

# Courts and Business Registration

## Evidence from Serbia

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## Abstract

This paper studies the effects of a reform in Serbia that transferred business registration from regional courts to a centralized agency. Using administrative data, the analysis employs a difference-in-difference strategy that compares new firms before and after the reform across districts based on the level of distrust in regional courts. The results suggest

that the reform increased the number of new firms more in regions with higher initial levels of distrust, by up to 34 percent. The reform also increased the survival rates of new firms. These effects are large compared to those of other types of registration reforms, suggesting that courts can pose significant barriers to new firm creation.

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## **Courts and Business Registration: Evidence from Serbia<sup>1</sup>**

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## 1. Introduction

A large literature going back to Hernando de Soto (1989) has argued that complex entry regulation prevents informal firms from registering with the government and may also discourage new firm creation.<sup>2</sup> However, studies that have measured the impact of reforms to simplify entry regulation have found only small effects on firm formalization and creation.<sup>3</sup> These studies typically examine the implementation of one-stop shops that integrate various subnational and national registration procedures. For example, with a one-stop shop set up in Mexico, firms that previously had to register with different municipal and federal authorities can complete several steps of the process at a single agency, reducing the number of days required to register a business from 30 to 1 and the required procedures from 8 to 3 (Bruhn, 2011).

Creating a one-stop shop is one of the most popular business registration reforms, but another type of entry reform is to make registration an administrative (not judicial) process (World Bank, 2006). Business registries managed as an adjudicative rather than an administrative function are prone to discretionary powers and increased uncertainty. Even simple procedures such as reserving a name are complex due to being subject to discretionary approval of a judge. The inconsistent interpretation of processes by judges makes automation particularly complex, since it requires standardization of procedures. In the World Bank's Doing Business report, countries in which courts operate business registries rank significantly lower than countries with administrative business registries (table 1).

**Table 1: DB Ranking of Countries with Administrative vs. Court Business Registries**

<b>Administrative Registries</b>	<b>Ranking DB 2018</b>	<b>Court Registries</b>	<b>Ranking DB 2018</b>
New Zealand	1	France	25
Canada	2	Slovenia	46
Hong Kong SAR, China	3	Croatia	87
Georgia	4	Germany	113
Jamaica	5	Austria	118
Singapore	6	Bosnia and Herzegovina	175

Source: Doing Business 2018 data obtained from [www.doingbusiness.org](http://www.doingbusiness.org)

<sup>2</sup> See for example Djankov et al. (2002), Klapper, Laeven and Rajan (2006), and Ciccone and Papaioannou (2007).

<sup>3</sup> See Bruhn and McKenzie (2014) for a summary of the studies on Brazil, Colombia, and Mexico, and see Branstetter et al. (2013) for Portugal.

Business registries managed by courts are less efficient, costlier for businesses, and due to their discretionary nature increase uncertainty for investors. However, we are not aware of any papers that measure the effects of reforming business registration from a judicial to an administrative procedure on firm creation. This paper aims to fill this gap by studying a reform in Serbia that transferred business registration from regional courts to a new centralized administrative agency in 2005. Although this reform only eliminated one procedure in the registration process, going from 11 to 10, it implied a large drop in the number of days required to register a business, going from 51 to 15 (World Bank, 2006). The World Bank's 2006 Doing Business called this reform one of the "boldest reforms" to the business environment that took place between 2004 and 2005 (p. 2).

Moving business registration away from courts may have large effects on firm creation since courts can entail significant bottlenecks and inefficiencies (see Chemin, 2009, and Kondylis and Stein, 2018). They may also pose opportunities for corruption. In fact, prior to recent reform efforts, the great majority of citizens and lawyers in Serbia perceived the presence of corruption in the judicial system (World Bank, 2014). Moreover, business registration at court was highly discretionary (Jersild and Skopljak, 2007). We thus expect the 2005 reform in Serbia to have relatively large effects on firm registration.

To measure the effects of the reform, we obtained data on the number of new firms from the Serbian Financial Accounts Registry for all years from 2003 to 2011. This data set covers formal companies (not sole proprietors) that submitted their financial statements to the registry.

