data approaches has relative advantages and drawbacks. Fixed-effects (FE) estimates exploit only the within dimension of data, i.e. changes within regions, and leaves unused information about differences across regions. This may be impractical in case of short panels and if time-series variation in enforcement within regions is only moderate. Moreover, FE estimates are generally more sensitive to measurement errors. If explanatory variables are highly autocorrelated then applying fixed-effects can remove true variation leaving mainly variation in measurement errors. Random-effects (RE) estimation treats region-specific effects not captured by the explanatory variables included in equation as randomly distributed across regions. In doing so, random effects combines the information from the between and within dimensions of the data in an efficient way and explains a larger share of variation in the data. However, the FE estimation method should be preferred if one suspects a correlation between control variables and the unobserved heterogeneity in region-specific effects. For example, the pressure for the EPL enforcement may be correlated with the unobserved balance of political forces in a region. Such a correlation will lead to a bias in OLS and RE estimates while using the fixed affects approach eliminates all constant region-specific effects from the model and thus eliminates any problems that they may cause.

All three estimators (OLS, FE and RE) assume that enforcement indicators are uncorrelated with the standard error term (ε_{it}) in (1) and (2) or, in other words, that they are exogenous to labour market outcomes. If such assumption does not hold then even FE estimates would be inconsistent. These correlations can appear if enforcement variables are, in fact, simultaneously determined with the labour markets outcomes. We have already mentioned the paper by Ichino et al (2003), which provides empirical evidence that conditions at local labour markets can bias judges' decisions. Therefore, as the next step, we estimate the both equations simultaneously exploiting three-stage least squares technique (3SLS) developed to estimate the system of structural equations[23]:

$$\begin{aligned} Y_{it} &= \alpha + \beta E_{it} + \gamma X_{it} + \phi_{1t} + \varepsilon_{it} \\ E_{it} &= \mu + \varphi Y_{it} + \psi Z_{it} + \phi_{2t} + u_{it}, \end{aligned} \tag{3}$$

where Z_{it} refers to the vector of exogenous (pre-determined) variables affecting labour market outcomes which may partly overlap with X's, u_{it} is an iid error term. So, in the first equation of the system (3), the labour market outcome variable is regressed on the enforcement variable, controlling other region-related exogenous characteristics, in the second equation the

[23] Zellner A., H. Theil. Three-Stage Least Squares: Simultaneous Estimation of Simultaneous Equations, *Econometrica*, Vol. 30, No. 1. (Jan., 1962), pp. 54-78.

enforcement variable is regressed on labour market outcomes and selected exogenous variables serving as the instruments.

The detailed description of how we specify particular equations using variables of interest and controls is given in Table A1*. In all equations where the labour market outcomes are on the left hand we control for per capita GRP, the proportion of urban population, the proportion of EPL protected employment. Various regional dummies are used in all models except FE where they are differenced out. Eq.#2 in the 3SLS estimation specified in order to explain variation in enforcement and therefore includes regional levels of education (to account for workers' voice), crime rate (to control general law enforcement situation), and the proportions of federal and regional bureaucracies in the total employment.

We believe that using various estimation procedures protects us from a bias associated with using just one estimator. Having various estimates we may compare whether different methodologies provide similar results and if so, we get an additional robustness check. Doing so, we follow methodological suggestions based on studies of the impact of EPL strictness on the labour market outcomes.[24]

5. Data Issues

In order to measure the regional variation in enforcement and to estimate its impact on regional labour market outcomes we have constructed a database that covers all years from 2000 through 2005. This provides us with the data panel containing around 480 year-region observations. The more detailed description of the data used in the paper follows below.

5.1. Data on Enforcement

5.1.1. Data on labour inspectorate activity

These data are regularly collected by the Federal Labour Inspectorate and cover all the regions of the RF. We consider the total number of inspectors allocated across regions a key variable for measuring institutional capacity of this agency. The intuition for this is straightforward since more inspectors are able to undertake more control missions and these missions can be more efficient if more time is allowed per one mission. Fewer inspectors can undertake more missions only by reducing the time allocated per mission and therefore by sacrificing enforcement efficiency. As Squire and Suthiwart-Narueput point out, when inspection resources are limited, investigations tend to be initiated in response to complaints rather than to be random. Additionally, there is also a danger of producing more in-desk reviews and fewer in-

[24] OECD Employment Outlook, 2004, p.78.

depths audits.[25] To account for cross-regional variation in population, we divide the number of inspectors by the total employment, by the employment in L&M sized firms, by the total number of firms, and by the number of control missions. We put special emphasis on the employment in L&M size firms since that is the only segment of the economy that may pretend to be really monitored by the agency. Though formally the Labour Inspectorate authority extends far beyond the L&M segment, its actual outreach there is almost negligible.

The number of inspectors is allocated across regions by the central office according to uniform norms, which are based on the population size in the region, but not on local labour market conditions. This allows us to argue that the regional density of inspectors network is not conditional upon the level of employment or unemployment and therefore to believe that this variable is exogenous to the labour market conditions. However, we cannot exclude endogeneity in case of the number of control missions or directives issued. Moreover, actual performance of regionally located inspectors is likely to be endogenous to the local labour market outcomes.

5.1.2. Data on Judiciary

Another set of the data used in our study reflects performance of the judiciary. These data are routinely collected by the Judicial Department of the Supreme Court. The key variable here is the number of labour disputes annually filed to courts in a region. Within the total number of legal cases one can single out legal cases concerning wages and cases concerning employment and dismissals. We use data on the total number of labour disputes filed and the number of cases concerning unfair dismissals only. In order to account for variation in regions size we standardize (divide) these measures by L&M sized employment, by the number of firms, etc.

Here we expect a strong endogeneity bias since workers' propensity to apply for judicial protection is negatively correlated with availability of outside options. In a tight labour market, outside conditions are favourable to workers and workers can exploit an exit option at relatively low cost. On the contrary, higher unemployment reduces availability of outside options and thus decreases relative costs of using judiciary protection.

