**Online Appendix**

Table A1. Types of fiscal policy changes by region and year: non-discriminatory tax cuts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Region | Tax rate in 1994–2001 | Tax rate since 2002 | Year of non-discriminatory tax cut | Tax rate after tax cut |
|  |  |  |  |  |
|  |  |  |  |  |
| Amur Oblast | 35 | 24 | 2003 | 20.5 |
| Bryansk Oblast | 35 | 24 | 2003 | 20.5 |
| Chuvash Republic | 35 | 24 | 2003 | 20.5 |
| Perm Krai | 35 | 24 | 2003 | 20 |
| Republic of Kalmykia | 35 | 24 | 2003 | 20 |
| Rostov Oblast | 35 | 24 | 2003 | 20.5 |
| Udmurt Republic | 35 | 24 | 2003 | 20.5 |
| Republic of Buryatia | 35 | 24 | 2004 | 23 |
| St. Petersburg | 35 | 24 | 2004 | 22 |
| Kabardino-Balkar Republic | 35 | 24 | 2005 | 20.5 |
|  |  |  |  |  |

Notes: Non-discriminatory tax cut regions adopted separate tax rates on profit and direct investment profit; project-based tax cut regions had one flat rate on corporate profit but reduced tax rate for government-approved select important investment projects. Regions, not listed in tables A1 and A2, kept one flat tax rate on corporate profit of all types and are referred in text as no tax cut (status-quo) regions.

Table A2. Types of fiscal policy changes by region and year: project-based tax cuts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Region | Tax rate in 1994–2001 | Tax rate since 2002 | Year of project-based tax cut | Tax rate after tax cut |
|  |  |  |  |  |
| Altai Republic | 35 | 24 | 2003 | 20.5 |
| Astrakhan Oblast | 35 | 24 | 2003 | 20 |
| Kaluga Oblast | 35 | 24 | 2003 | 20.5 |
| Kemerovo Oblast | 35 | 24 | 2003 | 20.5 |
| Khabarovsk Krai | 35 | 24 | 2003 | 20 |
| Komi Republic | 35 | 24 | 2003 | 20 |
| Kurgan Oblast | 35 | 24 | 2003 | 20.5 |
| Leningrad Oblast | 35 | 24 | 2003 | 20.5 |
| Lipetsk Oblast | 35 | 24 | 2003 | 20 |
| Novosibirsk Oblast | 35 | 24 | 2003 | 20.5 |
| Penza Oblast | 35 | 24 | 2003 | 21.5 |
| Pskov Oblast | 35 | 24 | 2003 | 20 |
| Republic of Dagestan | 35 | 24 | 2003 | 20 |
| Republic of Karelia | 35 | 24 | 2003 | 20 |
| Republic of Mordovia | 35 | 24 | 2003 | 20 |
| Republic of Tatarstan | 35 | 24 | 2003 | 20 |
| Smolensk Oblast | 35 | 24 | 2003 | 20 |
| Stavropol Krai | 35 | 24 | 2003 | 20 |
| Tambov Oblast | 35 | 24 | 2003 | 20 |
| Tyumen Oblast | 35 | 24 | 2003 | 20 |
| Vladimir Oblast | 35 | 24 | 2003 | 20 |
| Volgograd Oblast | 35 | 24 | 2003 | 20 |
| Vologda Oblast | 35 | 24 | 2003 | 20 |
| Yakutia Republic | 35 | 24 | 2003 | 20.5 |
| Yamalo-Nenets Autonomous Okrug | 35 | 24 | 2003 | 20 |
| Yaroslavl Oblast | 35 | 24 | 2003 | 20.5 |
| Khanty-Mansi Autonomous Okrug | 35 | 24 | 2004 | 20 |
| Novgorod Oblast | 35 | 24 | 2004 | 20 |
| Orenburg Oblast | 35 | 24 | 2005 | 20 |
| Samara Oblast | 35 | 24 | 2005 | 20 |
| Ulyanovsk Oblast | 35 | 24 | 2005 | 20 |
| Kostroma Oblast | 35 | 24 | 2006 | 20 |
| Voronezh Oblast | 35 | 24 | 2006 | 20.5 |
| Saratov Oblast | 35 | 24 | 2007 | 20 |
|  |  |  |  |  |

