

**Web Data Appendix to Accompany**  
 “Foreign Investment, Corporate Ownership, and Development:  
 Are Firms in Emerging Markets Catching Up to the World Standard?”

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**Table A1: Construction of the Sample of Firms, 1992-2000**

	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i><b>Czech Sample</b></i>									
Initial number of firms <sup>1</sup>	2416	3559	4379	2385	2357	9136	22949	22201	19282
Small firms <sup>2</sup>	454	939	1364	19	16	4791	16688	13294	12064
Non-industrial firms <sup>3</sup>	0	0	0	2	0	0	2634	4721	3260
Firms with missing observations <sup>4</sup>	425	470	45	47	58	2159	1447	1922	1874
Final sample (no. of firms)	1537	2159	2970	2317	2283	2186	2180	2264	2084
<i><b>Russian Sample</b></i>									
Initial number of firms <sup>1</sup>	25824	25633	27983	29053	28607	28601	29139	29153	29252
Small firms <sup>2</sup>	7739	6769	7785	8213	8989	9250	10689	10938	11343
Non-industrial firms <sup>3</sup>	872	514	754	970	891	895	963	945	940
Firms with missing observations <sup>4</sup>	580	427	629	661	1589	1768	1404	1392	1934
Final sample (no. of firms)	16633	17923	18815	19209	17138	16688	16083	15878	15035

**Notes:**

<sup>1</sup> The annual number of firms for the Czech Republic in 1992 and for the entire Russian sample for 1985-2000 are constructed from the total number of firms at the end of the year, whereas in the Czech 1993-2000 sample they are constructed from quarterly observations. Source: Czech Statistical Office and Goskomstat.

<sup>2</sup> Firms with less than 100 employees in all years or which have missing values for number employed in all years.

<sup>3</sup> Firms with a non-industrial or unidentified ISIC classification in all years; 5-digit industry codes (OKONKh) for Russian firms were reclassified into new 2-digit ISIC categories.

<sup>4</sup> Missing values and inconsistencies in other key variables: ownership, output and fixed assets.

**Table A2: Description of Variables**

<b>Variable</b>	<b>Czech Data</b>	<b>Russian Data</b>
Revenue	1992: Value of production in current prices of enterprises; 1993-2000 Revenue from own production and services plus change in inventory (without taxes);	Volume of production in current prices of enterprises (without taxes)
Capital	1992: equity 1993-2000: tangible and intangible assets	Average value of fixed productive assets used in industrial production in a given year.
Labor	Average number of fulltime-equivalent employees, adjusted on the basis of an eight hour day.	Average number of industrial employees in a given year -- an adjustment is made for contracted part-time workers. All others are considered as one.
Ownership	Available for 1991-2000. Defined as more than 50% ownership: 1. Private - includes private local firms, individuals, cooperatives, and NGOs; 2. State - includes federal and municipal ownership; 3. Mixed - combination of any types of ownership with no one category having 50%; 4. Foreign	Available for 1993-2000. Defined as 100% ownership: 1. Private - includes private local firms, cooperatives, and NGOs; 2. State - includes federal, regional and municipal ownership; 3. Mixed - combination of any domestic types of ownership 4. Foreign -- including partial ownership
Startup	=1 when a firm appears in the registry for the first time	=1 when a firm appears in the registry for the first time
Industry - Old Classification	3-digit old industry codes are recoded into 2-digit ISIC	5-digit OKONH (Russian Classification of Industries of the National Economy) is recoded into 2-digit ISIC
Industry - New Classification	2-digit NACE (some years up to 6-digit) is recoded into 2-digit ISIC	5-digit OKONH is recoded into 2-digit ISIC
Ministry	Available for 1990-1993. 4-digit ministry codes are recoded into 8 ministry categories	Available for 1985-1995. 4-digit ministry codes are recoded into 37 ministry categories
Unemployment rate	Official unemployment rate by provinces	Official unemployment rate by regions (89 constituencies of the Russian Federation)
Outcomes of regional elections	Municipal share of seats in the Czech parliament and the percent of seats hold by communist parties for each municipality	Four dummies indicating whether the current regional governor is a former regional administrator with no party affiliation, or represents the communist party, reform-oriented party, or other party