5.1.3. Perception of enforcement survey (PES) data

The above presented data pretend to draw an objective picture using numbers of inspectors, of control missions, of orders issued, of legal cases filed, etc., as hard measures of the enforcement. We supplement these variables with additional indicators, which have to reflect how major labour market actors and the EPL enforcing agencies perceive actual stringency of

[25] Squire and Suthiwart-Narueput, p.127

enforcement and the degree of compliance. It is easy to assume that, for example, the almost full compliance is associated with enforcement that is generally considered by labour market players as stringent though the number of court appeals is low. And vice versa may be true as well.

For collecting subjective information, we conducted a special survey covering all regions of the Russian Federation.[26] The special questionnaire focused on the EPL enforcement was sent to top officers in all regional staff-quarters of the Labour Inspectorate and the Employment Service, to regional representatives of the major TU federation (FNPR) and to regional representatives of the major employers' association (RSPP). Judges from regional and local courts dealing with labour disputes were surveyed in Moscow during their special educational (training) visits. For each agency, we designed a specialized questionnaire that combined a general (common to all agencies mentioned above) part and an agency-specific block. The questionnaire contained various questions about the degree of EPL observance in the region in general and about particular EPL dimensions.

Altogether we collected about 400 completed questionnaires covering all Russian regions. The major outreach problem in surveying that we encountered was with the trade unions federation and the employers associations. Their actual representation in most of the regions appeared to be limited and in some regions just nobody was ready to speak on the behalf of the organizations. However, this could be considered an additional indication for low enforcement capacity in some regions.

5.2. Data on Labour Market Outcomes

Here we rely on the annual labour market statistics routinely provided by the Rosstat. We use such variables as employment rate (total, female, and youth), unemployment rate (total, female, and youth), vacancy/unemployment ratio, the rate of informal sector employment (share of the informal sector in the total employment), and hirings and separations (labour turnover) rates.[27] We use female and youth employment/unemployment rates since these measures are considered more sensitive to labour market conditions compared to those for prime-age men.

6. How Does the EPL Enforcement Vary Across Regions? Descriptive Analysis

[26] The survey was conducted in late 2006-early 2007. We acknowledge the assistance in data collection from N.Vishnevskaya.

[27] Since most of these variables are routinely measured using the LFS or administrative statistics data, we do not go into additional details here.

All major statistical measures of the EPL enforcement are presented in the Table A2 (in the Annex). They unambiguously indicate the existence of significant variation in the EPL enforcement efforts across Russian regions. We will discuss this issue in the next part of the paragraph.

6.1. Coverage

Various segments of employment are exposed to the EPL to a different degree. As it usually happens, small firms are partially or fully exempt from the standard EPL norms.[28] Those hired by individual entrepreneurs or by other private citizens are de-facto exempt from these regulations as all self-employed are. In Russia, only those working for the L&M size firms are subjected to the EPL. This makes the proportion of covered employees in the total employment an indirect indicator of the efficient EPL coverage. While the country mean equals to 58%, this measure varies across regions from 40% to 74%. As Fig.A2 suggests, the share of the L&M size employment has been shrinking permanently in all regions over time, while the distribution has become more skewed to the left. At the same time, the interregional variation has been remaining significant and impressive. This means that the EPL-exempt employment can reach 60% of the total in some regions hinting on strong labour market segmentation.

6.2. Activity of the Labour Inspectorate

All major indicators based on the Labour Inspectorate statistics show remarkable variation across regions in exposure of firms to inspections.

The key indicator in this family of measures is the density of inspectors, calculated as the number of inspectors standardized per 100 thousands of employees. The measure varies from 3,0 in Moscow (followed up by other relatively well developed regions) to 25,0 in the ethnic Republic of Ingushetia or 13-20 in other remote or scarcely populated underdeveloped regions. The density of inspectors in the latter group of the regions exceeded the country average by 3-5 times and the Moscow level by 7-8 times higher making firms much more exposed to the regulatory pressure.

In the Moscow City, one inspector was in charge for monitoring about 6 thousands firms (or organizations) during the year; in S-Petersburg the corresponding responsibility was 3 thousands firms. Obviously, such high load per inspector makes probability for a firm in either region to be inspected very low. The difference emerged from higher density of inspectors as

[28] Tito Boeri, Juan F. Jimeno. The effects of employment protection: Learning from variable enforcement, European Economic Review 49 (2005) 2057–2077.

well as from lower density of firms in low populated and remote regions. Low population density (small population scattered across small villages on large territory) may need more inspection offices and therefore more inspectors. However, this can be true only in some regions (to the East from the Urals).

Efficiency of the regional LI offices can be measured as the number of inspections (control missions) conducted during the year. It depends upon the density of inspectors since more inspectors per given population of firms or employees can initiate more missions. However, it depends also on the propensity of the LI to intervene in the situation, since extraordinary or irregular missions may emerge as local initiative. The latter makes this variable partially endogenous to the regional/local labour market situation. In 2000-05, in the least inspected (controlled) regions there were on average 2,0-2,2 control missions per 1000 employees. In the most frequently inspected regions, there were 15,7-18,6 missions per 1000 workers, or 8-9 times more (see Table A2). Over the year, on average labour inspectors managed to inspect 12 firms of 1000 in Moscow, in S-Petersburg this number was also at low 23. On contrast, in the Kursk Oblast 460 firms of 1000 were checked, in the Chukotka region – 350, in Buryatia – 260. This meant that up to half of all firms came to the test of the EPL observance.

The rate of detected EPL violations (calculated as the number of detected violations divided by the total employment) is one of the most evident measures of the enforcement. Its maximum value exceeds the minimum by 5 times! On general, it positively correlates with the density of inspectors.

Examining interaction between the Labour Inspectorate and judiciary we also observe high variation. In 2005, the LI in 35 of 79 regions did not file any case to the judiciary. However, in some regions the number of court appeals was quite high, and the Southern regions were especially salient in this respect. The Krasnodar Kray took the lead with 69 cases filed per 100 th employees. In these regions the number of court filings (standardized by employment) was 7-17 times higher that the country mean. Given that the maximum figures were not high in absolute numbers we can hypothesize that the LI had weak incentives in using judiciary. They could have preferred alternative options when dealing with violations of the labour law.