We employ a difference-in-difference strategy that compares the number of new firms before and after the 2005 reform across districts based on the level of distrust in regional courts (as measured in the 2006 Life in Transition Survey). That is, we test whether the regions where a large fraction of individuals report distrust in courts saw a larger increase in new firms after the reform than districts with less distrust in courts. To verify whether this is a valid identification strategy, we show that the level of distrust in courts is not correlated with pre-reform changes in the number of new firms over time.

Our results suggest that the reform increased the number of new firms by up to 34%. We also look at employment, survival and growth rates of these new firms, but find no significant effect of the reform on the average number of employees or employment growth rates of new firms. We do, however, find that the reform increased the one- and two-year survival rates of new

firms. The effect we find is large compared to the previous literature. Previous studies have estimated about a 5% increase in new firms due to the introduction of one-stop shops in Colombia and Mexico (see Motta, Oviedo, and Santini, 2010, for a summary of effect sizes) and a 17% increase in Portugal (Branstetter et al. 2013).

Most other papers do not look at the characteristics of new firms, except for Branstetter et al. (2013) who find that the reform in Portugal led to the registration of smaller firms on average, and these firms were also less likely to survive during the first two years. Their interpretation is thus that the one-stop shop in Portugal allowed lower quality firms to register. This interpretation makes sense in a model where registration represents a fixed cost that only firms with the highest returns are willing to pay. When registration costs drop, firms with lower returns, i.e. lower quality firms, also find it profitable to pay the fixed costs of registration.

We do not find evidence that lower quality firms register after the reform in Serbia. In fact, firms seem to be of higher quality as suggested by the increase in the one- and two-year growth rates. The reason could be that registration at courts represented not only an administrative burden and fixed costs, but was also often discretionary and may have prevented some high-quality firms from registering at all. Our findings thus suggest that business registration reforms that move registration away from courts may be more effective at creating new and high-quality businesses than one-stop-shop reforms.

The rest of this paper is organized as follows. Section 2 provides details on the 2005 business registration reform in Serbia. Section 3 describes the data and section 4 the identification strategy. Section 5 presents that results. Section 6 concludes.

## **2. Description of the reform**

For decades, starting a business in Serbia was time consuming and burdened with unnecessary bureaucratic hurdles. The principal problems included:

- (i) There was **no unified registry/database of all business entities** in one place. Sixteen courts handled registration of companies and 131 municipalities handled registration of sole proprietors. Even within the same entity – court registry, data were not unified and allowed for different companies to be registered under the exact same name in any of the court registry locations.

- (ii) The **business registration process in the Commercial Court Registry was highly discretionary** and in many respects not consistent with good international practice. Even judges in the same court required different documents. As one lawyer says, *“I had to file the same form to the same court in 15 different ways depending on what judge handled my registration”* (Jersild and Skopljak, 2007).
- (iii) **Businesses needed to visit several government offices** to start operating their business (business registry, tax authority, statistics bureau, pension and health insurance) and *ex ante* inspections were mandatory for all activities, whether low or high risk.
- (iv) **The minimum capital requirement for LLC’s was significant** – approximately €5,000.
- (v) The **registries lacked accuracy, accessibility and transparency**. The registries were paper based and one had to prove legal interest to be allowed access to any information contained therein.
- (vi) **There was no exchange of data between the stakeholder institutions** that in turn increased the burden on businesses that had to re-submit the same information to several agencies.
- (vii) Business **entities were issued (at least) 4 identification numbers** used for different purposes, including the statistical number, the tax number, the business registration number and the social security registration number.

During the mid-2000s, Serbia underwent major structural reforms driven by the need for a substantial transformation of the socialist into a market economy legal system, with the objective to create a favorable business environment and increase private investment, business start-ups, job creation, and incentives for efficiency among both private and state-owned enterprises. Within this broader context, business entry was so burdensome, that it was an obvious candidate for major reform.