**Notes:** We also use several variables to control for other features of our data and major events. We have for instance included dummy variables for outlier observations of a change in capital stock relative to corresponding changes in output or in employment. For Russia, we have also included two additional variables: i) an interaction term between a dummy for year 1992 and state ownership and ii) an interaction term between a dummy for year 1992 and the log of capital. The former variable is added because ownership information is not available in 1992 and like others we assume state ownership for all firms in this year, given that large-scale privatization in Russia started only at the end of 1992. The latter variable is included in Russia because 1992 was the first year of high inflation and the end-year capital re-valuation began only in 1993.

**Table A3: Robustness of Ownership Effects to Functional Form, 1992-2000**

<b>Czech Republic</b>					
	<b>Cobb-Douglas Basic</b>	<b>Translog Basic</b>	<b>Translog Industry</b>	<b>Translog Industry, Var=HHI</b>	<b>Translog Industry, Var=<math>s_F</math></b>
Foreign	0.452** (0.033)	0.420** (0.032)	0.405** (0.031)	0.322** (0.036)	0.336** (0.042)
Mixed	0.112** (0.030)	0.111** (0.030)	0.104** (0.028)	0.056 (0.032)	0.146** (0.041)
Private	0.105** (0.024)	0.133** (0.024)	0.127** (0.022)	0.098** (0.026)	0.125** (0.026)
<i>Var</i> = HHI, $s_F$	...	...	...	-0.605 (0.370)	-0.097 (0.137)
Foreign $\times$ <i>Var</i>	...	...	...	1.656** (0.375)	0.238 (0.138)
Mixed $\times$ <i>Var</i>	...	...	...	1.068** (0.330)	-0.144 (0.132)
Private $\times$ <i>Var</i>	...	...	...	0.680* (0.326)	0.023 (0.123)
R <sup>2</sup>	0.757	0.765	0.786	0.786	0.786
F-test		47.926**			

  

<b>Russia</b>					
	<b>Cobb-Douglas Basic</b>	<b>Translog Basic</b>	<b>Translog Industry</b>	<b>Translog Industry, Var=HHI</b>	<b>Translog Industry, Var=<math>s_F</math></b>
Foreign	1.065** (0.039)	1.023** (0.038)	0.859** (0.038)	0.795** (0.039)	0.692** (0.050)
Mixed	0.192** (0.014)	0.157** (0.013)	0.104** (0.013)	0.100** (0.013)	0.107** (0.014)
Private	0.223** (0.014)	0.190** (0.014)	0.117** (0.014)	0.106** (0.014)	0.117** (0.015)
<i>Var</i> = HHI, $s_F$	...	...	...	-0.367** (0.119)	-0.576** (0.080)
Foreign $\times$ <i>Var</i>	...	...	...	2.599** (0.574)	1.463** (0.288)
Mixed $\times$ <i>Var</i>	...	...	...	0.222 (0.168)	-0.034 (0.110)
Private $\times$ <i>Var</i>	...	...	...	0.660** (0.164)	0.008 (0.108)
R <sup>2</sup>	0.717	0.723	0.740	0.741	0.741
F-test		191.145**			

**Notes:** N is 19945 in the Czech Republic and 152887 in Russia. The dependent variable is log of revenue. Coefficients are estimated effects of different types of ownership relative to state ownership. We report Arellano (1987) firm-clustered standard errors to control for arbitrary serial correlation; \* significant at 5%; \*\* significant at 1%. The estimates are obtained from the Cobb-Douglas and translog production functions which include inputs, industry dummies, year dummies, and controls for data anomalies. Columns “Translog industry” also include interactions of inputs and 2-digit industries. Column “Var=HHI” includes interactions of ownership dummies with the Herfindale index (HHI). Column “Var=  $s_F$ ” includes interactions with the share of foreign firms ( $s_F$ ). The F-test is for the significance of the squared and interaction terms on inputs in the translog production function.

