Abstract

Explanations for the sharp difference in the economic growth performance of Russia and China under economic reform vary widely. Some observers emphasize the differences in the choice of initial reform strategy, others the inherited institutional environment for economic activity. There is a debate over which institutional characteristics are conducive to good growth performance: decentralization and competition among local governments or centralization of control over performance targets. Yet there has been little systematic empirical effort of the Russian and Chinese cases to test the implications of these theories for the behavior of firms. This paper uses data from surveys of firms conducted by the World Bank in 2012 to analyze differences in business-government relations in Russia and China. The findings support theories that differences in levels of administrative decentralization and local government competition help account for differences in business-government relations in the two countries and the more dynamic business environment overall in China.

Keywords: China; Russia; government-business relations; enterprise surveys; institutional environment
Regional Variation in Business-Government Relations in Russia and China

1. Introduction

The dramatic contrast in the record of economic performance since market reforms began in Russia and China has attracted worldwide attention. World Development Indicators figures imply that the average annual compound growth rate for GDP per capita (in PPP terms and constant 2005 dollars) was 1.1% for Russia from 1991 to 2013 and 8.8% for China from 1980 to 2013. Explanations for the difference abound. For many, the explanation lies in the radical market-oriented policies adopted by Russian leaders under Western influence (Cohen 2001; Stiglitz 2005; Kotz 2005). They contrast this with the gradualism and etatism pursued by China. Some have gone so far as to treat China's path as an alternative model of development—the “Beijing consensus” (Ramo 2004). Closer studies of the politics of reform in China tend to attribute China’s performance less to strategic vision than to skillful and pragmatic bureaucratic maneuvering (Shirk 1993). Only if the absence of a grand strategy can be considered a grand strategy can we term China’s reform policies a model. China also adopted many more features of the “Washington Consensus” than is conventionally recognized, as Scott Kennedy has pointed out (Kennedy 2010). Many observers, and certainly China’s leaders, hold that by

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retaining the communist party’s political monopoly, China preserved a steering capacity that Russia relinquished when the CPSU dissolved (Solnick 1996).

Often writers counterpose a stylized version of one country’s trajectory to a detailed analysis of the other’s. For example, among China specialists it is axiomatic that the Soviet and post-Soviet Russian record reflects disastrous policy choices. Most would agree with Susan Shirk that "the Soviet strategy of political reform before economic reform produced political chaos and disintegration and a decline in living standards and growth rates" or Dali Yang’s assessment that "Russia's shock therapy did not produce a sound market economy but instead a sort of anarchic capitalism riddled with corruption" or Minxin Pei’s judgment that "of course, the big-bang approach has failed miserably in Russia" (Shirk 1993, p. 5; Yang 2004, p. 297; Pei 2008, p. 207). For the Chinese leadership, the Soviet/Russian case remains a potent source of "negative teaching material," a lesson in how not to carry out reform (Bernstein and Li, 2010, pp. 1-23).

However, theories focusing on choice of reform strategy ignore the strong element of endogeneity in the policy choices made by reformers in the two countries. Anders Aslund points out that the starting points for reform in the two countries could scarcely have been more different: China was a largely agrarian society, Russia a largely urban, industrial society; China’s bureaucrats had just undergone the trauma of the Cultural Revolution, whereas Soviet bureaucrats were adept at resisting any loosening of control; Chinese peasants were eager to respond to the opportunity to produce for market profit, Russian peasants, workers, and managers were fearful of liberalization and unsure of the leaders’ commitment to it;
Russia’s economy was dominated by giant loss-making industrial firms, China’s was still heavily oriented to manual labor; the share of defense production in the Soviet economy was far greater than that of China (Aslund 2007). The architect of Russia’s reform of the early 1990s, Egor Gaidar, himself pointed out that it is usually forgotten that, influenced by Chinese experience, Gorbachev had legalized individual private farming and individual entrepreneurship in 1986 and 1987 but that Russian economic agents had failed to respond in the way that the Chinese had responded (Gaidar 2007, p. 157). As is often the case in studying institutional effects, therefore, it is impossible to distinguish the effects of institutions from the effects of the conditions under which they were adopted on both the institutions and the outcomes (Przeworski 2004).

Cross-national comparison can often help disentangle congruent causal effects. In the context of a single country study, we cannot distinguish the effects of the communist political and economic system on postcommunist trajectories from the effects attributable to longer-term historical influences (Kitschelt 2003; Pop-Eleches 2007; Darden 2006.) China adopted most of the features of the Stalinist model of economic, political and social organization as it was building its communist economy in the 1950s. Soviet advisors oversaw the First Five-Year plan and Soviet assistance helped lay the foundation of China’s industrialization in the 1950s. In the 1960s and 1970s, scholars routinely treated the USSR and China as alternative models of communism (Schurmann 1966; Leonhard 1977; Johnson 1970). But while the different "roads to communism" in Russia and China were explored extensively,
there are strikingly few detailed empirical comparisons of the roads from communism (Rozman 1992 is a rare exception; see also Balzer 2008).  

Nonetheless, one point of comparison has been the legacy of economic administration in postcommunist Russia and China. Here the question concerns the way past centralization or decentralization of economic control shapes present-day incentives faced by local party and government officials with regard to economic growth. Theories in this vein vary. Some argue that local government autonomy and cross-regional competition drive growth; others claim that the central government sets the overall policy targets and manages the system for appointing and dismissing officials. Central control capacity, in the second view, enables the regime to restrain local rent-seeking and to reward effective governance, whereas local autonomy, according to the decentralizers, allows local governments to compete for the center’s favor by creating hospitable environments for productive investment. To date, however, these competing views have not been investigated empirically.  