The reform started with the Cabinet adopting principles of reform, based on which the legal and institutional framework were designed and implemented. A Business Registration Law and Companies Act were enacted in late 2004, and a new administrative agency was established to take over business registration from the courts and municipalities- the Serbian Business Registers Agency (SBRA). The SBRA started operating on January 1, 2005 as a newly established administrative, self-sustainable agency with an electronic and central business register for the

entire territory of Serbia, as well as other register relevant business-related registers (such as the Collateral Registry, the Financial Accounts Registry etc.).<sup>4</sup>

Considering that the paper records inherited from the courts were so out of date that they were unusable, a re-registration campaign was implemented, requiring all active companies to re-register in the SBRA free of charge. In the course of one year the registry was centralized, up to date and accessible via the Internet, leading to far greater legal certainty. As one attorney says, *“Now I can check in a few minutes if a company exists, what is the address, and who is authorized to represent them. Before, I had to go to the court for each inquiry”* (Jersild and Skopljak 2007).

For the first time in public administration, the silence is consent rule was applied, mandating that if the SBRA fails to formally respond a request for registration, either by granting it or by requesting more information, in the term of a maximum of 5 days, it shall be deemed that the company has been registered. The Company Law of 2004 reduced the minimum capital requirement for limited liability companies (90% of all companies in Serbia) from approximately €5,000 to €500 and eased requirements for establishing companies by making the rules more flexible. The minimum capital requirement was further reduced by the Company Law of 2011 to less than €1.

The effects of the reform were felt almost immediately. The time necessary for starting a business was reduced from 51 days in 2004 to 15 in 2005 (World Bank, 2006). The new system was a radical change, with a focus on customer service and user friendliness. The system moved from decentralized, inconsistent and discretionary practices of the commercial courts, to a centralized, up-to-date and transparent regime with internet access to all registration data. The SBRA exchanges information with all relevant stakeholder agencies and has grown into a one-stop shop that currently manages more than 20 business related registries. For business entry, the SBRA became a fully operational one-stop shop in 2009 (including tax registration, social security and health insurance).

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<sup>4</sup> The reform had broad support from the international and multilateral organizations operating in the country as well as high level political support from the Minister of Economy and Prime Minister. The biggest opponents of the reform were the commercial courts and the Ministry of Justice, which tried to stall the process and persuade policy makers to keep business registration in the courts. Business registration was a large source of power and influence for commercial courts, and so they opposed removing it from their activities. The Serbian Chamber of Commerce and the National Bank of Serbia also wanted it under their control. Thanks to the persistence of an Inter-Ministerial Working Group on Deregulation (and later the Council for Regulatory Reform), the reform was implemented as envisaged at the beginning. Almost all facets of the law were included in the final language. But the Ministry of Finance and Tax Administration retained control of issuing tax identification numbers until 2009 when all the processes for starting a business, including issuance of the tax IDs were unified under the SBRA.

Praise has been high. One attorney says, “*Since the registry started operating I did not have to appeal at all against their decisions, while before I had to do it very often*” (Jersild and Skopljak 2007). The results of the reforms were also recognized by the World Bank’s Doing Business Report and Serbia was ranked top reformer in the world in 2006. During its first year, the Serbian Business Registry Agency registered almost 11,000 new companies, 70% more than in 2004. In 2 years, the number of registered businesses more than doubled.

While the reform included several components, this impact evaluation focuses on the move of company registration away from courts and to the SBRA.

### **3. Data**

We use firm level data from Serbia’s Financial Account Registry. Firms are required by law to submit their annual financial statements to the Financial Account Registry. Before the creation of the SBRA, the Financial Account Registry was operated under the Central Bank of Serbia. It was then moved to the SBRA to enable that financial statements are held together with the business registry data and files.

The data set we have covers only companies that appeared in the database for the first time between 2003-2011 (it does not include sole proprietors). The data set provides the address of each firm. Cities listed in this address were hand matched to the 16 courts that handled company registration. Here, we only merged firms in cities with more than 50 firms, which corresponds to about 87% of all firms in the database (66,063 out of 75,771 unique firms).

We use two different pieces of information to calculate the number of new firms in each region that is handled by one of the 16 courts. First, the database includes the year when the firm reports that it registered for the first time. Second, we construct the year when the firm first entered the database.

