Criminal Persecution of Business in Russia's Regions: Private Interests vs. "Stick" System*

Eugenia Nazrullaeva†, Alexey Baranov‡, Andrei Yakovlev§

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Abstract

What explains the existence of predatory criminal persecution practices? Is it rent seeking behavior and private interests of law enforcement officials, or the inefficiency of the police institution? In this paper we empirically test the relationship between indicators of economic crimes in Russia's regions, the level of economic activity, and turnover of regional elites. Our main goal is to find out whether private interests or the so-called "stick" system are responsible for the overall upward trend in economic crimes observed in 2004–2009. We use a unique ICSID database, which contains official MVD's (Ministry of Internal Affairs) data on economic crimes (according to the articles of the Russian Criminal Code), along with biographical data for chiefs of regional police departments. Our results suggest that "stick" system based on key performance indicators is responsible for the intensifying upward trend in the dynamics of economic crime rates in 2004–2009, which overshadows negative consequences of predatory persecution practices.

Key words: criminal persecution, business, state violence, Russia's regions.

1 Introduction

In recent years we observe an intensifying tendency for criminal persecution of business in Russia's regions by different law enforcement officials. This tendency is confirmed not only by journalists, but also by experts (Nikitinskiy (2009), Novikova et al. (2010), Zhalinkskiy and Radchenko (2011), Volkov

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†Research fellow at ICSID and senior lecturer at HSE Department of Applied Economics. E-mail: enazrullaeva@hse.ru

‡Junior Research Fellow at ICISD. E-mail: aybaranov@hse.ru

§Director of the HSE Institute for Industrial and Market Studies. E-mail: ayakovlev@hse.ru

(2012), Gans-Morse (2012)), with capital outflow being one of the main consequences (Yakovlev (2012)). The situation we witness now may initially seem to be different from the phenomenon of "violent entrepreneurship" of the 1990's (see Volkov (2002)) with criminal groups being the main power of predatory persecution of business. However, recent tendencies are in line with the concept of "limited access order" by North et al. (2009). According to this concept, violence is one of the key factors determining economic development in most modern societies, whereas rent sharing with powerful social groups is a mean of deterring violence.

In the literature criminal persecution is often viewed as "corporate rading" (Firestone (2010)), a common practice involving threats to firms' property rights using law enforcement agencies (see Volkov (2004),Volkov and Privalov (2007)). However, Russia is not unique when dealing with predatory criminal persecution – similar things happened in Ukraine, in the Central Asia states and in other countries[1]. Nevertheless, they have grown into loud scandals on international scale only in Russia, and Russia can be regarded as a textbook case for analyzing what are the causes for reliance on violence in the economy, and how it is encouraged.

In this paper we empirically test the relationship between indicators of economic crimes in Russia's regions, the level of economic activity, and turnover of regional elites. We use a unique ICSID database, which contains official MVD's (Ministry of Internal Affairs) data on economic crimes (according to the articles of the Russian Criminal Code) for the period 2004–2009, along with biographical data for chiefs of regional police departments. Economic crimes, as we define this category, include crimes registered according to the articles of Chapter 22 of the Criminal Code ("Crimes in the Sphere of Economic Activity"), along with the 159 article "Fraud" and the 160 article "Misappropriation or Embezzlement" from Chapter 21 "Crimes Against Property". Our data include the number of registered criminal cases, criminal cases finished with an investigation, and criminal cases handed over to courts. We measure the level of economic activity using the data on the volume of retail trade in Russia's regions. Our assumption is that the volume of trade is a good proxy for cash flows in a region which may attract an unwanted attention of law enforcement agencies that are aimed at extracting rents. Panel data on Russia's regions allows us to study not only the cross-regional variation in crime rates, but also the its dynamics over time. We

[1] See relevant references on Ukraine in Markus (2012); on Uzbekistan see Saidazimova (2006) and Busvine (2012).

define two main channels which influence the dynamics of regional crime rates: private interests of law enforcement agencies (rent seeking behavior) and the so-called "stick system"[2] (the English version of the term was introduced in Taylor (2011)). Standards for the key performance indicators (KPI), on which the assessment of the police force is based, are heavily biased towards increasing registered crime rates each report period (per month). The choice of time period in our paper is nonrandom: during the 2000's a state capacity increased substantially and the practice of using state violence was intensified, right after the famous Yukos case in 2003. The end of the period is marked by the consequences of the 2008 economic crisis, first declarations of the President Medvedev to stop "causing nightmares to business", and the launch of a police reform in 2011.

Although our paper is not the first to study the link between violence and economic activity, most papers deal with either corruption or organized crime, and not with state violence. The main innovation of our paper is in new and detailed data on criminal cases in the sphere of economics, and there are no similar papers so far trying to establish a link between economic crimes, regional elites' turnover, and economic activity. Extending the approach introduced in Shleifer and Vishny (1993), we may assume that governments with weak institutions, i.e. law enforcement agencies, suffer higher degree of persecution practices. A personal gain for law enforcement officers is in extracting rents by putting a threat of starting a criminal case against a businessman. Business in response to the threat may cooperate or try to prevent persecution actions, e.g. by issuing a claim to court, or seeking assistance of lobby groups defending rights of business[3]. Sanchez (2006) show that in Latin America the existence of criminal violence is a part of institutionalized environment, especially in poor regions. Detotto and Otranto (2010), Daniele and Marani (2011) analyze consequences of organized crime for economic activity. Daniele and Marani (2011) estimate losses of high crime rates in terms of foreign direct investments, and find that these regions get only 1% of total FDI inflow. Hou and Moore (2010) show that for companies which have a direct connections with political elites and public companies the probability of being falsely accused of fraud is lower.

Using the new data on economic crimes classified by the articles of the Russia's Criminal Code,

[2]"Palka" ("the stick" in English) purely means "check mark" which is usually put in checkbox to show that the item in the "to do list" is solved.

[3]In case of Russia, Boris Titov, the leader of the Business Russia, has been recently officially appointed as federal ombudsman for entrepreneurs' rights

we divide economic criminal cases into two main categories: "entrepreneurial" and "mixed" depending on whether a certain article of the Code is being frequently applied by the police department to start a case against an entrepreneur. The share of mixed cases is around 90% of total cases (entrepreneurial and mixed), and fraud cases constitute almost 55% out of mixed cases. Schultz et al. (2012) using court data show that fraud convictions are often used to persecute entrepreneurs: in presence of prosecutor–judge alliances the probability of imprisonment being replaced by a conditional sentence is higher. We adopt the same approach and concentrate over the MVD's statistics on mixed cases. We show that upward trends observed in the dynamics of economic criminal cases in 2004–2009 are driven both by private interests of law enforcement officers seeking to extract rents from entrepreneurs (predatory persecution practices), and by the way the system of assessment of police departments' performance ("stick system") works. However, the effects of the "stick system" seem to be larger than negative consequences of law enforcers' private interests.

The rest of the paper is organized as follows. In the next three sections we briefly introduce the specific Russian context, and discuss incentives of law enforcement agencies in Russia to formulate hypotheses we aim to verify. Section 5 describe our data and methodology. In section 6 we discuss our modeling strategy and inference problems. Section 7 presents our results and robustness checks. Section 8 concludes.

2 Russian Context

Two dramatic lawsuits, which started in London in 2012 between former and current Russian oligarchs Boris Berezovsky and Roman Abramovich, as well as between aluminum tycoon Oleg Deripaska and his former partner Mikhail Chernoy (Croft (2012)), were a vivid reminder of the way how Russian capitalism was launched in the early 1990s. Under conditions of deep economic crisis and almost dysfunctional system of law enforcement, entrepreneurs had nothing to do but rely on criminal groups for defense of their property and for resolution of conflicts with their business partners (Volkov (2002)). The result was the rapid growth of the organized crime, corruption and "state capture" by oligarchs (Gustafson (1999), Levin (2000), Hellman (2003)).