Notes: Non-discriminatory tax cut regions adopted separate tax rates on profit and direct investment profit; project-based tax cut regions had one flat rate on corporate profit but reduced tax rate for government-approved select important investment projects. Regions, not listed in tables A1 and A2, kept one flat tax rate on corporate profit of all types and are referred in text as no tax cut (status-quo) regions.

Table A3. List of business connected governors (in office in 2003) by region

|  |  |  |  |
| --- | --- | --- | --- |
| Region | Governor | Region | Governor |
|  |  |  |  |
| Altai Krai | Alexander Surikov | Oryol Oblast | Egor Stroev |
| Arkhangelsk Oblast | Anatoly Yefremov | Perm Krai | Yury Trutnev |
| Belgorod Oblast | Yevgeny Savchenko | Primorsky Krai | Sergey Darkin |
| Chelyabinsk Oblast | Pyotr Sumin | Pskov Oblast | Yevgeny Mikhailov |
| Chukotka Autonomous Okrug | Roman Abramovich | Republic of Adygea | Khazret Sovmen |
| Irkutsk Oblast | Boris Govorin | Republic of Kalmykia | Kirsan Ilyumzhinov |
| Ivanovo Oblast | Vladimir Tikhonov | Republic of Khakassia | Aleksey Lebed |
| Jewish Autonomous Oblast | Nikolay Volkov | Saint Petersburg | Valentina Matviyenko |
| Kabardino-Balkar Republic | Valery Kokov | Sakha (Yakutia) Republic | Vyacheslav Shtyrov |
| Kaluga Oblast | Anatoly Artamonov | Samara Oblast | Konstantin Titov |
| Karachay-Cherkess Republic | Mustafa Batdyev | Smolensk Oblast | Viktor Maslov |
| Khabarovsk Krai | Viktor Ishayev | Sverdlovsk Oblast | Eduard Rossel |
| Khanty-Mansi Autonomous Okrug-Yugra | Alexander Filipenko | Tambov Oblast | Oleg Betin |
| Krasnodar Krai | Alexander Tkachyov | Tomsk Oblast | Viktor Kress |
| Krasnoyarsk Krai | Alexander Khloponin | Tver Oblast | Vladimir Platov |
| Moscow | Yuri Luzhkov | Tyumen Oblast | Sergey Sobyanin |
| Murmansk Oblast | Yury Yevdokimov | Ulyanovsk Oblast | Vladimir Shamanov |
| Nizhny Novgorod Oblast | Gennady Khodyrev | Volgograd Oblast | Nikolay Maksyuta |
| Novgorod Oblast | Mikhail Prusak | Vologda Oblast | Vyacheslav Pozgalyov |
| Omsk Oblast | Leonid Polezhaev | Yakutia Republic | Yuri Neelov |
| Orenburg Oblast | Alexey Chernyshyov | Yamalo-Nenets Autonomous Okrug | Yury Neyolov |
|  |  |  |  |

Note: the list included business connected governors elected in 2003. *Sources*: Lentapedia, Kommersant Factbook, Gubernatory.ru, and SPARK.