In this paper I seek to shed light on the degree to which government decentralization and competition affect business-government relations in the two countries. The data are drawn from two 2012 World Bank surveys of firms. Before describing the survey in more detail, however, let us consider the implications of administrative centralization and decentralization for economic performance.  

An influential institutional argument that administrative decentralization generates incentives for subnational government officials to induce productive

\[^{3}\text{I treat China as postcommunist because of its use of market institutions to achieve economic development, recognizing that it has retained the political institutions of a communist political system.}\]
activity is the theory of “market-preserving federalism” (Montinola, Qian and Weingast 1995; Weingast 1995). In a series of papers, Barry Weingast and his co-authors argue that the decentralization of control over economic regulation and social welfare administration that China carried out in the 1980s and 1990s, together with liberalization and the establishment of property rights, enabled the country to induce competition among provincial and lower governments that has restrained state predation and encouraged productive investment. Some scholars have found empirical evidence indicating that good growth performance by local and regional officials benefits their career advancement (Li and Zhou 2005; Yao and Zhang 2014). Several studies have argued that China’s legacy of greater administrative decentralization than that of the USSR and Russia helps to explain the benefits of local and regional competition for China (Qian and Xu 1993; Qian et al. 2006; Qian 2000; Xu 2011; Harrison and Ma 2013).

However, Hongbin Cai and Daniel Treisman argue that not decentralization, but centralized rule and competition among leadership factions, is the key to China’s economic growth (Cai and Treisman 2006, 2005). They point out that China’s nomenklatura system continues to ensure that central party personnel managers appoint, rotate, and dismiss regional party and government officials according to their assessments of performance, and that moreover, the center frequently acts to restrain local predation rather than the other way around. Encouragement for local experimentation, certainly an important feature of China’s policymaking process,

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4 This argument builds on the insight that organizations whose administrative divisions are structured in such a way as to induce an element of competition among them can generate useful information about the relative ability of divisional managers by comparing their performance records. Cf. Maskin, Qian and Xu 2000.
requires central monitoring and dissemination of information. Thus the question remains of how important centralization of control is to maintain the system of incentives that reward local competition and growth.

It is certainly the case that China has retained a higher degree of administrative decentralization than Russia, notwithstanding its centralized instruments of political control (such as the CCP, the National Development and Reform Commission, and other vertically organized agencies). A simple illustration of this point is the balance of subcentral revenues in total state fiscal revenues. As Figure 1 indicates, the share of total revenues going to the central government rose and fell sharply in China: rising after the Cultural Revolution, declining from the mid-1980s to mid-1990s, rising again after the tax reform of 1994, then declining modestly in the last several years. In Russia, the center’s take rose significantly under Putin, fell after the mid-2000s, then rose again with the recession of 2009. Today there is a widening difference in the center’s share of total revenues (48% in China, 61% in Russia). (Figure 1 about here)

They differ still more with respect to the level of centralization of economic coordination during the period of central planning. The Soviet central government exercised far more extensive control over the Soviet economy than did its Chinese counterpart. Relative to the size of the country, China’s provinces and cities had much more planning authority than did Russia’s. Moreover, China’s economy had a far larger proportion of small and medium-sized industrial enterprises than did the Soviet economy. This is important because the small and medium-sized enterprises--and even some of the largest enterprises-- were subordinated to the
provincial and municipal governments. As of 1984, China's central plan accounted for only about 30-40% of industrial output (Wong 1987, p. 389). Production in the Soviet economy was far more concentrated. Formally, 55% of Soviet industrial output in 1984 was produced by enterprises subordinate to the central (union) government (*Narodnoe khoziastvo SSSR v 1984 g.*, p. 131). In 1983, there were fewer than 46,000 industrial enterprises and associations in the Soviet Union. Of those, a set of giant enterprises numbering fewer than 1500 produced nearly half of all industrial output and employed one third of industrial labor (Hewett 1988, p. 115). Fewer than half of Soviet industrial enterprises employed fewer than 200 workers (Aslund 1995, p. 152). At the point of the transition, over 90% of Russian cities and towns had nine or fewer civilian firms, and almost half had only a single firm. This left many cities highly vulnerable to economic shocks as supply chains and markets were disrupted when planning broke down (Brown, Ickes and Ryterman 1989, p. 35).

China decentralized administrative control over economic production as it broke away from the Soviet model of planned industrial development starting in the late 1950s. Campaigns such as the Great Leap Forward and the Cultural Revolution only accelerated the tendency toward the self-sufficiency of province, city and county-level economies, the tendency Donnithorne (1972) termed the "cellularization" of Chinese economic development. The Cultural Revolution carried this process to an extreme, but the years after the Cultural Revolution saw only a modest restoration of centralized control before Deng undertook the program of "reform and opening up" after 1978.
Levels of administrative centralization thus differed at the point market reform began. The Soviet economy relied far more heavily on central coordination of production because of the much smaller number of potential suppliers and customers for giant industrial producers. The Chinese economy could tolerate more coordination of production decisions at subnational levels because of the much larger number of smaller producing units that were subordinate to provincial and urban governments. This suggests that producers in the Chinese economy were less vulnerable to disruptions caused by the loss of suppliers and customers and therefore better-positioned to respond to the opening of the market.