**Table 2: Two Different Measures of New Firms**

year	Number of firms				
	newly registered	newly entering	Gap year (year <sub>entered</sub> - year <sub>registered</sub> )		
			0	1	2
2003	4,925	4,160	100%	0%	0%
2004	5,021	4,804	86%	14%	0%
2005	8,739	8,604	90%	10%	1%
2006	8,885	8,376	89%	10%	1%
2007	8,931	9,532	86%	13%	1%
2008	8,568	8,859	91%	7%	2%
2009	7,456	7,542	93%	5%	1%
2010	7,151	7,500	93%	5%	1%
2011	6,383	6,686	95%	3%	1%
<b>Total</b>	<b>66,059</b>	<b>66,063</b>	<b>91%</b>	<b>8%</b>	<b>1%</b>

Source: Data from Serbia's Financial Accounts Registry

As shown in table 2, for most firms, the year of registration and year of entering the database are the same, but in some cases, they differ by one or maximum two years. We believe these differences are due to administrative delays in reporting financial accounts. We perform our analysis using both measures and find equivalent results either way. Table 3 presents the number of new firms based on their reported year of registration by commercial court and year.

**Table 3: Number of New Firms by Year and Commercial Court Region**

No	Commercial court	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
1	Belgrade	2,121	2,364	4,507	4,460	4,455	4,243	3,717	3,630	3,245	32,742
2	Kragujevac	228	195	331	329	353	323	251	291	275	2,576
3	Kraljevo	273	246	375	370	353	358	259	245	242	2,721
4	Leskovac*	165	157	198	187	172	156	146	153	119	1,453
5	Niš	259	232	346	337	360	346	291	296	309	2,776
6	Novi Sad	549	609	889	1,056	1,011	1,020	901	824	748	7,607
7	Pančevo	183	187	263	257	290	224	235	196	186	2,021
8	Požarevac	127	130	189	185	215	191	155	184	124	1,500
9	Sombor	90	85	168	135	169	163	168	150	117	1,245
10	Sremska Mitrovica*	128	123	234	248	276	290	220	208	179	1,906
11	Subotica	223	200	367	372	423	379	336	289	231	2,820
12	Užice*	119	69	168	179	149	149	109	88	106	1,136
13	Valjevo	153	185	266	320	297	311	264	215	218	2,229
14	Zaječar	91	73	100	96	114	97	136	141	84	932
15	Zrenjanin	91	70	172	190	148	160	146	118	110	1,205
16	Čačak*	125	96	166	164	146	158	122	123	90	1,190
<b>Total</b>		<b>4925</b>	<b>5021</b>	<b>8739</b>	<b>8885</b>	<b>8931</b>	<b>8568</b>	<b>7456</b>	<b>7151</b>	<b>6383</b>	<b>66059</b>

\* We do not have or have a relatively small number of responses for the distrust data in the commercial courts Leskovac, Sremska Mitrovica, Užice, Čačak, thus the 4 courts are excluded in our analysis later.

Source: Data from Serbia's Financial Accounts Registry

The other variable we use from the financial accounts database is the number of employees reported by firms. We calculate mean employment in new firms. And we also calculate the one-year employment growth rate. Both variables are first calculated at the firm level and the average across court region-years cells.

Finally, we calculate the one- and two-year survival rates of new firms. Here, we first construct an indicator for whether a firm appears in the database again one or two years later and we then average these indicator variables across court region-years cells.

The distrust data are coded from responses in the 2006 Life in Transition Survey conducted by the European Bank for Reconstruction and Development (EBRD), in collaboration with the World Bank (see Synovate, 2006, for a description of the survey). This survey asks, “To what extent do you trust courts?” Answers are coded as follows: (1) complete distrust; (2) some distrust; (3) neither trust nor distrust; (4) some trust; (5) complete trust; (6) difficult to say. As our measure of distrust, we use the fraction of respondents choosing “(1) complete distrust” or “(2) some distrust”.

Table 4 shows the number of respondents in each court region and the fraction of these respondents that report complete or some distrust in courts. The survey does not include any respondents in the court regions of Sremska Mitrovica and Čačak, which is why these regions are dropped out of our analysis. For two regions, Leskovac and Užice, the survey only includes 20 respondents each and the distrust numbers fall outside the range of those in other courts. We thus believe that 20 respondents are too few to obtain a reliable measure of distrust and drop these two court regions from the analysis. We are left with 12 court regions for which we have new firm and distrust data. Table 5 shows summary statistics for all variables used in the analysis.