**Table A4. Descriptive statistics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Obs. | Mean | SD | Min | Max |
|  |  |  |  |  |  |
| Tax Cut | 81 | 0.41 | 0.49 | 0 | 1 |
| Business Connection | 81 | 0.50 | 0.50 | 0 | 1 |
| GSZ Business Connection | 81 | 0.10 | 0.30 | 0 | 1 |
| HSE Business Connection | 81 | 0.09 | 0.28 | 0 | 1 |
| United Russia | 81 | 0.37 | 0.49 | 0 | 1 |
| GRP p.c. | 81 | 7.09 | 0.62 | 5.50 | 9.40 |
| FDI Growth | 81 | -0.02 | 0.69 | -1.74 | 2.76 |
| Domestic Investment Growth | 81 | 0.20 | 0.14 | -0.07 | 0.90 |
| Social Share | 81 | 47.29 | 7.03 | 25.43 | 62.50 |
| Federal Transfers | 81 | 0.08 | 0.11 | -0.02 | 0.71 |
| Oil | 81 | 2.67 | 3.75 | 0.00 | 12.18 |
|  |  |  |  |  |  |

Note: Our analysis focuses on 81 out of the 89 regions of Russia, as they were in 2003. As it is common in Russian studies, several autonomous okrugs are included as parts of larger regions: Komi-Permyak Autonomous Okrug with Perm Oblast (merged in 2005), Evenk and Taymyr Autonomous Okrugs with Krasnoyarsk Krai (merged in 2007), Koryak Autonomous Okrug with Kamchatka Oblast (merged in 2007), Ust-Orda Buryat Autonomous Okrug with Irkutsk Oblast (merged in 2008), Agin-Buryat Autonomous Okrug with Chita Oblast (merged in 2008), and Nenets Autonomous Okrug with Arkhangelsk Oblast. We also exclude Chechen Republic due to the lack of reliable data for the years of interest.

Table A5. Regions correctly predicted in baseline specification

|  |  |
| --- | --- |
| Regions correctly predicted in Model 1 | Governor had business connections |
|  |  |
| Amur Oblast | No |
| Astrakhan Oblast | No |
| Bryansk Oblast | No |
| Chuvash Republic | No |
| Republic of Dagestan | No |
| Republic of Karelia | No |
| Kemerovo Oblast | No |
| Komi Republic | No |
| Kurgan Oblast | No |
| Leningrad Oblast | No |
| Lipetsk Oblast | No |
| Novosibirsk Oblast | No |
| Perm Krai | Yes |
| Stavropol Krai | No |
| Republic of Tatarstan | No |
| Tyumen Oblast | Yes |
| Udmurt Republic | No |
| Volgograd Oblast | Yes |
| Yaroslavl Oblast | No |
|  |  |

Table A6. Robustness checks: Alternative Sources of Business Connection.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Alternative source:  GSZ Business Connection Pr(Tax Cut=1) | | Alternative source:  HSE Business Connection Pr(Tax Cut=1) | |
|  | Probit SAR | Probit SEM | Probit SAR | Probit SEM |
|  | (1) | (2) | (3) | (4) |
| **Business Connection** | **-1.126** | **-1.141** | **-1.331** | **-1.337** |
|  | **(-1.62)** | **(-1.653)\*** | **(-1.679)\*** | **(-1.685)\*** |
| **Spatial parameter** | **-0.081** | **-0.164** | **-0.064** | **-0.130** |
|  | **(0.117)** | **(0.354)** | **(0.08)** | **(0.254)** |
| United Russia | 0.531 | 0.525 | 0.441 | 0.444 |
|  | (1.646)\* | (1.621) | (1.343) | (1.351) |
| GRP p.c. | 0.045 | 0.026 | 0.049 | 0.041 |
|  | (0.106) | (0.059) | (0.115) | (0.092) |
| FDI Growth | -0.165 | -0.142 | -0.256 | -0.255 |
|  | (-0.714) | (-0.613) | (-1.093) | (-1.082) |
| Domestic Investment Growth | 3.299 | 3.378 | 3.578 | 3.642 |
|  | (2.581)\*\*\* | (2.622)\*\*\* | (2.549)\*\* | (2.577)\*\*\* |
| Social Share | 0.028 | 0.031 | 0.038 | 0.038 |
|  | (0.885) | (0.973) | (1.149) | (1.117) |
| Federal Transfers | -1.073 | -1.133 | -1.406 | -1.517 |
|  | (-0.632) | (-0.653) | (-0.742) | (-0.78) |
| Oil | 0.038 | 0.038 | 0.045 | 0.045 |
|  | (0.861) | (0.829) | (0.995) | (0.965) |
| Constant | -2.736 | -2.740 | -3.312 | -3.206 |
|  | (-0.636) | (-0.62) | (-0.747) | (-0.704) |
| **Effect of Business Connection** | **-34.6%** | **-37.9%** | **-41.3%** | **-44.1%** |
| Regions correctly predicted | 18/33 | 18/33 | 16/33 | 16/33 |
| Observations | 81 | 81 | 81 | 81 |
| AIC | -76.048 | -75.811 | -75.721 | -75.547 |