At the same time, China’s higher level of administrative decentralization is accompanied by a high level of political centralization (Landry 2008). That is, the CCP maintains its hierarchical nomenklatura system, adopted from the Soviet model, for appointing, dismissing and rotating cadres at all levels (Manion 1985; Burns 1994; Harasymiw 1984). The combination of political and administrative centralization permits China to set performance targets for local cadres, while giving them some discretion in achieving them (Edin 2003; Chou 2009; Heilmann 2008a, 2008b). Russia, meantime, combines high political centralization with high administrative centralization. Under Putin’s "vertical of power," the presidential administration exercises close control over the choice of governors, (even in periods when elections are held) while setting detailed performance targets for them to achieve. In contrast to China, economic growth has not been an overriding priority;
ensuring support for President Putin and United Russia appears to trump all else (Reuter and Robinson 2012).

These differences imply that the institutional environment in which local governments operate generates a more favorable climate overall for productive investment in China than in Russia. We would therefore expect to find evidence that administrative decentralization and inter-regional competition tend to induce productive investment in China more than in Russia. For the same reason, we should expect to find that local governments in China will exhibit greater diversity in institutional arrangements as leaders innovate and experiment with policy. Depending on local conditions, some may take on the features of a “developmental state” or “local state corporatism,” while others might take a more hands-off approach to business (Liu 2008; Doner, Ritchie and Slater 2005; Oi 1992, 1995).

We can evaluate these arguments by comparing enterprise behavior and business-government relations at the local level in the two countries. The differing strength of incentives to induce growth posited by the institutional theories should be evident at three levels of analysis: aggregate differences between the two countries in the institutional environment for business; regional and local institutional environments in the two countries; and firm-level behavior. I use data from World Bank enterprise surveys conducted in Russia and China in 2012 to do so. Corresponding to these three levels of analysis, I derive three specific predictions

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*often as the center tries to streamline the list, however, it grows again as policy priorities get added to the national agenda. For example, in spring 2015 the Duma debated a law that would add measures of the physical fitness of their citizens to the list of performance indicators (Voronov 2015).*
about ways in which the patterns of business-government relations are expected to differ between Russia and China.

First, at the aggregate national level, we should expect the quality of government interaction with business firms to differ. If local governments in China have greater motivation to promote economic growth than in Russia, we would expect to find that firms would consider local government more favorable to business in China than in Russia. Second, at the level of firms, business firms in China would be predicted to be engage more in productivity-enhancing investment because of the more competitive environment they face. Finally, because local governments have more discretion over their institutional environments in China, we would expect greater diversity in business-government relations across localities in China than in Russia.

2. Research Design

The data for this paper are drawn from the World Bank’s business enterprise surveys (http://www.enterprisesurveys.org). The World Bank and its collaborating organizations have been conducting enterprise surveys since 2002 in 135 countries on the basis of face-to-face interviews with senior managers of firms; in Eastern Europe these are known as the Business Environment and Enterprise Performance Surveys (BEEPS). The instruments are constructed so as to yield as much directly comparable information across countries as possible, but there are modest variations across years and countries. Therefore it is fortunate that the 2012 surveys in Russia and China ask almost identical batteries of questions.
The 2012 Russian survey interviewed business owners and top managers in 4,220 firms from August 2011 through June 2012. The 2012 China survey interviewed business owners and top managers in 2,700 firms from November 2011 through March 2013. The purpose of the surveys is to obtain a picture of the business environment at the national level. The World Bank takes care to draw up a nationally representative sample of firms stratified by region, sector, size and ownership type. A battery of similar questions is asked in each survey concerning the firm’s operations and the relations between the firm and the local government. Although there are minor differences between the Russian and Chinese 2012 surveys, there is a great deal of overlap between them, facilitating direct comparison.

I take advantage of a feature of these enterprise surveys that permits cross-regional comparison, although this was not the intent of the survey’s designers. The survey took care to draw up national samples stratified not only by firm size and sector, but also by primary sampling unit. In both the Chinese and Russian surveys, there were enough firms in each geographic sampling unit to warrant treating the units as samples in themselves. Doing so allows us to compare business environments across different territorial units, as well as across countries. Below I justify this use of the data in more detail.

The Chinese 2012 survey covered firms in 25 cities. At least 100 firms in each city were selected. For most cities, more than 100 firms were interviewed. All were privately owned. A third of the cities are coastal trading cities. The median city in the sample was much wealthier (as measured by gross output per capita) than the median city in China overall. However, they varied widely in levels of wealth.
The Russian 2012 survey interviewed firms in 37 regions. In most Russian regions sampled, around 120 firms were interviewed and in none were fewer than 79 firms represented. The gross regional output per capita of median Russian region in the sample was about 10% higher than the national median. Again, the overwhelming majority of the firms in the Russian survey were 100% owned by domestic private owners. Consequently, in neither survey is variation in ownership type used as an explanatory variable for firm behavior and outlook.

As noted, I chose to treat the territorial units as samples in themselves. This was motivated by the theoretical question about cross-regional variation in institutional characteristics, and justified by the fact that the surveyors took pains to construct pools of firms in each sampling unit that were homogeneous in composition by size and sector of the firms.

In many cases, respondents failed to provide answers to some questions. As a result, I excluded some items from analysis on the grounds that too few firms provided responses. In the case of Shanghai, so few firms in the city provided any answers at all (only 36) that I dropped all the Shanghai firms from analysis. I have

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6 Note that the geographic sampling units in Russia were regions, ie first-order administrative-territorial units, whereas the sampling units in China were cities. It is possible that this difference affects the results. Below I discuss this point further.