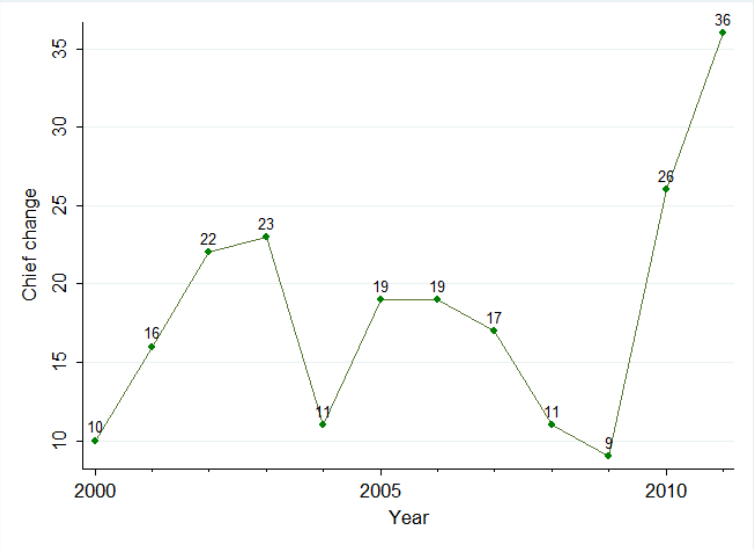
One of the indicators of a weak government was the outgrowth of shadow economy. In the Soviet Union in the 1980s the share of shadow economy was about 6% of GDP (WB-GKS (1995), Yakovlev (2001)). In 1990s Russia shadow economy amounted up to 25% of GDP (according to official data of Goskomstat), and up to 40% according to estimates of the World Bank and international experts (Johnson et al. (1997), Kaufmann and Kaliberda (1996)). Barter and other money substitutes expanded greatly, as well as taxes arrears (Gaddy (1998), Yakovlev (2000)). The effect of states collapse was an outburst of criminal activity, including intensification of violent pressure on emerging private business. In Russia in the 1990's, with the absence of effective law enforcement system, conflicts between business people were resolved upon intermediation of so-called criminal "roofs" ("krysha"), which, in return for their service, received a share of income of the firms they were "looking after" (Volkov (1999)).

After Vladimir Putin came to power and declared in 2000 his decision to consolidate "the vertical of power", economic growth in Russia took a new start, and at first sight it seemed to be a revival of order in public administration. However, quite soon provision of "roofs" was taken on not only by organized gangs, but also by law enforcement officials at different agencies (Ministry of Interior Affairs, Federal Security Service, Federal Service of Tax Police, etc.) (Gans-Morse (2012), Favarel-Garrigues (2011)). In their interaction with businesses, such "protectors" behaved identically, and an enterprise owner sometimes was unable to understand whether attackers were gangsters or policemen (Radaev (1998)).

It is possible to identify at least three stages of this evolution. In the beginning and middle of the 1990s, the law enforcement system was extremely weak. The reason was not only lack of experience and personnel that could adapt to work under market conditions. Key elements of the Soviet system of law and order, the Committee for State Security (KGB) and the Ministry of Internal Affairs (MVD), were taken by the new political elite as milestones of the "old regime", and permanent reorganization of these bodies was an instrument to weaken their influence. The result of this policy was a rise in crime (including economic crime), as well as partial informal privatization of public law enforcement agencies, which began to sell their protection to entrepreneurs.

Since the early 2000's, the government made an attempt to restore its control over the law enforcement system, centralizing functions of governance and purging administration of the Ministry of Internal Affairs (the turnover of chiefs of regional police departments (UVDs) is presented in Figure 1).

Figure 1: Chiefs of Regional Police Departments Turnover, 2000–2010



At that time, relative balance of power between the state and business made it possible to implement a whole range of liberal reforms: a radical tax reform[4], reduction of import tariffs, and simplification of customs regulations, as well as lowering of administrative barriers for small business. In law enforcement, simplification of tax administration and abolition of the Federal Service of Tax Police lead to decrease in the number of criminal proceedings against entrepreneurs (see Figure 4, Appendix C).

These positive trends were interrupted in 2003 with a conflict between the government and the largest Russian oil company Yukos. This conflict ended with a criminal suit against main owners of the company, who were sent to serve long terms in prison, and then to actual nationalization of assets of Yukos. Definitely, this was a case of selective law enforcement, because at that time, almost every large company used to implement similar tax optimization schemes. The "Yukos affair" broke down mechanisms of dialog between authorities and business and initiated a new wave of violent pressure on business at all levels of authorities. Yana Yakovleva (see Case 1) said that investigators found a contract written in English in her office. It was so surprising for them that one of them exclaimed: "Look! We've got a little Yukos here!"

[4]The government introduced since 2001 a flat 13%-scale of taxation of personal incomes and a regressive scale of unified social security tax. The rate of tax payment for profit was reduced to 24%, and the total number of taxes was decreased to one third - from 54 to 15. In this context, observers wrote about a tax revolution in Russia (see "The Putin Curve". The Wall Street Journal, November 26, 2002). According to the vice-minister of finance Sergey Shatalov, in the first half of the 2000's, tax burden on the economy declined from 34-35% to 27.5%.

Along with the experts she is confident that "Yukos affair" was a signal to law enforcers of possibility to use such a pressure.

Case 1. "Chemists" and "Poppy-seed" cases

In this case owners of chemical business were persecuted by officials of Federal Drug Control Service (FSKN) using Article 234 of the Russian Criminal Code. Owners of chemical company NPK "Sofeks", after turning down the offer from FSKN officials to supply drug manufacturer in Tajikistan with necessary chemical components in June 2004, were accused of illegal distribution of the so-called "virulent" substances and put in pretrial detention in July 2006. The absence of a statutory definition of "virulent substances" allowed investigator to declare the chemical solvent "diethyl" being a "virulent" substance simply based on the results of the FSKN internal expertise. Expert concluded "diethyl" being a strong medication with an ultimate draught of 1 ml even though it is widely used as an anesthetic. Regardless of public outrage and State Duma deputies' appeal to prosecutor, subjects spent 7 months in prison until the trial. The court sorted out that FSKN's expertise contradicted basic chemistry laws and released subjects from custody in February 2007. This case is among 0,2% share of trials ended in acquittal in Russia. Making a fuss over this case played a large part in acquittal of businessmen in February 2008. Later Yana Yakovleva, Chief financial officer and co-owner of NPK "Sofeks" company, established the non-commercial partnership "Business Solidarity" devoted to help pressured business people. The scheme of this partnership became a model for anticorruption center Business against corruption (see Case 3). Mrs Yakovleva said that she had realized that FSKN officials offered similar proposals to many chemical companies in Russia.

Despite the dismissal of Cherkesov (Chief of FSKN in 2003–2008), corrupt practices in FSKN had not been changed. In 2011 emerged so-called "Poppy-seed case". Cultivation of poppy is prohibited in Russia. Poppy seeds imported for use in bakery must meet strong requirements which were constantly changing over time. Before 2006 poppy seeds could contain up to 3% of narcotic opium alkaloids, from 2006 until 2010 up to 0,2%, and since 2010 it must be 100% free of such substances. Since 2010 three legal proceedings had been brought against businessman Sergey Shilov who controls 20% of food poppy supply in Russia. Sergey spent 4 months in jail during an investigation. Entrepreneur asked Olga Zelenina who is a specialist in the biology of poppy to provide her expert opinion on Russian standards. She affirmed that it is technically impossible fully eliminate narcotic traces. After that she was accused of complicity in organized drug trafficking and spent 1.5 month in jail. During this campaign FSKN arrested a lot of commodities of different poppy suppliers. Both Shilov and Zelenina were released from custody in September 2012.

Type of business: Small and medium-size businesses

Type of law enforcement agency: Federal Drug Control Service of the Russian Federation (FSKN)

Incentives to persecute: "Stick" system, extortion

See also: Firestone (2010), White (2009), Bolshoy Gorod (2012) (in Russian), Schiermeier (2012), Reyter (2012) (in Russian), The Chemists case materials (in Russian) at http://www.himdelo.ru/material/podrobnee/008/

Violence still was an important factor of economic development, but the subject of violence has changed: the role of gangsters was taken by policemen, investigators and prosecutors. This is evident from the "Magnitsky case"[5]. This case became a striking example of how law enforcement bodies in the

[5]Sergei Magnitsky, a partner at the Moscow law firm Firestone Duncan, a tax and legal adviser of the investment fund Hermitage Capital Management, was arrested on November 24, 2008 and died on November 16, 2009 in pre-trial detention. His death drew wide social response. In 2010, Magnitsky was given a posthumous Integrity Award from Transparency International. (http://www.transparency.org/getinvolved/awardwinner/sergei_magnitsky). On November 20, 2012 the US House of Representatives voted overwhelmingly in favor of the Magnitsky Act. (http://www.thelawyer.com/magnitsky-act-overcomes-further-hurdle-in-us-congress/1015594.article). This is the act against Russian bureaucrats suspected of conspiracy to defraud the Russian Federation of taxes on corporate profits and of money laundering and are involved in death of Sergei Magnitsky.

government are using their credentials for exertion of pressure on business in Russia. Actually, it is no more than a top of an iceberg. Starting with the "Yukos affair" in 2003-2004, violent pressure on business took enormous degree in Russia (Gans-Morse (2012)). As a result of this growing pressure on business, rating of business climate in Russia went worse[6], and were followed by rapid outflow of capital after the crisis of 2008-2009, which forced the government to turn to take prompt action in order to correct this situation. Such risks are reason of wide use of offshore companies by russian businessmen – simply because, say, Cyprus law enforcement system provide better protection against fraudulent attacks.