6.3. Judiciary authority (Courts)

Quantitative variables based on judiciary statistics tell basically the same story showing significant inter-regional variation in enforcement of the labour regulations. This variation has also been high throughout the whole period of 2000-05.

The Far Eastern Magadan region with 200 legal cases (per 1,000 employees) filed to courts took the leading place. It was followed by a few other Northern and Far Eastern regions,

where the corresponding values were in the range of 30 to 70. On the opposite pole of the scale, we find the most urban and densely populated regions like Moscow, S-Petersburg, Moscow and Nizhny Novgorod oblasts situated in the European part of the country. Here, of every 1,000 employees only 1 to 4 were involved in legal conflicts with their former or current employers filed to courts.

Largely the same distribution of regions emerges if we look at the legal cases on pay issues. The Northern and Far Eastern regions are among the most litigious regions, while the regions with the more developed and diversified economies are among the least litigious. Again, the gap between these two poles on the scale is remarkably large. The Magadan region shows as many as 160 litigations per 1,000 employees against just 0,8 litigations filed in Moscow.

Interregional variation in the workers' propensity to use judiciary for disputing unjust dismissals is somewhat narrower but the general tendency is the same. The intensity of litigation varies from 3 cases filed per 1,000 employees to 0,2-0,3 cases and the distribution of regions is about the same as discussed above.

All the data that we are presenting here provide very consistent and robust picture. The Northern and remote regions of the Far East with the least favourable climate conditions are among the most conflict prone. Here, the workers are endowed in accordance with the Labour Code with a generous package of additional social guaranties and benefits (the so called "Northern benefits package"), on the one hand. On the other, these local labour markets are weakly diversified and strongly isolated local monopsonies. Outside options for dismissed workers here are scanty, while migration costs in contrast emerge as prohibitively high. All this raises incredibly alternative costs of losing jobs to workers, therefore activating their "voice" and stimulating litigious activity. Expectation of winning a law suite supports this strategy. On the contrary, in regions with the more diversified labour demand a "voice" strategy becomes less beneficial compared to an "exit" strategy, and these simple cost-benefit considerations may suppress or drive down propensity to litigate. In case of losing a job a worker can find a new one here quickly and at low cost instead of being dragged into a lengthy and costly litigation.

6.4. Survey evidence

Our survey provides some additional evidence that the EPL observance being far from complete varies across regions within the wide band.

As the Table A3 undoubtedly suggests, the proportion of those surveyed believing that the EPL observance does not pose any problem is very small. This opinion is shared by just 3% of the judges (surveyed), 8% of the employers' representatives and by 3% of the TU regional leaders. None of the surveyed labour inspectors or the employment service top officers

underlined this position. On the contrary, 10-37% of our respondents consider non-observance a very acute problem. If measured by 7-point scale with the maximum given to the complete observance, regions vary from 2,3 to 5,0 points.

The Fig.A1 presents average scores to the EPL observance across various EPL segments assigned by our respondents if they use the 7-points scale. As we can easily see, most of the averages are under a value of 4 points, while the employers only assign just a little more than that. Table A4 differentiates these scores by segments of the EPL thus extending the picture. As the most problematic our respondents assessed the issues of enforcement of the regulations that govern hirings, separations, and pay. The preparation of collective agreements and provision of the TU rights appeared to be the least problematic and the most observed. However, the table confirms the basic conclusion that the EPL enforcement seems to be quite problematic.

The level of the EPL observance varies within regions as well. Firms with some political connections and administrative support may feel much less constrained in applying the rules. An additional factor affecting the law observance is the firm size since small firms are less prone to follow the rules while their monitoring is much more complex and costly. We asked our respondents whether "Are there differences between firms in the EPL observance in your region?" According to the Table A5, significant intraregional differences in the EPL observance are recognized by 36-59% of our respondents, while most of the other respondents accept that there are differences, though insignificant. Interestingly, speakers for employers are most prone to recognize selective observance while judges are the least prone. The proportion of those believing that there are no such differences is well under 10% of the total sample.

All the evidences mentioned above tend to confirm the point that the EPL observance in the Russian regions is incomplete, selective, and varying. This concerns particular segments of the labour law relatively more as well as firms, some of which are more exposed to enforcement than others. This seems to turn legislative framework into a kind of mosaic or patchwork. To exploring how variation in observance and enforcement across regions may affect labour market performance we turn in the next paragraph.

Why is the enforcement of labor laws in Russia so poor? This is a big and interesting issue clearly deserving a special in-depth study. To be short here, we can just list a mix of different economic as well as politico-economic factors destroying compliance and feeding into law avoidance.

Offering very strong "paper protection", these laws are very costly in monitoring and enforcement what makes them not enforceable in practice. Additionally, we can add such factors as high level of corruption, lack of tradition for following the rule of law, lack or weakness of

institutions enforcing labor contracts, weak bargaining power of workers (especially in times of high and rising unemployment), cheap alternative options for workers and employers.

7. Estimating the Impact of Enforcement

Simple charts that plot some EPL enforcement measures against major LM outcomes visualize associations we are looking for. Fig A5 shows correlation (r=0,46, statistically significant at 5% level) between institutional capacity of the LI (the number of inspectors per L&M employment) and the judiciary activity (the number of labour disputes filed to courts also per L&M employment) in Russian regions, suggesting that both enforcements work in the same direction reinforcing each other.

The figures A6 and A7 visualize some associations between indicators of enforcement and unemployment. The institutional capacity of the labour inspectorate (measured as number of inspectors per employment in large and medium sized firms) positively associated with unemployment is negatively with employment. The same associations hold for judicial enforcement measured as the number of legal cases on labour disputes filed to regional courts, and LM indicators. The association becomes stronger if we consider only legal cases on unfair dismissals. More active judiciary involvement in labour market regulation is likely to be associated with lower employment and higher unemployment. Both measures of the enforcement are negatively correlated with regional economic development.