**Table 4: Percentage of Responses with Complete or Some Distrust in Courts**

No	Commercial court	Number of respondents	Complete or some distrust
1	Belgrade	260	62.93
2	Kragujevac	100	50.00
3	Kraljevo	80	43.04
4	Leskovac*	20	85.00
5	Niš	60	68.33
6	Novi Sad	80	65.00
7	Pančevo	60	46.67
8	Požarevac	40	60.00
9	Sombor	40	77.50
10	Subotica	40	57.50
11	Užice*	20	25.00
12	Valjevo	40	65.00
13	Zaječar	60	66.67
14	Zrenjanin	100	65.00
	Total	1000	59.83

\* Note that commercial courts Leskovac and Užice are excluded in our analysis

Source: 2006 Life in Transition Survey

**Table 5: Summary Statistics**

2003-2011

	N	mean	min	max	p10	p25	p50	p75	p90
<i># of new firms registered</i>	108	559	70	4507	110	166	246	353	1020
<i># of new firms entering</i>	108	559	72	4755	103	161	237	356	1053
<i>Mean employment</i>	108	4.85	0.81	91.7	1.49	1.8	2.45	4.09	9.61
<i>1-year survival rate (%)</i>	96	89.8	71.5	99.6	82.5	85.9	89.9	93.5	98.2
<i>2-year survival rate (%)</i>	84	81.4	58.6	98	73.8	77.8	80.3	83.9	93.1
<i>1-year growth rate (%)</i>	96	-9.65	-151	28.4	-29.1	-16.1	-7.56	0.45	8.59
<i>Distrust</i>	108	0.61	0.43	0.78	0.47	0.54	0.64	0.66	0.68

Pre-reform period: 2003-2004

	N	mean	min	max	p10	p25	p50	p75	p90
<i># of new firms registered</i>	24	374	70	2364	85	109	191	253	609
<i># of new firms entering</i>	24	336	72	2243	72	93	185	224	571
<i>Mean employment</i>	24	11.6	1.33	91.7	1.49	2.62	4.27	12.7	23.7
<i>Distrust</i>	24	0.61	0.43	0.78	0.47	0.54	0.64	0.66	0.68

Sources: Data from Serbia's Financial Accounts Registry and 2006 Life in Transition Survey

#### 4. Identification strategy

We identify the effects of the reform with a difference-in-difference strategy that compares formal firm creation before and after the reform across regions based on the level of distrust in regional commercial courts. Our main regression model takes the form:

$$\text{Log}(\# \text{ new firms}_{r,t}) = \alpha_r + \beta_t + \delta \text{reform}_t * \text{distrust}_r + \varepsilon_{r,t}, \quad (1)$$

where the outcome variable is the log of the number of new firms in region  $r$  in year  $t$ , and  $\alpha_r$  and  $\beta_t$  are region and year fixed effects, respectively. The variable  $\text{reform}_t$  is equal to 0 before 2005 and equal to 1 after (and including) 2005. The variable  $\text{distrust}_r$  is the measure of distrust in the court responsible for region  $r$ . As described in section 3, it represents the fraction of survey respondents in region  $r$  who say they have at least some distrust in courts. The coefficient  $\delta$  measures the effect of the reform on the number of newly registered firms. We expect it to be positive and statistically significant, indicating that more firms registered in years after the reform compared to years before the reform and this difference was larger in regions with higher levels of distrust in courts. The number of observations in equation (1) is 108 (12 court-regions times 9 years of data). Standard errors are bootstrapped<sup>5</sup> and clustered at the region level.