The steps undertaken in 2009-2010 to make the Criminal Code more tolerant to entrepreneurs resulted in decrease of pretrial detention of them (Firestone (2010)). Also a number of new measures were initiated in 2012, including establishment of a position of Presidential Commissioner (ombudsman) for Entrepreneurs Rights, adoption of roadmaps for improvement of key conditions for business, which implied inclusion of indicators of investment climate in performance evaluation of regional governors and federal agencies. At the same time, the government substantially increased funding of the law enforcement system, and now is discussing new approaches to reforms in this system.

3 Incentives of law enforcers

According to Barinova et al. (2006), business "protection" was divided between MVD and FSB. MVD got small firms, FSB got large businesses while medium-sized enterprises were halved. Other experts believe that large business is subject of attacks by high officials regardless of their belonging to the certain law enforcement agencies. Nonetheless defense against hostile acts of "siloviks" could be provided only by "siloviks krysha" or belonging to the ruling elite. This statement is corroborated by Evroset case. Despite being a member of United Russia party, Yevgeny Chichvarkin faced raiding attacks ruled by high-ranking MVD officials (see Case 2).

[6]See http://www.doingbusiness.org/ as well as EBRD Transition Reports at http://www.ebrd.com/pages/research/publications/flagships/transition.shtml

Case 2. Motorola and Evroset cases

When criminal investigation is opened an investigator can arrest merchandise as a physical evidence. Seized goods have to be stored in special government warehouses. In case of perishable goods or goods which may quickly become obsolete, it is possible to sell them. Such regulations create wrong incentives to law enforcers. In the mid-2000's almost every firm on Moscow's electronics market faced a situation when investigators offered to buyout seized goods. Sometimes law enforcers sold confiscated goods to an affiliated company for 10% of its market value. Evroset, a mobile phone retailer with $2.5 billion assets, was among such companies. Motorola was also involved in this case. Manufacturer shipped mobile phones for Evroset which were confiscated in March 2006 as smuggled goods and later on special press-conference declared as "not designed for use in Russia", and, finally, even as "health hazardous". The U.S. office of Motorola tried to dispute the statement that their phones were improper. It took only 8 days between the press-conference with accusation to destruction. Motorola's top management asked George W. Bush to discuss this problem with V.Putin. After the G8 Summit hosted in Russia in July 117,500 phones were returned to Evroset. Though officials said 50,000 phones of 167,500 confiscated in total had been destroyed, afterwards approximately 30,000 of obliterated items were sold on grey market. One of the consequence of scandal was transfer to another position of Attorney General Vladimir Ustinov and dismissal of Alexander Zherihov, Head of Federal Customs Service of Russia. Evroset filed a suit for abuse of office. Two officials were punished, with one of them sentenced to 1 year in prison, and with the other obliged to pay a fine of $2000. After this "siloviks" started to seek vengeance both upon Motorola and Evroset. They impound all the business document of both enterprises. Finally this campaign transformed into personal persecution of Evroset's owner Y. Chichvarkin, who sold his business and seek political asylum in London in 2008. In April 2010 Chichvarkin's mother was found dead in her apartment. Along with some media, Mr. Chichvarkin suspects that she was murdered to urge him went to Russia. He was vindicated from charge in January 2011 but refuses to return home.

Type of business: Large and foreign businesses
Type of law enforcement agency: Ministry of Internal Affairs (MVD)
Incentives to persecute: Merchandise raiding
See also: Myers (2006), Gans-Morse (2012), Dorokhov (2011) (in Russian)

Main reasons to start legal proceedings, in addition to real offence, usually are an attempt to seize the assets or "commission" of the criminal prosecutions by competitor or even partner (Firestone (2010), Gans-Morse (2012)). It is wide used by entrepreneurs, who want to eliminate their competitors, or capture attractive assets in the framework of corporate raiding (See Case 3).

However, schemes of such property redistribution were changing over time. For a long while, these schemes were based on manipulation with regulations of the Federal Law on joint-stock companies, which had been adopted in 1995, and the Federal Law on bankruptcy of 1998, which drastically expanded the rights of creditors and allowed start bankruptcy proceedings in cases of minimum overdue indebtedness (Yakovlev (2003), Volkov (2004), Simachev and Radygin (2005)). This practice, which was a menace to really developing business, faced collective resistance, and in 2001–2002, a package of substantial amendments were made in both laws to noticeably limit the chances for capture of assets and redistribution of property rights.

Above-mentioned manipulations were subject of arbitrage. However, by that time teams of professional raiders started to look for new instruments for "violent" pressure on firms in the scope of their

interest and turned to use the provisions of the Criminal Code for this purpose. This thesis, naturally, can by no means deny the fact that all schemes used by the raiders could never be possible without participation of dishonest policemen, investigators, prosecutors, notaries public and judges.

In the early 2000's, in the framework of "power vertical" restoration, a tendency could be seen towards consolidation of the law enforcement system. However, this tendency developed when law enforcement agencies were kept inaccessible to public control. In this situation, Ministry of Interior Affairs, Federal Security Service and Public Prosecutors Office restored and consolidated a specific bureaucratic system of quota-based monitoring or performance evaluation, which is now branded as a "stick system" [7].

This "stick system" is not a Russian invention. Similar systems of appraisal based on specific sets of indicators were used in law enforcement agencies of the Soviet Union, and now they are also used in other countries. Large-scale hierarchies cannot do without such mechanisms of evaluation. Possible negative effects on behavior of lower levels in hierarchies are widely known. However, distorting effect of such formalized mechanisms of internal evaluation is stronger where the agency in question is more centralized and is kept closed from public control (see Favarel-Garrigues (2011).

Concerning the Ministry of Interior Affairs, logic of this "system of counting sticks" is based on appreciation of all lower departments of the Ministry by its central office according to numbers of started and investigated cases under relevant provisions of the Criminal Code. Core provisions differ by department. In the context of this "system of counting sticks", any decrease in these indicators is regarded as an illustration of poor performance of relevant departments. Law enforcer have to initiate and investigate certain amount of cases regardless of real criminal situation in his domain. In absence of particular offence he has two alternatives: to get reprimand or to bring up fake criminal proceeding against most vulnerable businessman[8]. Such scheme thrive not only in economic sphere but among all fields of responsibility of Russian police. Clearly this logic, without doubt, supports "accusatory bias" against all citizens, regardless of their guilt, as soon as they get into the field of vision of agencies in the Ministry of Interior Affairs and have no way to defend themselves unless they have connections in these agencies.

Such combination of giving the appearance of solving criminal cases in order to secure current position and applying violence for private gains considered as "predatory policing", introduced by (Gerber and Mendelson (2008)). This concept differs from two basic concepts of the role of the police in several key respects. The first model of these two theoretical model called "functionalist". It is presented in

[7]Major Alexei Dymovsky was the first to publicly declare that the "stick system" made a negative effect on activity of agencies of internal affairs. He did it in an Internet-appeal to the Prime Minister Vladimir Putin (see www.dymovskiy.ru). A detailed analysis of logic of the "stick system" is given in a paper (Paneyakh (2011))

[8]Bringing up fake criminal case charging someone called in russian "Prishit delo" (literally "sew a case"), which could be translated as "fasten a crime" on somebody

most developed democracies and devoted to provide services, enforce the law, preserve order in general interest. The second is presented in authoritarian societies and those with polarized social structures and named "divided society" model. It is characterized by strong identification of the police with the ruling regime, strong bias against subordinate groups. Police protects the interests of dominant elite and suppress subordinate groups such as different minorities, political opposition, poor. While it is obvious that predatory policing departs from the functionalist model, it is less clear how it diverges from divided society policing. Gerber and Mendelson emphasize three key differences: police corruption is present as often as police violence; all groups of society experience significant levels of police misconduct; "even if elites occasionally deploy the police for political purposes, most instances of police misconduct advance rent-extraction and self-preservation rather than suppress subordinate groups" (Gerber and Mendelson (2008), pg. 5). Authors studied only public experience of police violence and police corruption without paying special attention to businessmen, that is, personal encounters with the police that members of the general public identify as involving corruption or violence. Using data of six surveys conducted in Russia authors found evidence to support their theory of predatory policing.