However, simple correlations present a very raw picture and say nothing about the direction of causuality. Saying that we are moving to the regression analysis.

According to H2, stricter enforcement is expected to drive employment rates down. If this holds true, then coefficients for enforcement proxies in the regressions are expected to be negative and statistically significant. Tables A6-A8 present the estimates drawn from all tested specifications. For all LM indicators there are more significant coefficients with correct signs in the OLS and 3SLS specifications than in both panel data specifications. In fact, there is much less variation in the explanatory variables if one accounts for individual effects and autocorrelation in the explanatory variables. Therefore, standard errors are much larger in the RE and FE specifications and we get fewer significant coefficients.

As we can see, the number of inspectors in all specifications is statistically significant and has the expected (negative) sign. All point estimates in OLS, FE, and RE models are almost identical but they are somewhat lower in the 3SLS specification. The equation #2 in the 3SLS which models inspectors' density as a function of employment rate has also the expected sign and is of high statistical significance. All this suggests that increase in inspectors' density is likely to drive e/p ratio down reducing thus the total number of jobs.

The variable based on the number of violations detected by the LI (per employment and taken in logs) used as an enforcement proxy tells us basically the same story, though in the FE and RE models its coefficients are statistically insignificant. The OLS and 3SLS models provide close point estimates with expected signs while 3SLS specification weakens (if not solves) endogeneity problem. The number of control missions (in logs) gets significance in the OLS and 3SLS only, though in other specifications the signs are negative as we expected.

The last two lines in the table relate to the judiciary enforcement. Coefficients of the total number of labour disputes (in logs and standardized by employment) filed to courts enter OLS, FE and RE equations with the expected negative sign but get 10% significance in the RE specification only. If we use as the variable of interest the number of labour disputes on unfair dismissals (also in logs and standardized by employment), we get the significant and negative coefficient for the OLS model only, while tested coefficients in other models are statistically non significant.

Tables A7-A8 summarize the estimates for specifications where we use the female employment rate and the youth employment rate as the dependent variables. The male prime-age employment is usually quite robust and low sensitive to marginal changes in regulations. Over the whole transition period in Russia, this e/p ratio has changed very little. Since women and youth positions in the labour market are more volatile and sensitive to shocks, we may expect that the coefficients of enforcement variables in these specifications display higher statistical significance than in the previous baseline case. In fact, when the coefficients are of 90% and higher statistical significance, their values are somewhat higher than in our first (baseline) table A6.

Summing up the effects of enforcement on the e/p ratio, we can cautiously say that despite multiple measurement problems most of the econometric evidence available to us so far suggest that there are no reasons to reject the Saltykov-Tchedrin's hypothesis.

Let us turn now to another basic indicator of the labour market performance - the unemployment rate. We consequently consider four different unemployment measures (for the total population, for women, for youth (20-29 years old), and for long-term unemployed). Our main expectation here is to see statistically significant and positive coefficients for the enforcement variables when unemployment rates are dependent variables. If H2 holds true, then stricter enforcement should bring higher unemployment. Again, the motivation is straightforward since higher labour costs associated with enforcement of the strict EPL constrain labour demand and keep people out of jobs, other things being equal.

The coefficients of the specifications where the total unemployment is a dependent variable are given in Table A9.

Not all the coefficients shown in the table have the expected sign but all that are statistically significant enter with the expected sign. Accounting for endogeneity in the 3SLS specification brings little change in the value of the coefficient compared to simple OLS. The RE estimate is significant at 10% level while the FE remains not. The detected number of violations affects regional unemployment positively and significantly. The FE and RE estimates in this case enter with the opposite sign but remain insignificant. The RE coefficient gets significance (with the correct sign) for the number of control missions taken as a right-hand variable, while the FE coefficient gets the right sign but not statistical significance.

The least significant results we get when regressing the log number of labour disputes filed to courts – coefficients are significant only in 3 of 8 specifications. However, using the log number of labour disputes on unfair dismissals as an alternative regressor improves the estimation results. This seems to make sense since not all labour disputes may indeed affect hirings/firings costs.

Using female or youth unemployment rates on the left hand side of equations (instead of the unemployment rate for the total population) provides us with similar but marginally better results. Results (coefficients when they are significant) for youth unemployment are somewhat stronger than for the female or total unemployment. This can be explained by the fact that youth unemployment is usually higher than the average and firms are more aware of hiring young people. As we all aware, young people as labour market outsiders suffer most from the overly strict regulations. This means that more interventionist LI policy in this area tends to affect young people first and foremost.

As a next step, we regress the proportion of long-term unemployed (in regional unemployment) on the same enforcement measures as we did earlier. The coefficients from these exercises are collected in Table A12.

The number of inspectors does not seem to provide support to our hypothesis, while it itself emerges as dependent upon long-term unemployment. However, the coefficients for two other enforcement measures associated with the LI activity enter the equations with expected plus sign, though with low (10%) statistical significance. Surprisingly enough, in this case endogeneity does not seem to be an issue at all, if to rely on the last column of the table. Turning again to the judiciary data, we get that taking the number of labour disputes on unfair dismissals as the main enforcement proxy for judiciary activity gives us positive and significant coefficients in the OLS and SE models, while positive but not significant in RE and FE models.

In our final exercise we regress ratio of unemployed to vacancies. The expected sign here is negative since the H2 assumes the positive association between enforcement and U/V ratio (as it is in the unemployment case). Table A13 presents the estimation results. The OLS and 3SLS

estimation generally supports this assumption while estimates based on RE and FE models are less supportive.

Our main econometric results presented in the tables A6-A13 (A8 is still missing) are summarized in the table presented below. Altogether we get 140 estimates distributed across the cells of the table according to the expected sign and statistical significance.