The identification assumption is that, in the absence of the reform, the level of distrust in courts would not have been correlated with the change in number of new firms over time. To test whether this assumption is plausible, we estimate the following variant of equation (1) using pre-reform data only, i.e. data for the years 2003 and 2004:

$$\text{Log}(\# \text{ new firms}_{r,t}) = \alpha_r + \beta_t + \gamma \text{yr2004}_t + \delta \text{yr2004}_t * \text{distrust}_r + \varepsilon_{r,t} \quad (2)$$

where  $\text{yr2004}_t$  is equal to 1 in year 2004 and equal to 0 in year 2003, and all variables are defined as in equation (1). If the level of distrust in courts was not correlated with the change in outcomes before the reform, the coefficient  $\delta$  will be equal to zero. Columns 1 and 2 of table 6 shows the coefficient  $\delta$  from estimating equation (2) for our two different measures of new firms (based either on reported year of registration or year the firm entered the database). The coefficients for both variables are not statistically different from zero, suggesting that our identification assumption is plausible.

To measure the effect of the reform on our other outcome variables of new firms (log mean employment size, 1-year and 2-year survival rates, and the 1-year employment growth rate), we

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<sup>5</sup> Using the `vce(boot)` option with 50 replications in STATA.

estimate equations analogous to (1). We also estimate a regression analogous to equation (2) to check for a pre-reform correlation between the level of distrust and the change in one of our other four outcome variables: mean employment size. Column 3 of table 6 shows the coefficient  $\delta$  for this regression. The coefficient indicates that level of distrust was not correlated with the change in mean employment in new firms over the pre-reform years 2003 and 2004. We cannot perform the pre-trend analysis for survival and growth rates since we only have two pre-reform years and would thus have to use post-reform years to calculate these rates.

**Table 6: Pre-Trend Analysis**

	Dependent variable:		
	Log number of new firms registered	Log number of new firms entered	Log mean employment in new firms
	(1)	(2)	(3)
yr2004* Distrust	0.0715	0.186	-0.881
	(0.317)	(0.476)	(3.165)
Observations	24	24	24
R-squared	0.116	0.298	0.603
Number of regions	12	12	12
Notes: All regressions include region fixed effects and a dummy variable for year 2004. The outcome variable in column 1 assigns new firms to the year they report as their registration year. The outcome variable in column 2 assigns new firms to the year when they first appear in the database. Mean employment in column 3 is based on year of entry, not year of registration (since it is only observed once a firm enters the dataset). Bootstrapped standard errors clustered at the region level in parentheses; *** p<0.01, ** p<0.05, * p<0.1			
Sources: Data from Serbia's Financial Accounts Registry and 2006 Life in Transition Survey			

## 5. Results

We find a positive effect of the reform on the number of new firms. This effect is statistically significant at the 1-percent level (table 7, columns 1 and 2). That is, we find that the post-2005 increase in new firm registration was greater in regions with high distrust in courts than in regions with low distrust in courts. The magnitude of the coefficient in column 1 implies that going from the lowest level of distrust (0.43) to the highest level (0.77), the reform increases the number of registered firms by 34% ( $\exp(0.861*0.77)/\exp(0.861*0.43)-1=0.34$ ). Since the average number of firms registering in a region-year cell is 559, this increase corresponds to 190 additional firms per

region-year that register due to the reform. In addition, mean employment of newly entering firms is smaller, but the coefficient is not statistically significant.

The coefficient in column 3 of table 7 suggests that the reform lowered the average size of new firms, but this effect is not statistically significant. Similarly, we find no significant effect of the reform on the one-year employment growth rate.<sup>6</sup> We do find, however, that the reform increased the one and two-year survival rates of new firms (columns 4 and 5 of table 7). The coefficient in column 4 suggests that going from the lowest level of distrust (0.43) to the highest level (0.77) increases the one-year survival rate by 3.8 percentage points ( $11.17 \times (0.77 - 0.43) = 3.8$ ), compared to an average survival rate of 89.8% (table 5). The corresponding increase in the two-year survival rate is 8.3 percentage points, compared to an average survival rate of 81.4%.