Case 3. Agromol case

Another common scheme is an accusation of improper use of subsidized government bank loan. In 2008 successful dairy businessman Dmitry Malov from Kostroma (city in 300 km from Moscow) was visited by two former officers of Economic department of MVD. Visitors urged to sell his enterprise to unknown person. After refusal they menace litigation. Afterwards Mr. Malov was charged with fraud. He appealed accusation in Procuracy and proceeding was dropped. But eventually FSB office in Kostroma reopened the case. Despite absence of complaints from creditor, timely payments of debt, and using loan on stipulated purposes he was accused of improper use of investment credit. Mr. Malov believes that he was "commissioned", i.e. someone involved in property development might have paid officers, as his company's factory is situated in the city center which makes this plot quite attractive. In 2010 Mr. Malov was sentenced to 5.5 years in prison, and spent in jail almost 2 years before being discharged with the help of anticorruption center Business against corruption. This organization was established by public association Business Russia to help persecuted entrepreneurs. Chairman of Business against corruption is Boris Titov, former Chief of Business Russia. In June, 2012 he became Presidential Commissioner for Entrepreneurs Rights. Among 52 members of Board are 2 Federation Council, 3 deputies, 23 lawyers. The supervisor of Business against corruption is Igor Shuvalov – First Deputy Prime Minister in Dmitry Medvedev's Cabinet.

Type of business: Medium-size business

Type of law enforcement agency: MVD, Federal Security Service of the Russian Federation (FSB, main successor agency of KGB)

Incentives to persecute: Commissioned crime, corporate raiding

See also: Sandford (2011), Ruvinsky (2011), The Agromol case materials (in Russian) at http://www.kapitalisty.ru/prime/podrobnee/043/

4 Hypotheses

Based on the Russian context discussed above, and case studies as typical examples of predatory criminal persecution of business, we formulate two competing explanations which factors may have caused the growth in the number economic crimes observed during the period 2004–2009. Our goal is to try to distinguish between these two effects using econometric modeling.

Hypothesis 1: Private Interests

Law enforcement officers initiate criminal cases in private interests: potential gains for law enforcement officers may be associated with cash flows. If rent seeking behavior dominates we should see higher level of economic crimes in a region with higher cash flows.

Hypothesis 2: "Stick" System

H2.1 The "stick" system creates incentives for the MVD officials to inflate the reported crime statistics. The common practice is to show a small positive increment in registered cases each year.

H2.2 However, the year-to-year change in economic crime indicators is lower for regions with higher level of crimes in a previous year.

5 Data and Methodology

Our initial sample include 78 regions out of 83 (total) for the period 2004–2009. We exclude from our sample 5 regions, as it is usually done in most regional studies on Russia. Firstly, we omit Chechen Republic and Ingush Republic from our panels. Data collection in these regions is poor. In addition, we drop Nenets Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, and Khanty-Mansi Autonomous Okrug, because socio-economic indicators for these areas are included as a part in indicators for their corresponding larger regions (Arkhangelsk Oblast and Tyumen Oblast).

5.1 The MVD Data on Economic Crimes

The main advantage of our paper is that we use a unique database of the ICSID (HSE), which contains statistics on economic crimes in Russia's 78 regions from the Ministry of Internal Affairs (MVD, Department of Information and Analysis). Our data covers the detailed regional information on articles of the

Russian Criminal Code, Crimes in the Sphere of Economics (Section VIII), for the period 2000–2010. The section on the crimes in the sphere of economics can be classified into the following chapters:

- Crimes Against Property, Chapter 22 (specifically, we collected the data on economic crimes according to the article 159 "Fraud", and the article 160 "Embezzlement")
- Crimes in the Sphere of Economic Activity, Chapter 23 (certain types of articles from 169–199)
- Abuse of office, Chapter 24 (we collected the data on crimes for the article 201 "Malfeasance in office", and the article 204 "Commercial bribery")

The MVD regional yearbooks we use as a source of the data on crimes also provide a detailed classification of the types of criminal cases. For each article on economic crime of the Criminal code we have:

- the total number of criminal cases registered during a year;
- the number of cases finished with an investigation;
- the number of cases handed over to courts.

Based on series of the ICISD internal seminars and discussions with Russian experts from the Institute for the Rule of Law (Saint–Petersburg), and from the Department of Law at HSE (Moscow) we construct aggregate proxies for criminal cases which may be started on an entrepreneur. There are specific articles on economic crimes which are widely used to initiate a case on an entrepreneur. We group all the articles on crimes in the sphere of economics into two main categories (the detailed information on the types of articles included into each category may be found in Appendix A).

- "Entrepreneurial" articles (Art. 171–174, 176–178, 180, 185, 193–199, 201, 204)
- "Mixed" articles (Art. 159, 160, 183, 188, 190, 191).

In the entrepreneurial articles we include articles mostly used against entrepreneurs, whereas mixed articles may be applied against other subjects. The percentage of mixed cases, on average, is around 90% of all entrepreneurial and mixed registered criminal cases. Although the share of entrepreneurial crimes is not so high, among all entrepreneurial crimes 60% refer to tax cases, i.e. cases registered under the articles "Tax evasion by person" (198) and "Tax evasion by enterprise" (199) (see Table 3). 55% of mixed cases are fraud cases ("Fraud", article 159).

Figures 2–4 present the dynamics of the above mentioned groups of criminal cases according to the classification on cases which were registered and finished with an investigation. The dynamics of criminal cases (registered and investigated) per 1,000 firms in a region, on average, follows the same pattern, especially concerning the upward trend in 2004–2009.

We should particularly stress that, based on previous empirical results for the case of Russia (see Paneyakh (2011), and other papers by the experts from the Institute for the Rule of Law, Saint-Petersburg), we understand the data we deal with may not measure the real number of criminal cases initiated to persecute business. Moreover, what we know for sure is that official statistics on economic crimes is subject to a potential bias. The main problem, according to Paneyakh (2011), is that predatory criminal persecution is based on a threat from the MVD's officials and takes place unofficially, without starting a criminal case. However, we have only official statistics on criminal cases started against entrepreneurs. Therefore, we have to make an assumption that the number of unobserved persecution cases, which involves bargaining under the threat of starting a criminal case, is roughly proportional to the number of criminal cases actually started. Measurement error in the indicator of criminal persecution is a source of potential endogeneity. The second problem is the so-called "stick" ("palochnaya") system, i.e. when current KPI at lower levels of police departments produce wrong motivation for police officers. First of all, officers have to show positive dynamics in their performance. An absolute level of criminal cases is of less importance than its positive change for the performance evaluation of a police department. Therefore, there is a strong incentive to register every year more criminal cases than in the previous year. There are also penalties for unsolved criminal cases, so mostly cases which can be easily solved or cases already solved at the moment of investigation tend to be registered. The last reason may explain, for example, why the number of theft cases (per capita) registered in Russia is low in comparison with Germany or Sweden (Volkov (2012)). It is rational to start only cases for which the necessary evidence is already gathered. Thus the share of solved cases should be higher for economic crimes than for violent crimes. It follows that the "stick" system based on wrong KPI is working inertially, for its own purposes. Different shocks which may happen do not change the nature of the system for long. A good example may be the "Poppy-seed" case described in Case 1 above, when dismissal of the Chief of FSKN had no effect on existing practices.

5.2 The ICSID Data on Socio-Economic and Political Indicators

We use the volume of retail trade per capita (in constant 2000 prices) as a proxy variable for cash flows associated with private interests' of the MVD officials. Retail trade is associated with such liquid assets as commercial real estate, in comparison to production assets which are less liquid. Presence of liquid

assets in a region create incentives for raiding. We have collected and coded the biographies of regional elites, in our case – chiefs of regional police departments and governors. Our main variables measure the turnover of regional elites. We thus code a turnover variable 1 if a new Chief of regional police department was appointed during a current year. Our assumption (based on discussions with Russian experts) is that a new Chief of a regional police department is not responsible for his predecessor's activity, therefore, high indicators of crimes tend to shift downwards. We also code a scheduled turnover variable 1 if a new governor was supposed to be re-elected or re-appointed during a current year (dates of re-elections/re-appointments are exogenously scheduled). Note that even in presence of a scheduled end-of-term incumbents can both win or lose re-election or re-appointment. Therefore, scheduled turnover measures a potential change in governors, and should be exogenous with respect to cash flows. Scheduled turnover may influence cash flows in a region: if business expects that a new governor comes into office during a year, uncertainty over the decisions made by a new comer in office may lead to the lower volume of retail trade.