	Statistically significant (at 5%)	Non-significant
Correct (expected) sign	54 (39%)	63 (45%)
Wrong sign	4 (3%)	19 (14%)

The coefficients estimates when the sign is correct but significance is at 10% level make 9 cases or 6% of the sample. If we shift them from the upper right cell into the upper left, then the correct and significant (at 10% level) coefficients make 45% of the total. The correct sign is observed in 84% of all the estimates. This gives empirical support to our main hypothesis.

8. Conclusion (REMAINS TO BE WRITTEN!)

Moving to a flexible labor code that is fully enforced (WB, p.100)

Annex: Tables and Graphs

Table A1. Normative Firing Costs in Russia and Some OECD Countries, N of monthly wages

	Advance notice (months)			Severance pay (months of av wage)		
	Tenure			Tenure		
	9 months	4 years	20 years	9 months	4 years	20 years
Russia		2		2-3 (+3 months for the Northern and Far Eastern Regions)		
Sweden	1	3	6	0	0	0
Finland	1	2	6	0	0	0
Germany	1	1	7	0	0	0
France	1	2	2	0	0,4	2,7
Italy	0,3	1,1	2,2	0,7	3,5	18
UK	0,2	0,9	2,8	0	0,5	2,4
USA	0	0	0	0	0	0
Czech Republic	2	2,5	2,5	1	1	1
Hungary	1	1,2	3	0	1	1
Poland	2	3	3	0	0	0

Sources: the RF Labour Code; OECD Employment Outlook, Paris, 2003.

Table A1*. Major specifications used in econometric estimations

	Variables in equations	**OLS**	**FE**	**RE**	**3SLS** Eq#1	**3SLS** Eq#2
	ALL EQUATIONS	Urbanisation rate				
		Year dummies				
		Per capita GRP (Ln)				
		% L&M employment				
			Dummies for Russian macro-regions			
			Dummies for Moscow and St-Peterburg			
			Dummies for autonomies (ethnic regions)			
						% with tertiary education
						Crime rate (ln)
						Federal bureaucracy (empl share)
						Regional bureaucracy (empl share)
						Dep variable from Eq #1
Additional variables in Eq. #2 (3SLS)						
1	LI: N of inspectors per 1,000 L&M employment					None
2	LI: N of violations detected per 1,000 L&M employees (ln)					N of control missions per 1,000 L&M employees (ln)
3	LI: N of control missions per 1,000 L&M employees (ln)					LI: N of inspectors per 1,000 L&M employment
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)					N of judges and prosecutors per 1,000 of pop (ln)
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)					N of judges and prosecutors per 1,000 of pop (ln); labour turnover rate

Table A2. Enforcement in Russian Regions: Descriptive Statistics, 2005

	N	mean	se(mean)	sd	p50	min	max	cv
Proportion of L&M employment	79	57,8	0,7	6,5	57,9	37,8	72,2	11,2%
Labour Inspectorate								
N of firms per 1 inspector	80	1043,2	105,4	943,1	900,5	318,8	8089,5	90,4%
N of inspectors per 100,000 L&M employees	79	113,6	6,9	61,5	100,5	51,4	483,4	54,1%
N of control missions per 1 inspector	80	72,4	2,3	20,7	70,0	30,5	138,5	28,6%
N of control missions per 1 firm	80	0,090	0,006	0,052	0,083	0,010	0,362	57,5%
N of control missions per 1000 empl (L&M)	79	8,08	0,46	4,10	7,05	3,16	24,71	50,7%
N of law violations per 1 inspector	80	521,6	23,5	210,1	507,8	170,2	1188,7	40,3%
N of employees returned to jobs due to LI intervention, per 100,000 L&M employees	79	56,2	6,8	60,2	33,5	0,0	322,1	107,1%
Av N of violations per 1 control mission	80	7,3	0,3	2,6	6,9	1,6	16,2	34,8%
Courts								
N of legal cases on unjust dismissals by 1,000 L&M employees	79	1,088	0,064	0,566	0,867	0,419	3,094	52,0%
Total N of legal cases in courts per 1,000 L&M employees	79	26,8	3,0	26,3	21,0	3,2	200,9	98,0%

Table A3. "How Serious is the Problem of the EPL Observance in Your Region?", %

	Judges	Labour Inspectors	RES	Employers	TU
- very acute problem	12	37	18	23	10
- quite serious problem	85	56	77	68	83
- almost unserious problem	3	-	-	8	2

Fig. A1. The degree of EPL Observance, 7-point scale, 1 – complete ignorance, 7 – complete observance

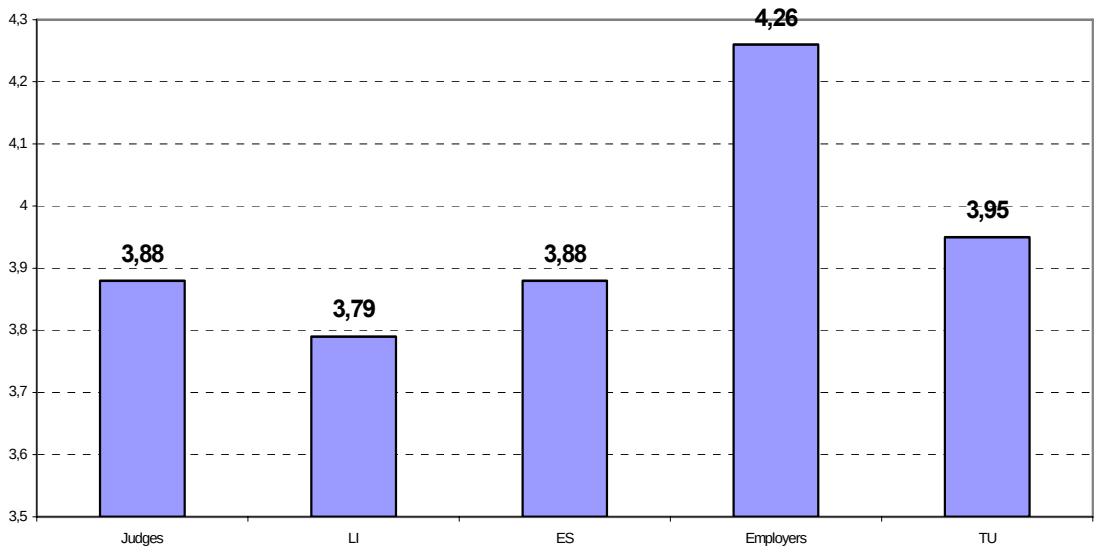

Fig. A2. Distribution of regions by L&M employment, 2000-05 (actual EPL coverage)