**Table 7: Effect of the Reform on New Firms**

Dependent variable:						
	Log number of new firms registered	Log number of new firms entering	Log mean employment in new firms	1-year survival rate of new firms	2-year survival rate of new firms	1-year employment growth rate of new firms
	(1)	(2)	(3)	(4)	(5)	(6)
Reform*Distrust	0.861*** (0.268)	0.842*** (0.274)	-0.652 (0.977)	11.17* (6.758)	24.40* (13.74)	-32.92 (31.48)
Observations	108	108	108	96	84	96
R-squared	0.792	0.860	0.502	0.750	0.791	0.132
Number of regions	12	12	12	12	12	12

Notes: All regressions include year and region fixed effects. The outcome variable in column 1 assigns new firms to the year they report as their registration year. The outcome variable in column 2 assigns new firms to the year when they first appear in the database. Employment, survival and growth in columns 3 and 6 are based on year of entry, not year of registration (since they are only observed once a firm enters the dataset). The growth rate in column 6 is calculated as

$$growth_t = \frac{emp_t - emp_{t-1}}{(emp_t + emp_{t-1})/2}$$

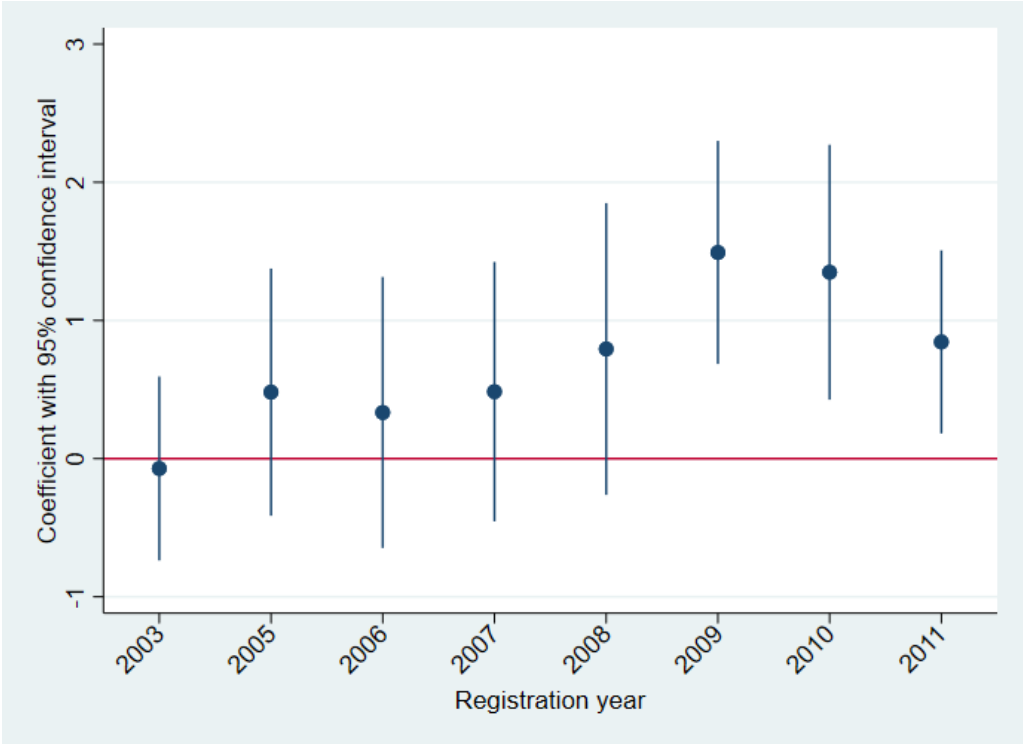
at the firm level. After that, we take the simple average of growth rates in a region-year cell. Bootstrapped standard errors clustered at the region level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Sources: Data from Serbia's Financial Accounts Registry and 2006 Life in Transition Survey

<sup>6</sup> As a robustness check, we also calculate an employment growth rate that is weighted by firm employment when taking the average within court-year cell. We also find no statistically significant effect here.