For the purpose of econometric modeling we normalize the number of criminal cases for each category (entrepreneurial, mixed; total, investigated) by the total number of firms registered in a Region. We use the indicator reported by Rosstat which is known for its potential bias in favour of "dead weight" firms which seized to exist or were created for tax evasion purposes. However, this indicator seems roughly legit as we need it to control for the total size of a region's economic activity.

Other socio-economic indicators we use as additional control variables are borrowed from regional yearbooks published by the Federal State Statistics Committee (Rosstat), and include:

- The percentage of employed in public sector (healthcare and education) as a proxy for the number of policemen (this information if officially unavailable at the regional level). We need this variable as a control for criminal cases, in regions with higher number of policemen the number of registered and investigated cases should be higher because of the way the system of KPI works.
- The percentage of urban population (used as a control variable for criminal cases and retail trade).
- The total number of small firms registered in region, with small firms being mostly involved into retail trade (used as a control variable for retail trade).
- Total migration growth as a proxy for changes in demand (used as a control variable for retail trade).
- Road density as a proxy for infrastructure coverage (used as a control variable for retail trade).

6 Modeling Strategy

6.1 Dynamic Panel Data Modeling: Simultaneous Equations

We follow the estimation approach for dynamic panel data which was introduced by Anderson and Hsiao (1981) and Arellano and Bond (1991), and further developed in Arrelano and Bover (1995), Blundell and Bond (1998). Based on the Anderson and Hsiao (1981) and Arrelano and Bover (1995) dynamic panel data framework, we estimate is the following system of simultaneous equations:

$$\Delta y_{1,it} = \rho_{11} y_{1,it-1} + \rho_{12} y_{2,it-1} + \alpha_1 z_{it} + X_{1,it}\beta + c_{1,i} + \theta_{1,t} + u_{1,it}, \quad (1)$$

$$\Delta y_{2,it} = \rho_{21} y_{1,it-1} + \rho_{22} y_{2,it-1} + \alpha_2 s_{it} + X_{2,it}\beta + c_{2,i} + \theta_{2,t} + u_{2,it}, \quad (2)$$

where $y_{1,it}$ is the number of economic criminal cases per 1,000 firms (logged) (Δ is the first difference operator), $\Delta y_{2,it}$ is the proxy for cash flows (the volume of retail trade, in fixed 2000 prices). z_{it} is the dummy variable for the turnover of chiefs of regional police departments, s_{it} is the dummy for the scheduled turnover of governors.

$X_{1,it}$ and $X_{2,it}$ include other socio-economic control variables. $c_{1,i}$, $c_{2,i}$ are individual fixed effects, and $\theta_{1,t}$, $\theta_{2,t}$ stand for fixed time effects. $u_{1,it}$, $u_{2,it}$ are idiosyncratic error terms, serially correlated and heteroskedastic, cross-correlated over the equations.

We use a system GMM approach described in Blundell and Bond (1998) to estimate the system of equations, constructing moment conditions using the exogenous explanatory variables and internal instruments for lagged values of $y_{1,it}$ and $y_{2,it}$. Our model is a slightly modified version of the standard dynamic panel data model, because we use a change in the dependent variables $\Delta y_{1,it}$ and $\Delta y_{2,it}$ on the left-hand side. The idea behind this modification is that we see a high degree of inertia in $y_{1,it}$ due to the way the "stick" system works. This stickiness results in stable growth in the number of crimes during the period we analyze. However, growth in crime indicators should be less rapid in regions with higher "base", i.e. $y_{1,it-1}$. The "stick" system dictates that the parameter estimate for ρ_{11} should be negative. Taking $\Delta y_{2,it}$ on the left-hand side of the second equation is partly a way to mitigate non-stationarity issues arising when modeling the dynamics of cash flows, as there is also a high degree of inertia.

The two–step system GMM estimator we use allows to resolve endogeneity problem caused by the inclusion of lagged on the dependent variables which are not strictly exogenous with respect to c_i[9]. Our

[9]For first-differenced equation the lags of the dependent variables on the left-hand side of equations for first-differenced analogs of the equations are being instrumented by third lags of dependent variables in levels (along with exogenous explanatory variables) to deal with potential serial correlation problems, and for equations in levels instruments are first-differenced

approach also takes into account the reverse causality arising between criminal persecution indicators and the volume of cash flows, as the relationship may hold in both directions: higher cash flows lead to higher criminal persecution, which, in turn, leads to lower cash flows.

As lagging the right-hand side variables may lead to autocorrelation problems, we use the Windmeijer (2005) cluster-robust standard errors bias corrected for the case of fixed T. We also use the Sargan (1958) and Hansen (1982) test for overidentifying restrictions at the post-estimation stage to check whether additional moment conditions hold.

6.2 Inference Problems

The situation with endogeneity of our chiefs of PD turnover variable should not be as severe as in case of proxies for cash flows. There is little evidence of reverse causation between a change of the chief of the regional police department and economic crime rates. Although intuition tells us that an abnormally high level of predatory persecution should lead to the replacement of the current person in the office, in practice chiefs of police departments in Russia are not being replaced if their region tend to demonstrate high economic crime rates. As an argument we may look whether those cases when a person's replacement in the office was caused by natural reasons (death) differ from the rest of observations. During the period 2004–2009 we observe 77 total number of turnovers, and in 3 cases out of 77 the cause of a change was natural. In Komi Republic the Chief of regional police department died from heart attack (2006), in Yakutia Republic the Chief of PD died under surgery in a hospital (2005), in Stavropol Krai the Chief of PD died in a road accident (2005). Our expectation is that in a year when turnover is observed the number of economic crimes should decline. We observe a lower level of registered crimes for "entrepreneurial" and "mixed" crimes in Komi Republic in a year after the death of the Chief of PD, and rather stable levels and no growth in both Yakutia Republic and Stavropol Krai. Therefore, we consider the indicator of the MVD's chiefs turnover as beign exogenous with respect to criminal cases.

7 Results and Discussion

Our preliminary results suggest that there is a strong evidence in favor of the second hypothesis about "stick" system, and mild evidence that the first hypothesis about "private interests" may hold. We run our models for mixed criminal cases, and check the robustness of the results using the aggregated indicator of mixed and entrepreneurial cases (which are less than 10%). Results for equations in levels (see Tables 7,

third lags of dependent variables.

Appendix C), i.e. for $y_{1,it}$ and $y_{2,it}$ on the left-hand sides, suggest that there is a high degree of inertia in both the dynamics of criminal cases per 1,000 firms (total registered and investigated) and the volume of retail trade per capita. The effect of the first lag on crime rates is highly significant and strong, [0.6;0.9], i.e. 1 % higher crime rates in the previous period lead to almost 1% higher rates in the current period. This finding support our second hypothesis (H2.1) about the "stick" system. Estimating equations in first-differences for the dependent variables (see Table 8, Appendix C), i.e. in terms of $\Delta y_{1,it}$ and $\Delta y_{2,it}$, we get the result that the year-to-year change in criminal cases is lower for regions with higher level of crimes in a previous year, which partly supports our second hypothesis (H2.2) as it is negative, but insignificant for some specifications. Regions with higher levels of economic crime rates in $(t-1)$ period tend to grow slower in period t, i.e. 1 % higher crime rates lead to [-0.4%;-0.1%] lower growth in criminal cases. These effects are also in line with the way the "stick" system we described before works. Regional police departments are constrained to show good KPI both on registered and investigated crimes in practice: plus one case each period (month). Unchanged crime rates may cause suspicions that police department does not try to serve its best, rapid growth in crime rates may suggest a negative tendency in criminal situation. In addition severe growth in crime rates rise the base level for next year which will cause more effort to reach this level in future. However, "plus one case" situation is different for regions with different base levels of crime rates.

The chiefs of PD turnover is significant at 10% level only for several specifications (see Model (2) and Model (3), Tables 7 and 8). For the total number of registered crimes (mixed and entrepreneurial) we see that when a new person comes into office the change in crime rates is less by around 5%. This is true for the aggregate indicator of entrepreneurial and mixed cases, and for mixed cases separately, both total registered and investigated. In other specifications the effects of turnover are insignificant. This finding also supports our argument about the "stick system".