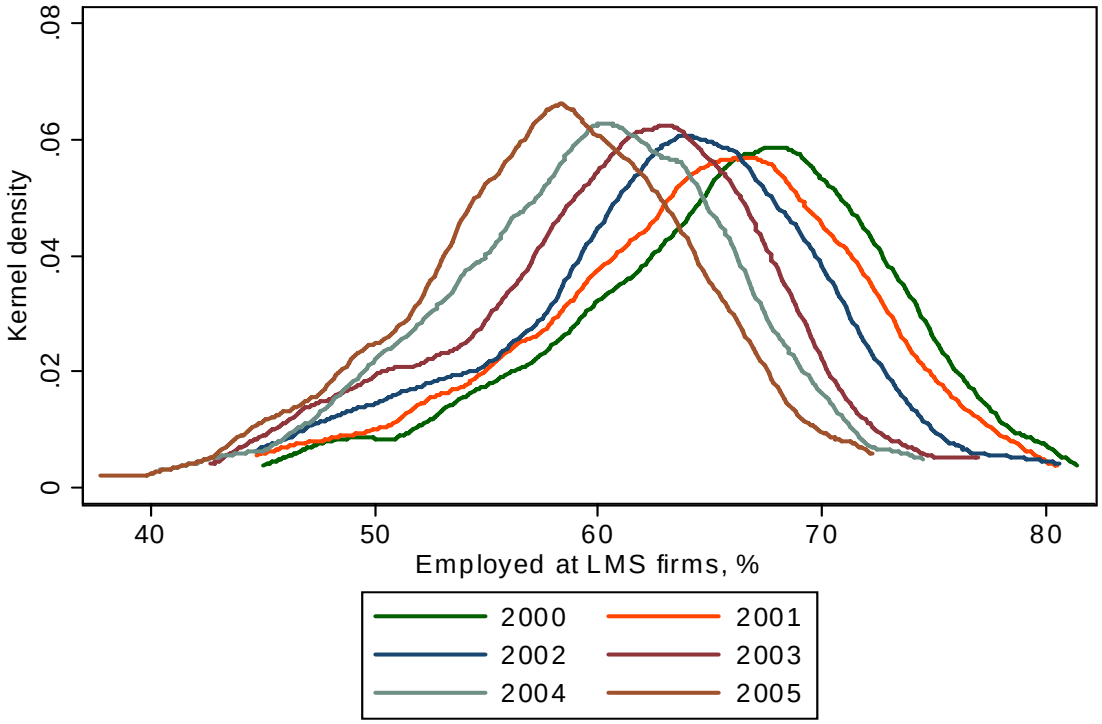

Fig. A3. Distribution of regions by number of inspectors per 100 L&M employees

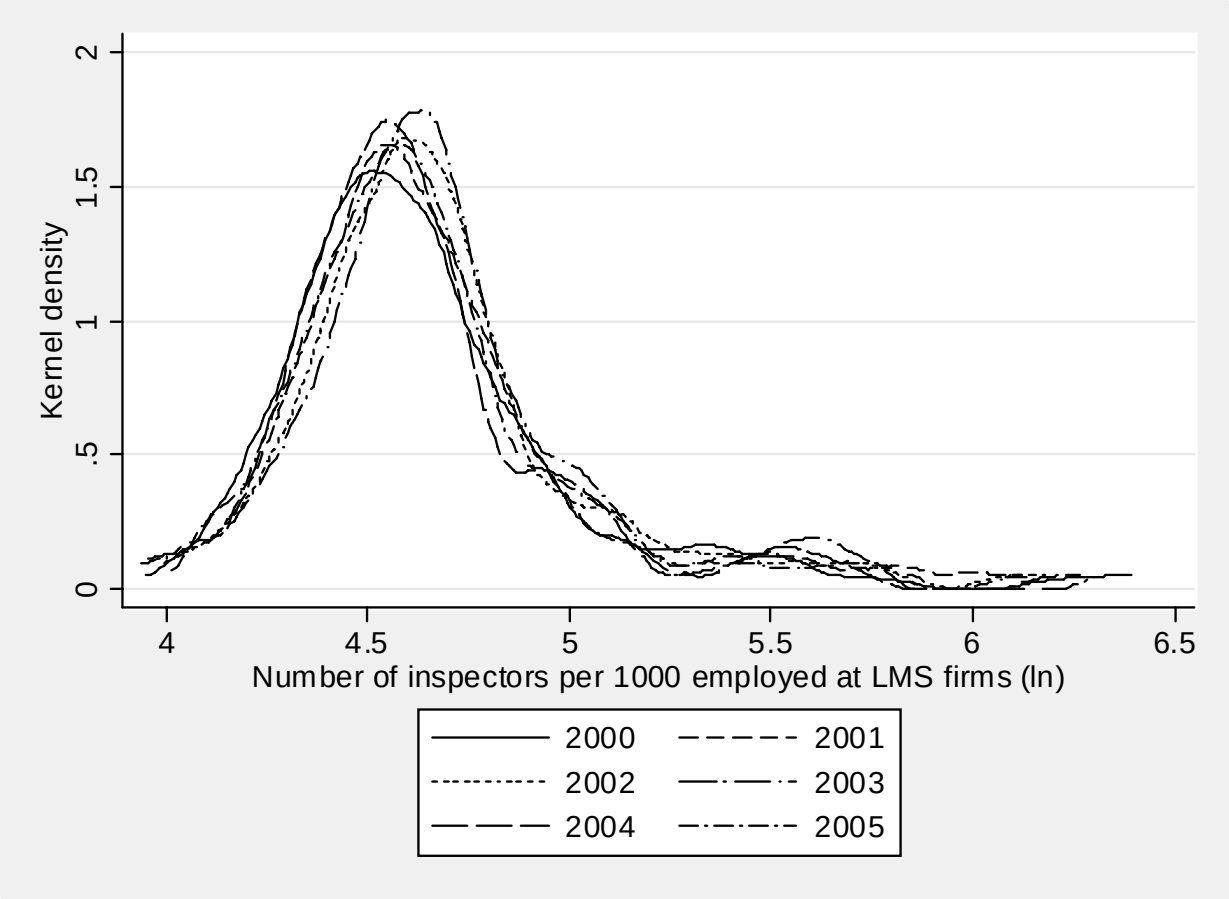

Fig. A4. **Distribution of regions by number of labour disputes filed to courts**