7 In the case of Russia, the coefficient of variation for mean size of firm was only .04 across the regions sampled; the cv for the proportion of firms that were in the service sector was .126 and that for the proportion of firms in manufacturing was .24. For China, the cv’s were similar for individual sector shares. Here even more fine-grained sectoral categories are available. The cv for the average share of food and related industries was .3; for chemical industries it was .23; for machine-building .34; for retail and wholesale trade it was .69. 7 The city samples are closely matched with respect to (logged) firm size as well. The coefficient of variation for firm size was .07.
also dropped observations from the analysis in cases where firms did not provide an answer or chose the "don't know" response.

By treating the individual territorial units as samples in their own right we can add an intermediate level of analysis between the firm and the country. This is particularly important for analysis of large, territorially heterogeneous countries such as Russia and China, where regional differences in economic profile, wealth, society and political environment are associated with institutional differences affecting firms. It is all the more important to take advantage of cross-territorial variation when attempting empirical tests of propositions about administrative decentralization. The 2012 surveys of enterprises in Russia and China each have adequate numbers of territorial units and firms in each territorial unit to permit an examination of both cross-national and cross-regional differences in the business environment. Although per capita GDP in the Russian regions sampled was somewhat higher than the national median, and that of the Chinese cities much higher, analysis of the growth rates of the two samples indicate that the median growth rate of each sample was equal to that of the national median. Below I shall return to the methodological issues posed by the fact that China’s units are cities whereas Russia’s are regions and the fact that China’s sample cities tend to be richer than the national average.

Table 1: Enterprise sample units compared with national aggregates, median and coefficient of variation

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<th>Sample</th>
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<td>Russia (2010)**</td>
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<td>Compound average annual growth rate</td>
<td>China (GDP, 2000-2011)</td>
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<td>Russia (GDP per capita, 2000-2010)</td>
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*Yuan per person  
**Rubles per person  

NB: National figures for China are based on all prefect-level cities. The Chinese statistical agency reports these as province-level aggregates. Note that aggregating by province reduces overall variation.

Source: Rosstat; China Data Online

3. Results

The first hypothesis concerns the overall difference in business conditions between Russia and China. Here our expectation is that, overall, China's local governments will be more conducive to business than Russia's. Four sets of items from the surveys allow us to evaluate this proposition. The first asks the firms' views of the greatest problem they face in their business environment. (Table 2)

For China, access to finance, worker educational levels, and the competitive environment were the problems most likely to be considered the severest obstacles to doing business. For Russia, tax rates (presumably including social insurance contributions) were far and away the greatest problem, followed distantly by access to finance. No other problem was cited by more than 8% of the firms. The fact that for China, access to finance was the most commonly cited problem, followed by the workforce's educational levels, suggests that problems that are only indirectly the
result of government policies are far more likely to be obstacles to business in China than those directly stemming from government’s actions, such as tax rates, corruption, and licensing. Although tax rates were named by 16% of respondents in China, in Russia more than twice as many firms did so.

Ideally, we would test the first hypothesis by examining responses to items about corruption. The surveys sought in various ways to obtain information about corruption. For example, a number of questions in both surveys asked about the prevalence of "informal payments" and "gifts" in various situations (for example, following a question about visits from tax inspectors, the survey asked "in any of these meetings or inspections was a gift or informal payment expected or requested?"). However, few firms in either country provided responses to these questions. Those that did overwhelmingly claimed that no informal payments or gifts were expected or requested. In China, for example, 2293 firms provided some response to a question about the total value of informal payments as a percentage of annual sales; of those only 73 firms named a figure greater than zero. In the Russian survey, of 2645 firms providing some response to the equivalent question, 1890 firms claimed that no payments had been given. We can interpret these results in either of two ways. We could take them at face value and conclude that there is very little corruption in either country in firm-government relations. Alternatively, we could infer that the issue of corruption is so sensitive that firm managers prefer to give no answer or an inaccurate answer rather than risk answering candidly. In view of official attention to the problem of corruption in both countries, it would be highly unwise to take the results to these questions at face value.
There are three other items, however, that yield more informative patterns of responses. The first concerns the total amount of time that senior management spends dealing with government regulations. We can take this as a rough measure of the degree to which administrative regulation is burdensome for firms. Table 3 reports the results. (Table 3)

It is striking that, in the Chinese survey, 55% of firms reported that no time was spent by senior management on regulations. The mean amount of time spent by firms was 1.3%. In Russia, by contrast, only 16% of firms reported spending no time. The mean amount of time was 18%, the median was 10%.

Another dimension of the institutional environment for firms has to do with the judicial system. Table 4 displays the results to a question about perceptions of its fairness. (Table 4 here)

About 60% of Chinese firms reported that the court system was fair whereas only one third of Russia firms agreed. Whatever institutional qualities the court systems may have in each country, in the aggregate there appear to be significant differences in the aggregate between them.

Finally, Table 5 reports the responses to an item about the degree to which unregistered, informal-sector firms pose difficulties for the given enterprise. This question may be taken as an indication of the degree to which law enforcement bodies are able to enforce regulations affecting licensing, labor safety, wages, taxes, pollution, and the like. If authorities turn a blind eye to the practices of firms that evade regulation, it would suggest that they are inept or corrupt or both. (Table 5)
In Russia, over 14% of firms reported that competition from the informal sector was a major or very severe obstacle, as opposed to only 4% of Chinese firms. Over 60% of Russian firms but almost 80% of Chinese firms reported that it was not an obstacle or only a minor one. Thus it appears that such competition is a somewhat greater problem for Russian firms than Chinese ones.