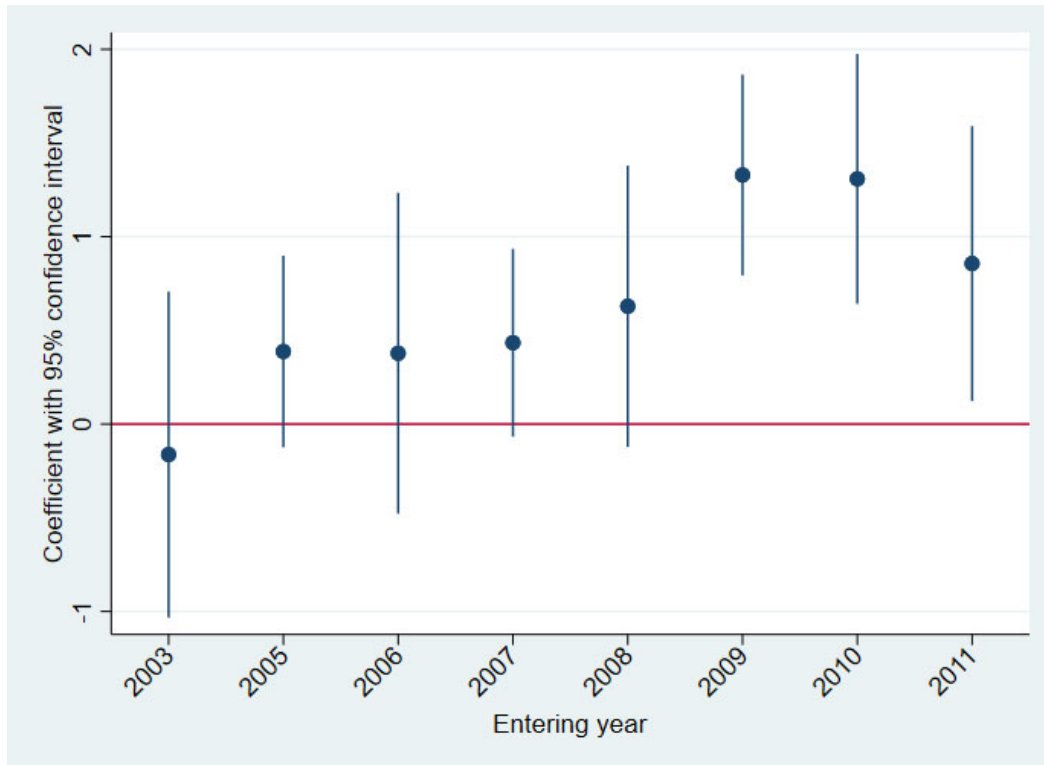
Figures 1 and 2 show the effect of the reform on the number of new firms estimated separately for each year in our data. The base year is 2004. The size of the coefficients is relatively stable during the first three years after the reform (2005 through 2007) and then increases from 2008 onwards. Note that the coefficients have large standard errors and not all of them are statistically significant, likely because we do not have enough power to estimate all effects separately. The fact that the effect of the reform was larger from 2008 onwards may be related to other reforms that happened around the year 2009 in the business registration domain in Serbia, such as unifying all procedures required to start a business at the SBRA.

**Figure 1: Effect of the Reform on Number of New Firms Registered Over Time**



Sources: Data from Serbia’s Financial Accounts Registry and 2006 Life in Transition Survey

**Figure 2: Effect of the Reform on Number of New Firms Entering Over Time**



Sources: Data from Serbia’s Financial Accounts Registry and 2006 Life in Transition Survey

## 6. Conclusion

This paper measures the effect of a reform in Serbia that transferred business registration from regional courts to a new administrative agency in 2005. Our results suggest that the reform increased the number of new firms by up to 34%. The effect of the reform is larger in regions with high distrust in courts than in regions with low distrust in courts. We also find that the reform increased the one- and two-year survival rates of new firms. This increase in survival rates contrasts with effects found, for example in Portugal, where registration reform attracted the more “marginal” firms (Branstetter et al. 2013).

Our paper adds to the previous literature on business registration reforms that has typically studied the introduction of one-stop shops. We find bigger effects on firm creation than those other papers and find evidence that the reform allowed higher-quality firms as opposed to lower-quality firms to register.

Overall, it seems that reforms that transform a highly discretionary business registration regime, such as one managed by courts, to a purely administrative procedure that is simple,

transparent and electronic have larger effects than simply putting in place a one-stop shop that integrates procedures without substantive changes to the underlying institutional setup. In addition to lowering entry costs, such reforms can eliminate discretionary powers, such as the ones exercised by judges, to decide whether to allow firms to register or not and to put up potential roadblocks.

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