Table A4. To What Degree the Following Norms Are Observed? (Full Compliance = 7)

	Judges	LI	ES	Employers	TU
Preparation and signing of collective agreements	4,5	4,7	4,1	4,6	4,3
Hirings, signing up labour contracts	3,9	3,6	3,9	4,3	3,7
Separations, cancellation of labour contracts	3,8	4,0	3,9	4,2	3,7
Use of short-term contracts	4,3	4,0	3,9	3,5	3,9
Working time, incl over-time work					
Pay	4,0	3,4	3,7	4,2	3,6
Timing of pay	4,2	4,5	4,3	4,4	4,3
Social guaranties and benefits for particular groups of workers	4,1	4,4	3,8	4,1	4,0
TU rights	4,4	4,9	4,1	4,5	4,4

Table A5. Are There Differences Between Firms in the EPL Observance in Your Region?, %

	Judges	LI	ES	Employers	TU
Almost no differences	9	3	4	11	7
Insignificant differences	55	40	46	29	46
Significant differences	36	50	44	59	44

Fig. A5. Simple correlation between institutional capacity of LI (N of inspectors per L&M employment) and judicial enforcement (N cases filed to courts), 2005

Fig. A6. LI institutional capacity vs unemployment rate

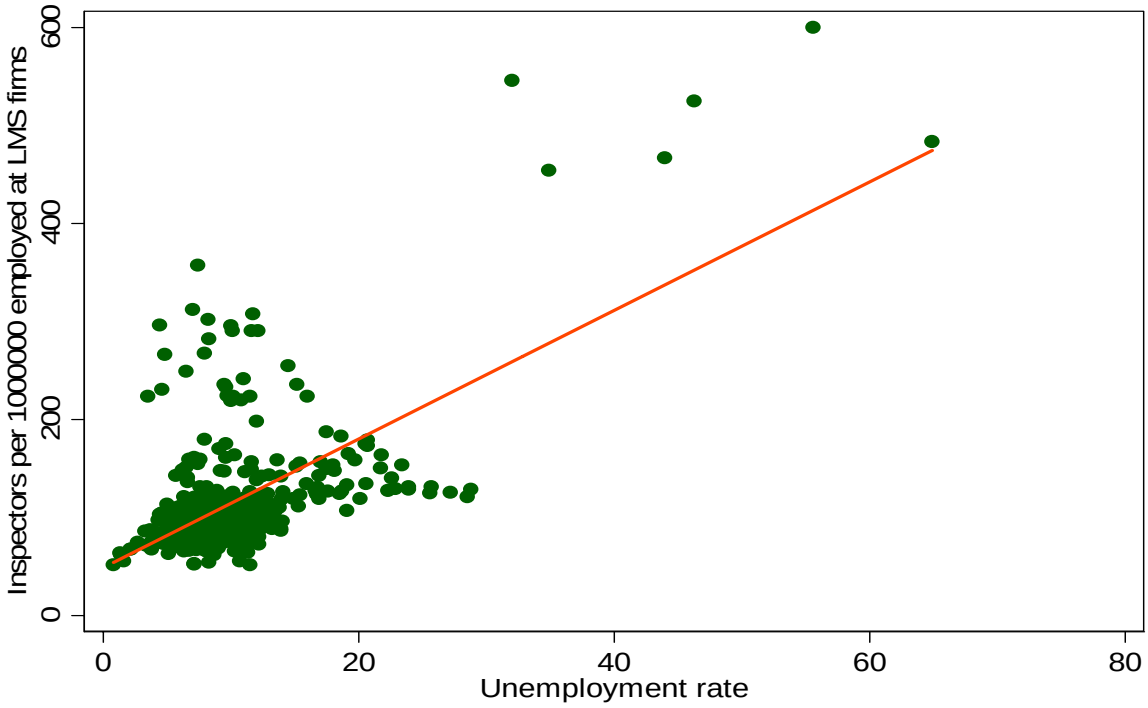

Fig. A7. Judicial enforcement and unemployment

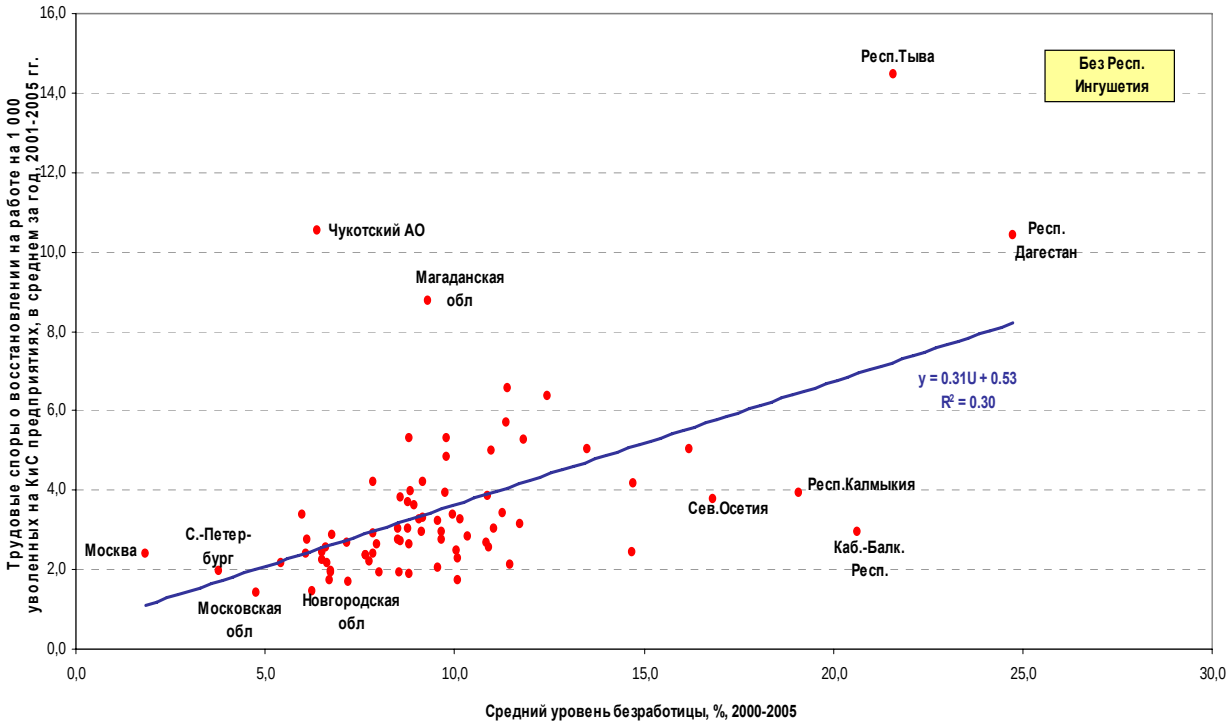

Table A6. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= employment rate

Dep: employment rate (e/p ratio)		OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	-0,026***	-0,026	-0,025**	-0,010**	-6,485***
2	LI: N of violations detected per 1,000 L&M employees (ln)	-1,205**	0,318	-0,124	-2,127**	-0,019*
3	LI: N of control missions per 1,000 L&M employees (ln)	-1,257**	-1,275	-1,181	-3,500***	0,018*
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	-0,630	-0,415	-0,415*	-1,110	0,004
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	-3,019**	1,635	-0,071	-2,191	0,002

Table A7. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep = female employment rate

Dep: female employment rate (e/p ratio)		OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	-0,030**	-0,050***	-0,038**	-0,017***	-8,233***
2	LI: N of violations detected per 1,000 L&M employees (ln)	-1,042	1,097	-0,103	-1,929*	-0,017*
3	LI: N of control missions per 1,000 L&M employees (ln)	-1,350	-0,110	-0,973	-4,18***	0,016
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	-1,092**	-0,802	-0,835**	-5,042	0,086
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	-4,287***	3,654*	-1,236	-5,798***	0,008

Table A8. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep = youth employment rate [NOT YET READY!!!]

Dep: youth (20-29) employment rate (e/p ratio)		OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment					
2	LI: N of violations detected per 1,000 L&M employees (ln)					
3	LI: N of control missions per 1,000 L&M employees (ln)					
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)					
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)					

Table A9. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= unemployment rate