To compare the relative size of the effects of interest in the first equation for criminal cases we calculate standardized analogs of the coefficient estimates divided by the standard deviation (s.d.) of the dependent variable and multiplied by the s.d. of the explanatory variable. Point estimates of the effects of the "stick" system associated with PD chiefs' turnover are larger (value -1.968 in Model (2) and -3.239 in Model (3), Table 7) than effects associated with previous levels of crime rates (all values range in 0.6 to 0.95 interval) and cash flows measured as retail trade per capita (values range in 0.2 to 0.5 interval).

Our proxy for cash flows, retail trade volume per capita produce positive significant results, the only exception is for investigated mixed and entrepreneurial crimes (Model (4), Tables 7 and 8). Note that the volume of trade is normalized per capita, and the number of criminal cases are normalized per 1,000 firms. We also have the second equation which describes the reverse causality between retail trade and crime rates. Therefore, the effect we pick up suggests an evidence in favour of our first hypothesis of

"private gains" (H1) that higher cash flows lead to higher degree of predatory criminal persecution.

Sargan (1958) and Hansen (1982) test for overidentifying restrictions at the post-estimation stage show that the null of additional moment conditions being true holds. We also apply the modified version of the serial correlation test, taking into account the cross-correlation of the residuals in two equations, to check whether there is significant AR(1) autocorrelation in residuals, our results suggests that the null of no serial correlation holds. We also try estimating our equations in first-differences as even in presence of short time series panels and rather robust to the unit root problem Blundell and Bond (1998) approach we still have concerns over a potential unit root problem (coefficient estimates for the lagged dependent variables are statistically close to 1). Simple first-differenced approach also uses the two-step GMM and assumes that ε_{it} follows the random walk process. Our main results remain for the "stick" system hypothesis remain robust (see Table 10, Appendix C).

As a further robustness check we try excluding from our sample of 78 regions four regions: Moscow City and Moscow Oblast together with Saint-Petersburg City and Leningrad Oblast. Saint-Petersburg City and Leningrad Oblast have the same Chief of police department, they share common law enforcement practices and trends in the dynamics of crime rates, which are formally reported for both regions. Moscow City and Moscow Oblast are strong outliers in terms of factors which influence the dynamics of economic crimes: both regions have high number of firms and retail trade volume, i.e. more possibilities exist for higher levels of predatory persecution. These four regions may also be viewed as outliers because entrepreneurs may try to resolve disputes with police departments using their connections with federal center. Our results remain roughly robust (see Table 9, Appendix C). Interesting to mention that eliminating these outlier regions produce insignificant results for the scheduled governors' turnover variable in the second equation for retail trade, which means that the initial uncertainty effect was most probably produced by these four regions. To check further robustness of our results we use KPRF vote share in Duma elections and the share of votes in regional legislatures held by United Russia (mandates). The idea behind this variable being correlated with the number of economic crimes is that it may serve as a proxy for the degree of political competition in a region, because KPRF may probably be considered as the only solid opposition to the ruling party "United Russia", and the high number of United Russia's mandates may signify lower political competition. Our results remain robust when adding these additional controls.

8 Conclusion

The aim of this paper was to examine which factors may have caused the growth in the number economic crimes observed during the period 2004 – 2009. Bearing in mind that large portion of criminal investiga-

tions is started on genuine reasons, we suggest two explanations. Taking into account large evidence of involvement of law enforcers in raider attacks towards property seizure in Russia, and the results of previous research on violence, we test two hypotheses. The first one was that law enforcement officers can initiate criminal cases in private interests. An alternative hypothesis might concern the so-called "stick system" which imply manipulations to give the appearance of solving criminal cases.

Law enforcement officers involved in former activity put violent pressure on entrepreneurs using official capability to start criminal prosecution. In case of raider attack, the reason of starting prosecution could be farfetched with the sole purpose to seize assets. Entrepreneur is put on pretrial detention and forced to transfer the ownership of assets to person affiliated with enforcers. The latter activity conditioned by KPI system of law enforcers. Each low-level department of Ministry of Interior Affairs has to show improvement in their field of activity, that is, a growth in number of registered cases and in the percentage of investigated criminal cases for certain articles of Criminal Code. This KPI system, called the "stick system", provide distorted incentives. In case of real offense, law enforcer prefers to initiate proceeding which could be easily solved only. Otherwise, he prefers to start fake proceeding against unprotected businessman in order to get a "stick". The most desirable situation for law enforcer is when he could either extort money or get a "stick".

We found evidence for both hypothesis, which corroborate with Gerber and Mendelson (2008) theory of "predatory policing", with preliminary results showing that the "stick system" effects are larger than private gains effects. The effect of the "stick system" is in constant growth of both registered and investigated criminal cases. However, when a new chief of the regional police department comes into office the first incentive of a new chief is to decrease "base level" of the number of criminal cases. We observe up to $\approx 5\%$ decrease in the number of initiated cases after chief change, which is also consistent with the "stick system": a new chief is not responsible for the results of his predecessors. The hypothesis of private interests suggests that higher cash flows in a region measured by the volume of retail trade create incentives for predatory criminal persecution, i.e. incentives for rent extraction. Our results suggest that all these effects are observed simultaneously, and these effects are robust when we exclude regions-outliers like Moscow City and Moscow Oblast together with Saint-Petersburg and Leningrad Oblast. Further investigation of the comparison of the effects we found is needed, taking into account that the effect of the "stick system" is a linear combination of the two effects.

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A Articles of the Russian Criminal Code

The Criminal Code Of The Russian Federation: Section VIII “Crimes in the Sphere of Economics”

1. Chapter 21 “Crimes Against Property”
    - Article 159 “Fraud”
    - Article 160 “Embezzlement”
2. Chapter 22 “Crimes in the Sphere of Economic Activity”
    - Article 171 “Illegal entrepreneurship”
    - Article 172 “Illegal Banking Activity”
    - Article 173 “Pseudo-entrepreneurial activity”
    - Article 174 “Money laundering”
    - Article 176 “Illegal acquisition of credits”
    - Article 177 “Deliberate evasion of the repayment of credit”
    - Article 178 “Serious abuse of the antitrust law”
    - Article 180 “Trademark infringement”
    - Article 185 “Abuse in the Case of Issuance of Securities”
    - Article 193 “Non-return of Funds in Foreign Currency from Abroad”
    - Article 194 “Evasion of Customs Payments”
    - Article 195 “Bankruptcy fraud”
    - Article 196 “Intentional (fraudulent) bankruptcy”
    - Article 197 “Fictitious Bankruptcy”
    - Article 198 “Tax evasion by person”
    - Article 199 “Tax evasion by enterprise”
3. Chapter 23 “Abuse the office”
    - Article 201 “Malfeasance in office”
    - Article 204 “Commercial bribery”

B Data Description

Table 1: Variables' Description & Data Sources

Data Description	
Variable	*Description*
Entrepreneurial Cases	Criminal cases registered by articles 171–174, 176–178, 180, 185, 193–199, 201, 204 of the Russian Criminal Code. Types of cases are: total registered, investigated. Source: MVD Regional Yearbooks.
Mixed Cases	Criminal cases registered by articles 159, 160, 183, 188, 190, 191. Types of cases are: total registered, investigated. Source: MVD Regional Yearbooks.
Fraud Cases	Criminal cases registered by article 159. Types of cases are: total registered. Source: MVD Regional Yearbooks.
Tax Cases	Criminal cases registered by articles 198 and 199. Types of cases are: total registered, investigated. Source: MVD Regional Yearbooks
Chiefs of Regional Police Departments Turnover	Dummy variable =1 if a new chief of regional police department was appointed by the President during a current year (appointments at the end of the year are coded as next year appointments. Source: ICSID Database.
Scheduled Governors' Turnover	Dummy variable =1 if a new governor was expected to be elected/appointed during a current year. Source: ICSID Database.
Employed in Public Sector	The percentage of employed in public sector (healthcare and education). Source: Rosstat.
Retail Trade Volume	The volume of retail trade, per capita, 1,000 Rub (in constant 2000 prices, deflated using the CPI index). Source: Rosstat.
Number of Small Firms	Total number of firms registered in a region (thnds). Source: Rosstat.
Share of Urban Population	Percentage of regional population living in cities. Source: Rosstat.
Total Migration Growth	Regional migration inflow (outflow) balance. Source: Rosstat.
Road Density	Density of roads of general use (with solid surface), km of roads per 1,000 sq km of area. Source: Rosstat.