In each case, therefore, firms in China found government to be less of a hindrance to their operations than did Russian firms. These results support the expectations of the institutional theories. While we should not place undue weight on any one of these results, the patterns of differences between responses in Russia and China are consistently in the same direction.

The second hypothesis translates these aggregate cross-national differences into predictions about firm-level behavior. We hypothesized that cross-regional competition encourages regional officials to encourage firms to engage in growth-generating effort. This would imply that firms in China would tend to be more oriented to productive investment in physical and human capital, to be more innovative, and to do more to upgrade technology. Five items from the two surveys allow us to test this hypothesis directly. They concern the provision of training to employees; possession of an ISO or similar certification; introduction of new management practices; effort devoted to research and development; and introduction of new products and services. Each indicates the degree to which firms are oriented to improving their competitive position by upgrading skill and technology. Table 6 summarizes the results. (Table 6)
In all cases, Chinese firms are more competitively-oriented than Russian firms. 85% of firms in China, but fewer than half in Russia, reported offering training. Fewer than 11% of Russian firms have ISO or equivalent certification, whereas over 60% of the Chinese firms do. In China, 45% of firms had introduced new management practices or structures in the last three years, while in Russia, only 26% of firms had done so. In China, 40% expended resources on in-house R & D; in Russia, 86% did not. In China, just over half the firms had introduced a new product or service, in Russia, only slightly over a quarter had done so.

The third hypothesis concerns the relative degree of variation among territorial units in institutional characteristics. We expected to find that, compared with Russia, China’s local governments will feature greater diversity across territorial units, and, greater homogeneity within them, reflecting the local differences in the institutional choices made by local governments.

Table 7 displays the results of an analysis testing this proposition. The items are those already discussed but now incorporated into a multi-variate model predicting the likelihood of a positive response. To facilitate comparison, I have made all the response variables dichotomous. I conducted the analysis using STATA’s xtlogit procedure for multi-level logistic regression. Here firms are the basic unit of observation. Firms are nested inside territorial units (again, cities for China, regions for Russia) which in turn are nested in the national samples. Firm responses to each question are regressed on three co-variates: the logged size of the firm; the employees’ overall level of education (measured as the share of the workforce with a higher education in Russia, and a secondary education in China),
and the gross regional/city product per capita. (Russia’s figure is for 2010, the latest figure available; China’s is for 2011). The territorial units are the panels. The estimation yields a predicted mean value for each firm’s response conditional on its being located in the given panel. The predicted firm responses are then aggregated to yield a mean value for each question for each territorial unit. That is, the value is the average expected likelihood for a particular city or region that a firm in that city or region will give a positive response to a given question, holding firm size and educational level and city or region GDP per capita constant. The point of the exercise is to test the thesis that in China’s more regionally heterogeneous structure of economic administration, conditions for firm behavior and firm-government relations will vary more across regions than in Russia. By implication, the territorial units within China will also show more internal homogeneity relative to total variation. Two statistics are used to test these expectations: the intra-class correlation statistic, or rho, and the coefficient of variation.

The rho statistic in a multi-level model indicates the amount of variation across observations that is explained by correlations within the units in which the observations are nested (intra-class correlation) relative to the amount of variation observed across the panels. In this case, that means the degree to which firms in a given city or region offer similar responses after holding constant firm-level characteristics, such as the size of the firm, the educational level of the firm’s workforce, and the gross output of the city or region per capita. How much of the pattern of variation, in other words, is accounted for by common features of territorial units as opposed to characteristics of the firms or the level of wealth of
the territorial unit? In every case, the rho values for China are higher, often by several times, than those for Russia. Thus in predicting the patterns of responses of individual firms, we can explain 20, 30 and even 50% of the variation by the characteristics of the cities where they are located. For Russia, in most cases only 5-10% of cross-firm variation is associated with regional characteristics.

The second measure is the degree to which the mean values vary across the spatial units. The coefficient of variation is used for this test. The \( cv \) is a dimensionless statistic calculated as the standard deviation of a distribution divided by the mean. For the distribution of a given random value (such as mean income per province of a country), a higher coefficient of variation would represent a greater dispersion of values around the country's mean. Note that in a multi-level model such as this, where both rho and the \( cv \) statistics are calculated, as rho increases, the \( cv \) will decrease. This is because the \( cv \) calculates the dispersion of mean values of a variable across different nesting units without taking account of clustering within the units. Consequently, to the extent that intra-unit variation declines relative to cross-unit variation, the \( cv \) is likely to decline as well. (Table 7)

The results again show that in every case, the \( cv \)'s for China are considerably greater than those for Russia. Both rho and the \( cv \) therefore tell the same story. Spatial variation in firm behavior and government institutions is substantially greater in China than in Russia.

4. Discussion
The findings reported here are consistent with the argument that differences in levels of administrative centralization in Russia and China affect business-government relations in such a way as to encourage at least some city governments in China to induce productive investment, innovation, and competition among firms. The evidence therefore adds support to the argument that the differences in economic performance between Russia and China in the reform era can be explained in part by decentralization of control and competition to achieve economic results. Aggregate differences in the obstacles that firms face in the two countries, differences in perceptions of the fairness of courts, intrusiveness of bureaucracy, and enforcement of the rules of competition all reveal an institutional environment less difficult for firms in China than in Russia. Chinese firms are far likelier to complain about the lack of access to finance and the low level of education of the workforce than are their Russian counterparts. Russian firms are likelier to cite onerous tax rates as their greatest burden and to spend more time dealing with government regulations than Chinese firms. These findings are also consistent with the results of surveys of entrepreneurs in Russia and China conducted by Djankov, Qian, Roland and Zhuravskaya, who report that 82% of Chinese entrepreneurs, and only 49% of Russian ones, regard local government as favorably disposed toward entrepreneurship. Attitudes toward regional government broke down almost identically (78% vs. 51%) (Djankov et al. 2006).