	Dep: unemployment rate	OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	0,048**	0,002	0,032*	0,046***	9,967***
2	LI: N of violations detected per 1,000 L&M employees (ln)	1,269**	-1,610	-0,708	4,196***	0,026*
3	LI: N of control missions per 1,000 L&M employees (ln)	3,100***	0,761	1,679*	8,110***	-0,057*
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	1,088	0,366	0,414	10,996**	0,027
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	6,501***	-0,908	1,786	10,377***	-0,018

Table A10. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= female unemployment rate

	Dep: female unemployment rate	OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	0,043**	0,014	0,039	0,044***	11,306***
2	LI: N of violations detected per 1,000 L&M employees (ln)	0,953	-2,809	-0,949	3,433***	0,030*
3	LI: N of control missions per 1,000 L&M employees (ln)	2,694**	0,077	1,765	7,254***	-0,051*
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	1,306	0,810	0,848	9,202**	0,028
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	6,335***	-2,563	2,404*	9,969***	-0,022

Table A11. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= youth unemployment rate

	Dep: youth unemployment rate	OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	0,064***	0,008	0,050	0,063***	7,025***
2	LI: N of violations detected per 1,000 L&M employees (ln)	1,716**	-2,664	-0,808	5,916***	0,018*
3	LI: N of control missions per 1,000 L&M employees (ln)	4,394***	0,996	2,815	11,131***	-0,036*
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	1,480	0,874	0,895	14,124**	0,020
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	8,396***	-2,428	2,217	13,589***	-0,012

Table A12. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= proportion of long-term unemployed

	Dep: % of LT unemployed	OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	-0,024**	-0,019	-0,010	0,000	6,471**
2	LI: N of violations detected per 1,000 L&M employees (ln)	0,408	3,249	2,532*	3,709*	0,004
3	LI: N of control missions per 1,000 L&M employees (ln)	1,029	4,579*	2,753	1,298	0,010
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	0,125	-1,502**	-0,924	7,474	0,009
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	3,042*	6,313	3,356	8,644***	0,007

Table A13. Regression coefficients, OLS, FE, RE, and 3SLS Estimates, Dep= ratio of unemployed to vacancies

	Dep: U/V ratio	OLS	FE	RE	3SLS	
					Eq.#1	Eq.#2
1	LI: N of inspectors per 1,000 L&M employment	0,007***	0,002	0,004***	0,007***	46,111
2	LI: N of violations detected per 1,000 L&M employees (ln)	0,199	-0,283***	-0,217*	0,475**	0,145
3	LI: N of control missions per 1,000 L&M employees (ln)	0,371**	-0,302**	-0,132	1,215***	-0,259**
4	Courts: all labour disputes filed per 1,000 L&M employees (ln)	0,238**	0,088	0,094**	1,253**	0,233
5	Courts: N of disputes on unfair dismissals per 1,000 L&M employees (ln)	1,005	-0,070	0,255**	1,712	-0,188