C Descriptive Statistics and Regression Results

Figure 2: Number of "Mixed" Criminal Cases, 2000–2010

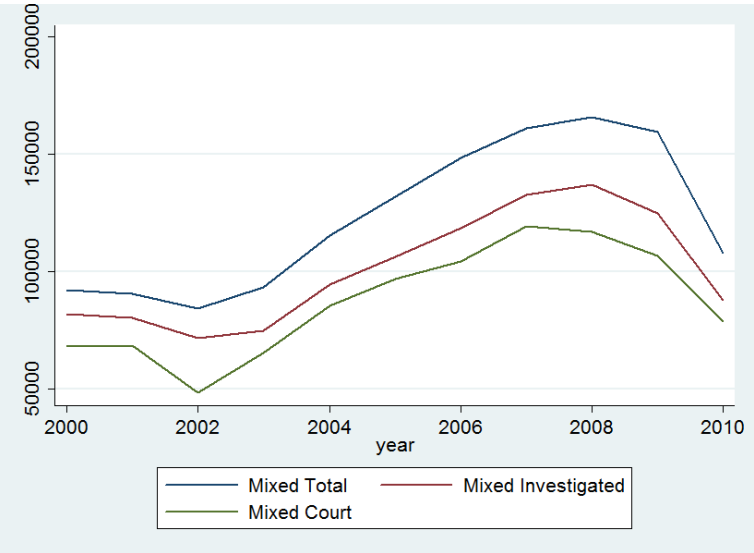

Figure 3: Number of "Entrepreneurial" Criminal Cases, 2000–2010

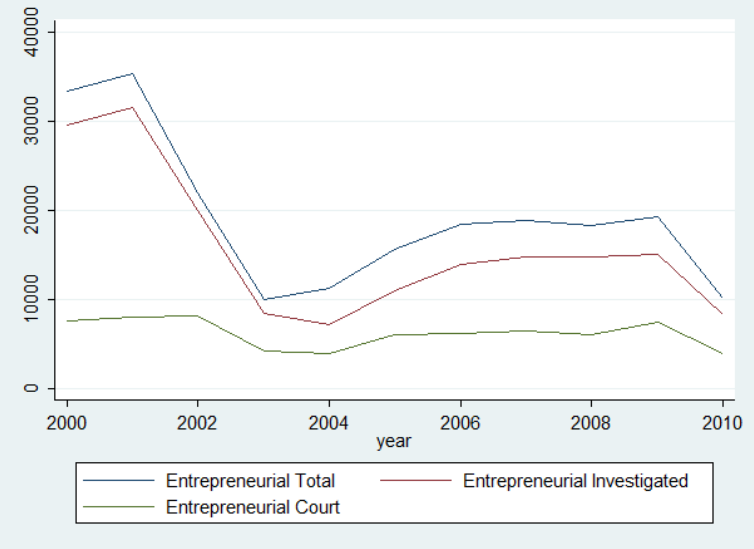

Table 2: Summary statistics, "Left-hand Side" Variables, 2004–2009

Variable	Mean	Std. Dev.	Min.	Max.	N
Entrepreneurial Plus Mixed Cases, Total	2091.026	1924.715	70	11097	462
EntMixed Cases Per 1,000 Firms, Total	52.600	29.723	6.789	237.167	462
Entrepreneurial Cases, Total	220.158	252.974	8	2075	462
Entrep Cases Per 1,000 Firms, Total	5.302	2.553	0.558	17.084	462
Mixed Cases, Total	1888.632	1725.23	54	9137	467
Mixed Cases Per 1,000 Firms, Total	47.325	28.679	5.895	230.728	467
Entrepreneurial Plus Mixed Cases, Investigated	1674.397	1575.747	51	9595	464
EntMixed Cases Per 1,000 Firms, Investigated	40.646	19.856	3.223	136.390	464
Entrepreneurial Cases, Investigated	165.196	193.301	5	1680	464
Entrep Cases Per 1,000 Firms, Investigated	4.010	2.207	0.209	12.838	464
Mixed Cases, Investigated	1526.773	1435.47	44	8032	467
Mixed Cases Per 1,000 Firms, Investigated	47.325	28.679	5.895	230.728	467
Retail Trade Volume	24.008	10.832	5.928	87.181	468

Table 3: Summary statistics: Structure of Criminal Cases, 2004–2009

Variable	Mean	Std. Dev.	Min.	Max.	N
Mixed Cases in Entrepreneurial Plus Mixed, Total	0.887	0.052	0.663	0.989	462
Entrepreneurial Cases in Entrepreneurial Plus Mixed, Total	0.113	0.052	0.011	0.337	462
Tax Cases in Entrepreneurial Cases, Total	0.577	0.146	0.083	0.925	462
Fraud Cases in Mixed Cases, Total	0.551	0.158	0.0359	0.938	467
Mixed Cases in Entrepreneurial Plus Mixed, Investigated	0.893	0.055	0.67	0.988	464
Entrepreneurial Cases in Entrepreneurial Plus Mixed, Investigated	0.107	0.055	0.012	0.33	464
Tax Cases in Entrepreneurial Cases, Investigated	0.62	0.172	0.065	1	464

Table 4: Summary statistics: Base "Right-hand Side" Variables, 2004–2009

Variable	Mean	Std. Dev.	Min.	Max.	N
Chiefs of PD Turnover	0.165	0.371	0	1	468
Scheduled Governors' Turnover	0.194	0.396	0	1	468
Employed in Public Sector	17.03	3.079	10.9	34.5	468
Total Number of Small Firms	15	27.891	0.2	217.6	468
Percentage of Urban Population	69.359	12.372	25.9	100	468
Total Migration Growth (Per 100,000 People)	-0.420	4.057	-20.1	12.1	468
Road Density	130.290	109.507	0.8	636	468

Table 5: Total chiefs of Police Departments Turnovers – Per Year (78 Regions)

	Total number of turnovers	Mean Turnover
2004	8	0.103
2005	14	0.179
2006	20	0.256
2007	16	0.205
2008	10	0.128
2009	9	0.115
N	468	

Table 6: Total Scheduled Governors' Turnovers – Per Year (78 Regions)

	Total number of turnovers	Mean Turnover
2004	19	0.244
2005	17	0.218
2006	13	0.167
2007	10	0.128
2008	19	0.244
2009	13	0.167
N	468	

Table 7: System of Equations (In Levels): Registered and Investigated Entrepreneurial/Mixed Criminal Cases Per 1,000 Firms vs. Retail Trade Volume Per Capita. 2004–2009

Equation 1: Criminal Cases	(1) Model	(2) Model	(3) Model	(4) Model
L.Criminal Cases Per 1,000 Firms (Logged)	0.920***	0.944***	0.947***	0.594***
	(0.053)	(0.143)	(0.050)	(0.101)
L.Retail Trade Volume Per Capita (Logged)	0.385**	1.067***	0.558***	0.190
	(0.174)	(0.261)	(0.170)	(0.270)
MVD Chiefs' Turnover	-0.040	-0.049*	-0.049*	-0.041
	(0.026)	(0.026)	(0.027)	(0.031)
L.Share of Urban Population (Log)	-0.779**	-2.193***	-1.153***	-0.874**
	(0.303)	(0.459)	(0.310)	(0.433)
L.Employed in Public Sector (Log)	0.908***	2.318***	1.277***	1.533***
	(0.307)	(0.510)	(0.331)	(0.403)
Year Effects	Yes	Yes	Yes	Yes
Equation 2: Retail Trade	(1)	(2)	(3)	(4)
L.Retail Trade Volume Per Capita (Log)	1.015***	1.017***	1.016***	1.013***
	(0.006)	(0.006)	(0.006)	(0.008)
L.Criminal Cases Per 1,000 Firms (Log)	0.032***	0.027***	0.033***	0.034***
	(0.005)	(0.005)	(0.005)	(0.006)
Scheduled Governors' Turnover	-0.011***	-0.016***	-0.010***	-0.014***
	(0.003)	(0.004)	(0.003)	(0.004)
L.Share of Urban Population (Log)	-0.010***	0.003*	-0.012***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
L.Road Density (Log)	0.007***	0.004**	0.008***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
L.Number of Small Firms (Log)	0.003*	0.002	0.003**	0.003**
	(0.001)	(0.002)	(0.001)	(0.001)
L.Total Migration Growth	-0.003***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Year Effects	Yes	Yes	Yes	Yes
Observations	468	468	468	468