We also considered the implications of the institutional perspective for firm-level behavior. Studies of business-government relations in the two countries suggest that Chinese local governments reward successful firms but require them to
compete in international markets (Balzer 2008). For example, Shandong province provides an extra 1% in subsidies to firms for every additional dollar they earn in exports. The provincial government actively targets firms for membership in business groups that will serve as provincial champions, but allows loss-making firms to go bankrupt (Liu 2008). In Russia, by contrast, a characteristic pattern of local business-government relations is the particularistic, often personalized, exchange of favors--tax breaks and subsidies to favored firms in return for support for government’s political interests (Frye 2002; Yakovlev 2006; Aidis et al. 2008). In any case, we do see substantial differences in the degree to which firms in Russia and China seek to adapt to domestic and global competition. Almost no firms in Russia have gone to the trouble of acquiring international quality certification for their products; a majority of the Chinese firms have done so. About twice as many of the Chinese firms have introduced new products or services in the previous three years as have Russian firms. The overwhelming majority of Chinese firms offer training to their employees; fewer than half of Russian firms do so. These findings suggest an environment in Russia in which firms complain of government interference but depend on government to protect them against competition and provide services such as training, whereas Chinese firms are less likely to solicit government assistance or complain of excessive government interference.

We also took advantage of the structure of the data set to explore cross-regional differences and found that Chinese localities vary more in the environments they create for business. For example, as Table 7 showed, the amount of total variation in the predicted probability that firms regard tax rates as their
worst problem explained by intra-city correlations is .37, while that for Russia is .04. Yet tax rates are by far the most commonly cited problem for Russian firms. This suggests that it is the national tax regime in Russia that creates problems for Russian firms, whereas in China there is more local variation in tax regimes.

Do the two methodological issues raised above, i.e. the fact that the spatial units used for this analysis are Chinese cities and Russian provinces, and that the fact that the sample units in China tend to be richer than the national average, undermine these inferences?

In Russia, it is clear that the regions (the 83 subjects of the federation as of 2012) rather than cities are the units where most administrative responsibility is concentrated. The Soviet pattern under which the regions were given general responsibility for managing their economic and social development, whereas cities were extremely constrained, continues today. In China, no one subnational level of government possesses such a predominant share of administrative responsibility. Moreover, the pressure to generate growth operates at all levels of government in China, not just the province level (Xu 2011). Subcentral governments from the province to the county face strong incentives to find new, creative ways of generating revenues. Moreover, because of China’s vast population size, the administrative distance between individual enterprises and province-level governments is far greater than in Russia. Therefore, it is reasonable to compare Russian regions with Chinese cities as relevant institutional settings for firms.

With respect to representativeness, as noted above, the Chinese sample is indeed less representative of the national population than is the Russian sample.
The Chinese survey frame included no cities in which output per capita in 2011 fell below 40,000 RMB; very poor cities were therefore excluded. The median gross domestic product per capita for all cities (aggregated to the province level) is less than half that of the sample median, and the range of variation as measured by the coefficient of variation is considerably higher. Therefore it is possible that the sample overstates the degree to which city governments overall in China are more effective in creating favorable business climates than regional governments in Russia. However, firm-level responses about the business environment were robust to the inclusion of city-level controls. That is, there were substantial commonalities in the way firms regarded the local business environment, even holding constant firm characteristics and the development level of the city. Moreover, variation among growth rates for the sample cities is greater than among cities nationally. This implies that the same factors that drive growth in richer cities also explain it in poorer cities. Seaport cities, for example, did not vary from inland cities in the effects of institutional variation (they were slightly wealthier, but the difference was not statistically significant.) We can be confident, therefore, that we have captured some essential features explaining national variation across cities in the institutional setting for business-government relations, although we cannot be sure what the effect would be of adding much poorer cities to the analysis.

Another objection that might be raised to these results has to do with temporal effects. If we had panel data, we could include fixed effects for both territorial unit and year. As it is, we have to ask whether the particular year in which the survey was conducted affected the results? One way to check this is to
compare the aggregate results of the surveys in 2012 with those in Russia and China conducted in previous years. If there were shocks associated with 2012 (for example, the fact that both countries saw leadership transitions in that year), we might expect the 2012 results to differ from the previous results at the aggregate level. To investigate this possibility, I compared results for the question about the greatest problem faced by firms in their environment for 2005 and 2012 in China and 2009 and 2012 in Russia. The results differ only modestly. The top four responses for China in 2012 (as Table 2 shows) were: access to finance; an inadequately educated local workforce; the practices of competitors in the informal sector; and tax rates. The results for 2005 were quite similar: access to finance was the most-cited problem, followed by availability of electricity, inadequately educated workforce, and the practices of competitors in the informal sector.