Note: Z-values in parentheses. Levels of significance \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A7. Entropy balancing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Pre Entropy Balancing | | | Post Entropy Balancing | | |
| Covariates | Mean | | Covariates | Mean | |
| Treat | Control | Treat | Control |
|  |  |  |  |  |  |
| GRP per capita | 7.176 | 6.854 | GRP per capita | 7.176 | 7.176 |
| GRP | 7.508 | 7.044 | GRP | 7.508 | 7.508 |
| Federal Transfers | 0.055 | 0.084 | Federal Transfers | 0.055 | 0.055 |
| Share of social protection in total budget expenditure, % | 45.91 | 46.94 | Share of social protection in total budget expenditure, % | 45.91 | 45.91 |
| Share of tax for natural resources in budget revenue, % | 9.424 | 8.129 | Share of tax for natural resources in budget revenue, % | 9.424 | 9.422 |
| Unemployment | 88.07 | 87.26 | Unemployment | 88.07 | 88.09 |
| GRP Growth | 29.29 | 29.08 | GRP Growth | 29.29 | 29.29 |
| FDI Growth | 0.158 | -0.185 | FDI Growth | 0.158 | 0.158 |
| Domestic Investment Growth | -0.262 | -0.202 | Domestic Investment Growth | -0.262 | -0.262 |
| Investment Risk | 44.46 | 39.09 | Investment Risk | 44.46 | 44.46 |
| Oil endowment | 2.725 | 2.364 | Oil endowment | 2.725 | 2.725 |
| Natural Gas Endowment | 2.289 | 1.789 | Natural Gas Endowment | 2.289 | 2.289 |
| Rating of Investment Potential in Natural Resources | 38.11 | 44.22 | Rating of Investment Potential in Natural Resources | 38.11 | 38.12 |
| Number of SMEs | 0.308 | 0.257 | Number of SMEs | 0.308 | 0.308 |
| Distance from Moscow | 2584 | 2572 | Distance from Moscow | 2584 | 2584 |
| United Russia | 0.296 | 0.225 | United Russia | 0.296 | 0.296 |
|  |  |  |  |  |  |

Table A8. Robustness checks: OLS regression

|  |  |  |  |
| --- | --- | --- | --- |
|  | OLS | OLS | OLS |
| VARIABLES | Pr(Tax Cut=1) | Pr(Tax Cut=1) | Pr(Tax Cut=1) |
|  | (1) | (2) | (3) |
|  |  |  |  |
| **Business Connection** | **-0.359\*\*\*** | **-0.282\*\*** | **-0.250\*\*** |
|  | **(0.119)** | **(0.119)** | **(0.109)** |
| Constant | 0.638\*\*\* | -1.610 | -1.307 |
|  | (0.093) | (1.537) | (1.473) |
| Controls | Yes | Yes | Yes |
| Entropy balancing | Yes | No | No |
| Dropping pre-2000 governors | No | Yes | No |
| Dropping outliers | No | No | Yes |
| Observations | 81 | 67 | 80 |
| R-squared | 0.129 | 0.288 | 0.230 |
|  |  |  |  |

Notes: Standard errors in parentheses. Levels of significance \*\*\* p<0.01, \*\* p<0.05, \* p<0.1