Cluster-Robust Standard Errors in Parentheses.
Equation 1: Criminal Cases Per 1,000 Firms as DV (Logged).
Equation 2: Volume of Retail Trade Per Capita as DV (Logged).
Models (1) Registered Mixed Cases.
Models (2) Registered Mixed and Entrepreneurial Cases.
Models (3) Investigated Mixed Cases.
Models (4) Investigated Mixed and Entrepreneurial Cases.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: System of Equations (Change In): Registered and Investigated Entrepreneurial/Mixed Criminal Cases Per 1,000 Firms vs. Retail Trade Volume Per Capita. 2004–2009

Equation 1: Change in Criminal Cases	(1) Model	(2) Model	(3) Model	(4) Model
L.Criminal Cases Per 1,000 Firms (Logged)	-0.127**	-0.056	-0.044	-0.406***
	(0.051)	(0.143)	(0.067)	(0.101)
L.Retail Trade Volume Per Capita (Logged)	0.385**	1.067***	0.605***	0.190
	(0.176)	(0.261)	(0.176)	(0.270)
MVD Chiefs' Turnover	-0.039	-0.049*	-0.048*	-0.041
	(0.026)	(0.026)	(0.027)	(0.031)
L.Share of Urban Population (Log)	-0.867***	-2.193***	-1.244***	-0.874**
	(0.313)	(0.459)	(0.307)	(0.433)
L.Employed in Public Sector (Log)	1.094***	2.318***	1.359***	1.533***
	(0.327)	(0.510)	(0.321)	(0.403)
Year Effects	Yes	Yes	Yes	Yes
Equation 2: Change in Retail Trade	(1)	(2)	(3)	(4)
L.Retail Trade Volume Per Capita (Log)	0.016***	0.017***	0.016***	0.013*
	(0.006)	(0.006)	(0.006)	(0.008)
L.Criminal Cases Per 1,000 Firms (Log)	0.032***	0.027***	0.033***	0.034***
	(0.005)	(0.005)	(0.005)	(0.006)
Scheduled Governors' Turnover	-0.012***	-0.016***	-0.010***	-0.014***
	(0.003)	(0.004)	(0.003)	(0.004)
L.Share of Urban Population (Log)	-0.011***	0.003*	-0.012***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
L.Road Density (Log)	0.008***	0.004**	0.008***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
L.Number of Small Firms (Log)	0.003*	0.002	0.003**	0.003**
	(0.001)	(0.002)	(0.001)	(0.001)
L.Total Migration Growth (Log)	-0.003***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Year Effects	Yes	Yes	Yes	Yes
Observations	468	468	468	468

Cluster-Robust Standard Errors in Parentheses.
Equation 1: Criminal Cases Per 1,000 Firms as DV (Logged).
Equation 2: Volume of Retail Trade Per Capita as DV (Logged).
Models (1) Registered Mixed Cases.
Models (2) Registered Mixed and Entrepreneurial Cases.
Models (3) Investigated Mixed Cases.
Models (4) Investigated Mixed and Entrepreneurial Cases.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Robustness Check (Change In): Registered and Investigated Entrepreneurial/Mixed Criminal Cases Per 1,000 Firms vs. Retail Trade Volume Per Capita. 2004–2009

Equation 1: Change in Criminal Cases	(1) Model	(2) Model	(3) Model	(4) Model
L.Criminal Cases Per 1,000 Firms (Logged)	-0.036	-0.100	-0.044	-0.377***
	(0.057)	(0.153)	(0.066)	(0.127)
L.Retail Trade Volume Per Capita (Logged)	0.519***	0.864***	0.453***	0.077
	(0.151)	(0.243)	(0.164)	(0.296)
MVD Chiefs' Turnover	-0.054*	-0.046*	-0.037	-0.023
	(0.028)	(0.025)	(0.027)	(0.031)
L.Share of Urban Population (Log)	-1.047***	-1.907***	-0.906***	-1.068*
	(0.290)	(0.431)	(0.307)	(0.548)
L.Employed in Public Sector (Log)	1.141***	2.147***	0.996***	1.907***
	(0.297)	(0.416)	(0.297)	(0.469)
Year Effects	Yes	Yes	Yes	Yes
Equation 2: Change in Retail Trade	(1)	(2)	(3)	
L.Retail Trade Volume Per Capita (Log)	0.010	0.007	0.010*	-0.012
	(0.006)	(0.006)	(0.006)	(0.009)
L.Criminal Cases Per 1,000 Firms (Log)	0.036***	0.038***	0.035***	0.054***
	(0.005)	(0.005)	(0.005)	(0.008)
Scheduled Governors' Turnover	-0.003	-0.010***	-0.003	-0.005
	(0.004)	(0.003)	(0.004)	(0.003)
L.Share of Urban Population (Log)	-0.016***	-0.009***	-0.015***	-0.015***
	(0.002)	(0.002)	(0.002)	(0.002)
L.Road Density (Log)	0.008***	0.007***	0.007***	0.007***
	(0.001)	(0.002)	(0.001)	(0.002)
L.Number of Small Firms (Log)	0.001	0.002	0.001	0.001
	(0.001)	(0.002)	(0.001)	(0.002)
L.Total Migration Growth	-0.003***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Year Effects	Yes	Yes	Yes	Yes
Observations	444	444	444	444

Cluster-Robust Standard Errors in Parentheses.
Without Moscow and Moscow Oblast, Saint-Petersburg and Leningrad Oblast.
Equation 1: Criminal Cases Per 1,000 Firms as DV (Logged).
Equation 2: Volume of Retail Trade Per Capita as DV (Logged).
Models (1) Registered Mixed Cases.
Models (2) Registered Mixed and Entrepreneurial Cases.
Models (3) Investigated Mixed Cases.
Models (4) Investigated Mixed and Entrepreneurial Cases.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Robustness Check (First-Differenced Equations): Registered and Investigated Entrepreneurial/Mixed Criminal Cases Per 1,000 Firms vs. Retail Trade Volume Per Capita. 2004–2009

Equation 1: Change in Criminal Cases	(1) Model	(2) Model	(3) Model	(4) Model
L.Criminal Cases Per 1,000 Firms (Logged)	-0.095	-0.148**	-0.095	-0.209***
	(0.070)	(0.065)	(0.070)	(0.051)
L.Retail Trade Volume Per Capita (Logged)	0.157	0.052	0.157	0.320*
	(0.163)	(0.129)	(0.163)	(0.166)
MVD Chiefs' Turnover	-0.045*	-0.041*	-0.045*	-0.027
	(0.025)	(0.021)	(0.025)	(0.025)
L.Share of Urban Population (Log)	1.794	0.330	1.794	1.741*
	(2.774)	(1.454)	(2.774)	(1.043)
L.Employed in Public Sector (Log)	2.416***	2.507***	2.416***	0.837*
	(0.620)	(0.621)	(0.620)	(0.442)
Year Effects	Yes	Yes	Yes	Yes
Equation 2: Change in Retail Trade	(1)	(2)	(3)	(4)
L.Retail Trade Volume Per Capita (Log)	0.357*	0.304**	0.357*	0.274**
	(0.187)	(0.130)	(0.187)	(0.133)
L.Criminal Cases Per 1,000 Firms (Log)	0.041	0.045	0.041	0.009
	(0.028)	(0.030)	(0.028)	(0.018)
Scheduled Governors' Turnover	-0.014	-0.013	-0.014	-0.008
	(0.010)	(0.008)	(0.010)	(0.006)
L.Share of Urban Population (Log)	-0.032	-0.029	-0.032	-0.010
	(0.046)	(0.031)	(0.046)	(0.023)
L.Road Density (Log)	0.040	0.036	0.040	0.019
	(0.040)	(0.035)	(0.040)	(0.026)
L.Number of Small Firms (Log)	0.016	0.026	0.016	0.028
	(0.067)	(0.061)	(0.067)	(0.033)
L.Total Migration Growth	-0.024	-0.021	-0.024	-0.008
	(0.020)	(0.015)	(0.020)	(0.012)
Year Effects	Yes	Yes	Yes	Yes
Observations	468	468	468	468

Cluster-Robust Standard Errors in Parentheses.
Equation 1: Criminal Cases Per 1,000 Firms as DV (Logged).
Equation 2: Volume of Retail Trade Per Capita as DV (Logged).
Models (1) Registered Mixed Cases.
Models (2) Registered Mixed and Entrepreneurial Cases.
Models (3) Investigated Mixed Cases.
Models (4) Investigated Mixed and Entrepreneurial Cases.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$