The environment for Russia changed only slightly more. In 2012, the top-cited problems were: tax rates; access to finance; corruption; and practices of competitors in the informal sector. These were followed by an inadequately educated workforce and political instability. The results for 2009 were as follows: the most commonly cited problem was access to finance, followed by tax rates, political instability, and an inadequately educated workforce. Corruption was in fifth place. Thus political instability declined by 2012, while corruption rose. Overall, however, the patterns show considerable continuity in the problems faced by firms in both countries. It would be surprising if this were not the case, because firms are responding to patterns of interactions with firms and governments at the local level, which are not likely to be affected strongly or immediately by national
events. Shocks such as a new political line by the central leadership are likely to take time to filter down to the daily practices of firms and local governments.

The results of the analysis certainly do not disconfirm other standard explanations for the aggregate difference in economic performance between Russia and China. Macro-level explanations having to do with the effects of natural resource export dependency in Russia, the greater length of the communist era in Russia, and political culture differences may all be relevant. However, because they operate at the aggregate level, they do not help us explain the effects of local government variation and competition. The combination of political centralization and administrative decentralization has allowed greater variation across regions, relative to intra-regional variation, in China than in Russia. The fact that firms tend to converge on their assessments of the institutional environment in Chinese cities much more than in Russia indicates that we can draw inferences about the effects of specific local institutional settings more in China than in Russia. In Russia, the combination of administrative and political centralization creates a more uniform, and intrusive, national environment for business. The results also support studies that find meaningful differences across regions in state-society relations in both countries (Remington 2011; Stoner-Weiss 1997; Florina, Lai and Tan 2012; Fewsmith 2013).

It is the case that in both countries, businesses are more closely tied to state officials than is the case in liberal market economies. In China, this can take the form of “red hat” enterprises (ie formerly common practice for private businesses to register as state or collective firms), cooptation of party officials onto boards, and
other practices blurring the distinction between the state and private sectors (Tsai 2007; Dickson 2008). Likewise business-government relations in Russia are frequently based on collusion in rent-sharing, capture, or corruption (Yakovlev 2006, 2007, 2011; Hellman, Jones and Kaufmann 2000). Access to finance and tax rates may be politically mediated rather than functions of an impersonal environment. Nonetheless, the BEEPS survey data show that firms and regions can differ markedly in the local environment for business, with the wider variation across cities in China being clearly associated with differences in firm behavior.

As a final point, we should recognize that many analysts of China's economic development, both inside and outside the country, have blamed the system of incentives for local officials in China for rewarding short-term output growth at the expense of other targets, such as environmental protection. For example, central officials are often unable to force local officials to close local enterprises that violate national environmental standards (Economy 2007; Fewsmith 2013). The Russia-China comparison supports the argument that the structure of incentives for officials and firms has produced much higher rates of economic growth in China during the reform era than in Russia. However, General Secretary Xi Jinping has recently downgraded the importance of economic growth as a top-priority performance target in favor of environmental protection, technological modernization, and debt reduction.\(^8\) A telling indication of the effectiveness of

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8 For example, in January 2015, the mayor of Shanghai announced that GDP growth would no longer be a performance target for officials. Shortly thereafter, at the "two meetings" (National People's Congress and National People's Political Consultative Conference), the government announced that achieving growth for its own sake was to be replaced as a national target with a more diverse set of goals, including
administrative decentralization and inter-governmental competition in achieving national policy targets other than those of output growth will be whether the quality of growth becomes more important than the quantity of growth.

scientific and technological modernization and environmental sustainability. (Chu 2015; Wang 2015).
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Figure 1: Trends in Fiscal Centralization, Russia and China
Table 2: "Can you tell me which of the elements of the business environment included in the list, if any, currently represents the biggest obstacle faced by this establishment?"

<table>
<thead>
<tr>
<th>Problem</th>
<th>% of firms citing given problem as greatest obstacle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to finance</td>
<td>Russia 13.13, China 21.98</td>
</tr>
<tr>
<td>Access to land</td>
<td>Russia 3.93, China 4.61</td>
</tr>
<tr>
<td>Business licensing and permits</td>
<td>Russia 3.74, China 0.67</td>
</tr>
<tr>
<td>Corruption</td>
<td>Russia 7.58, China 1.01</td>
</tr>
<tr>
<td>Courts</td>
<td>Russia 0.77, China 0.1</td>
</tr>
<tr>
<td>Crime, theft and disorder</td>
<td>Russia 0.93, China 0.58</td>
</tr>
<tr>
<td>Customs and trade regulations</td>
<td>Russia 2.53, China 1.68</td>
</tr>
<tr>
<td>Electricity</td>
<td>Russia 1.95, China 5.42</td>
</tr>
<tr>
<td>Inadequately educated workforce</td>
<td>Russia 7, China 16.89</td>
</tr>
<tr>
<td>Labor regulations</td>
<td>Russia 0.58, China 1.73</td>
</tr>
<tr>
<td>Political instability</td>
<td>Russia 5.9, China 0.67</td>
</tr>
<tr>
<td>Practices of competitors in the informal sector</td>
<td>Russia 7.09, China 16.22</td>
</tr>
<tr>
<td>Tax administration</td>
<td>Russia 1.9, China 4.27</td>
</tr>
<tr>
<td>Tax rates</td>
<td>Russia 38.56, China 16.27</td>
</tr>
<tr>
<td>Transport</td>
<td>Russia 4.42, China 7.92</td>
</tr>
<tr>
<td>Total</td>
<td>Russia 100, China 100</td>
</tr>
</tbody>
</table>
Table 3: "In a typical week over the last year, what percentage of total senior management’s time was spent on dealing with requirements imposed by government regulations?"

<table>
<thead>
<tr>
<th>Percentage of time in average week</th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16.13</td>
<td>54.75</td>
</tr>
<tr>
<td>1</td>
<td>3.68</td>
<td>22.46</td>
</tr>
<tr>
<td>2</td>
<td>2.36</td>
<td>11.42</td>
</tr>
<tr>
<td>3</td>
<td>1.66</td>
<td>3.55</td>
</tr>
<tr>
<td>4</td>
<td>0.41</td>
<td>1.63</td>
</tr>
<tr>
<td>5</td>
<td>10.53</td>
<td>2.98</td>
</tr>
<tr>
<td>6</td>
<td>0.29</td>
<td>0.1</td>
</tr>
<tr>
<td>7</td>
<td>0.33</td>
<td>0.05</td>
</tr>
<tr>
<td>8</td>
<td>0.44</td>
<td>0.14</td>
</tr>
<tr>
<td>9</td>
<td>0.04</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>19.26</td>
<td>1.2</td>
</tr>
<tr>
<td>&gt; 10%</td>
<td>44.87</td>
<td>1.74</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4: "The court system is fair, impartial, and uncorrupted."

<table>
<thead>
<tr>
<th>Percentage of firms choosing response (don’t know and non-responses excluded)</th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>26.91</td>
<td>3.81</td>
</tr>
<tr>
<td>Tend to disagree</td>
<td>39.51</td>
<td>35.65</td>
</tr>
<tr>
<td>Tend to agree</td>
<td>27.39</td>
<td>53.18</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>6.19</td>
<td>7.37</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 5. "To what degree are the practices of competitors in the informal sector an obstacle to the current operations of this establishment?"

Percent of firms choosing response (don't know and non-responses excluded)

<table>
<thead>
<tr>
<th></th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not apply</td>
<td>7.28</td>
<td>0.1</td>
</tr>
<tr>
<td>No obstacle</td>
<td>51.78</td>
<td>39.35</td>
</tr>
<tr>
<td>Minor obstacle</td>
<td>11.92</td>
<td>38.77</td>
</tr>
<tr>
<td>Moderate obstacle</td>
<td>14.83</td>
<td>17.85</td>
</tr>
<tr>
<td>Major obstacle</td>
<td>9.54</td>
<td>3.41</td>
</tr>
<tr>
<td>Very severe obstacle</td>
<td>4.64</td>
<td>0.53</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 6: Competitive orientation of firms, Russia and China

<table>
<thead>
<tr>
<th></th>
<th>Training&lt;sup&gt;a&lt;/sup&gt;</th>
<th>ISO&lt;sup&gt;b&lt;/sup&gt;</th>
<th>New management practice&lt;sup&gt;c&lt;/sup&gt;</th>
<th>R &amp; D&lt;sup&gt;d&lt;/sup&gt;</th>
<th>New product&lt;sup&gt;e&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Russia</td>
<td>China</td>
<td>Russia</td>
<td>China</td>
<td>Russia</td>
</tr>
<tr>
<td>Yes</td>
<td>45.1</td>
<td>85.3</td>
<td>10.8</td>
<td>60.3</td>
<td>26.1</td>
</tr>
<tr>
<td>No</td>
<td>54.9</td>
<td>14.7</td>
<td>89.2</td>
<td>39.7</td>
<td>73.9</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Percentages are calculated after excluding non-responses, "don't know" and "doesn't apply" responses from totals.

a. "Over fiscal year 2011, did this establishment have formal training programs for its permanent, full-time employees?"
b. "Does this establishment have an internationally-recognized quality certification, such as ISO 9000, 9002, 14000, or HACP?"
c. "Over the last 3 years, has this establishment introduced new managerial/administrative processes?"
d. "In the last 3 years, did this establishment spend on research and development activities performed within the establishment?"
e. "Over the last 3 years, has this establishment introduced a new product or service?" (NB: Wording of question in Russia was slightly less restrictive: "In the last 3 years, has this establishment introduced new or significantly improved products or services?")
Table 7: Measures of cross-regional variation in regional/local mean values:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Russia</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean predicted likelihood:</td>
<td>rho</td>
<td>cv</td>
</tr>
<tr>
<td>Spent on R &amp; D in last 3 years</td>
<td>0.047</td>
<td>-0.135</td>
</tr>
<tr>
<td>Introduced new management practices in last 3 years</td>
<td>0.047</td>
<td>-0.167</td>
</tr>
<tr>
<td>Cited access to finance as greatest obstacle</td>
<td>0.029</td>
<td>-0.012</td>
</tr>
<tr>
<td>Cited tax rates as greatest obstacle</td>
<td>0.045</td>
<td>-0.101</td>
</tr>
<tr>
<td>Informal sector competition more than minor obstacle</td>
<td>0.080</td>
<td>-0.039</td>
</tr>
<tr>
<td>Offer training programs</td>
<td>0.061</td>
<td>-0.856</td>
</tr>
<tr>
<td>Hold international quality certification</td>
<td>0.032</td>
<td>-0.120</td>
</tr>
<tr>
<td>Introduced new product in last 3 years</td>
<td>0.057</td>
<td>-0.135</td>
</tr>
<tr>
<td>Agree: courts fair</td>
<td>0.085</td>
<td>-0.087</td>
</tr>
<tr>
<td>Management spends &gt; 5% time dealing with government regulations</td>
<td>0.117</td>
<td>0.134</td>
</tr>
<tr>
<td>Inadequately educated workforce as more than minor problem</td>
<td>0.116</td>
<td>-0.483</td>
</tr>
</tbody>
</table>