**Table A4: Ownership Effects in Value Added Functions**

<b>Czech Republic, Dependent Variable = Log of Values Added, 1992-2000</b>							
	<b>OLS</b>	<b>FE</b>	<b>RE</b>	<b>IV1-RE</b>	<b>IV2-RE</b>	<b>WM</b>	<b>LP</b>
Foreign	0.417** (0.027)	0.183** (0.030)	0.313** (0.023)	0.436** (0.025)	0.433** (0.025)	0.126** (0.038)	0.276** (0.024)
Mixed	0.063** (0.024)	-0.003 (0.023)	0.036 (0.020)	0.086** (0.024)	0.084** (0.024)	-0.025 (0.030)	0.005 (0.027)
Private	0.150** (0.021)	0.040* (0.021)	0.097** (0.017)	0.126** (0.018)	0.120** (0.018)	0.049 (0.030)	0.088** (0.018)
No. of obs.	18349	18349	18349	15638	15509	14108	18349
No. of firms	4632	4632	4632	4160	4075	4020	4632
R <sup>2</sup> (overall)	0.788	0.728	0.782	0.787	0.789	0.372	...

<b>Russia, Dependent Variable = Log of Values Added, 1996-2000</b>							
	<b>OLS</b>	<b>FE</b>	<b>RE</b>	<b>IV1-RE</b>	<b>IV2-RE</b>	<b>WM</b>	<b>LP</b>
Foreign	0.949** (0.051)	0.232** (0.067)	0.765** (0.044)	1.155** (0.051)	1.150** (0.051)	0.242** (0.075)	0.559** (0.045)
Mixed	0.111** (0.029)	-0.005 (0.053)	0.165** (0.027)	0.179** (0.033)	0.184** (0.034)	0.003 (0.058)	0.035 (0.025)
Private	0.205** (0.029)	0.011 (0.055)	0.214** (0.027)	0.252** (0.032)	0.257** (0.032)	0.009 (0.060)	0.085** (0.029)
No. of obs.	28359	28359	28359	27383	27383	27791	28339
No. of firms	11987	11987	11987	11458	11458	11891	11970
R <sup>2</sup>	0.725	0.621	0.718	0.722	0.722	0.361	...

<b>Russia, Dependent Variable = Log of Revenue, 1996-2000</b>							
	<b>OLS</b>	<b>FE</b>	<b>RE</b>	<b>IV1-RE</b>	<b>IV2-RE</b>	<b>WM</b>	<b>LP</b>
Foreign	0.938** (0.048)	0.168** (0.050)	0.579** (0.040)	0.960** (0.045)	0.941** (0.045)	0.206** (0.057)	0.371** (0.031)
Mixed	0.134** (0.026)	0.032 (0.036)	0.168** (0.023)	0.195** (0.031)	0.185** (0.031)	0.033 (0.038)	0.032* (0.013)
Private	0.227** (0.026)	0.055 (0.039)	0.205** (0.024)	0.253** (0.030)	0.245** (0.030)	0.065 (0.043)	0.063** (0.015)
No. of obs.	28359	28359	28359	27383	27383	27791	28339
No. of firms	11987	11987	11987	11458	11458	11891	11970
R <sup>2</sup>	0.751	0.595	0.739	0.746	0.746	0.361	...

**Notes:** Coefficients are estimated effects of different types of ownership relative to state ownership. To account for arbitrary serial correlation, we report Arellano (1987) firm-clustered standard errors in parentheses; \* significant at 5%; \*\* significant at 1%. The estimates are obtained from the translog production function specified in equation (1) and which includes industry dummies, year dummies, and controls for data anomalies. RE – random effects estimator, FE – fixed effects estimator, IV1 uses ministries under central planning as instruments, IV2 uses regional political influence and unemployment rate as instruments, WM – weighted matching estimator with propensity scores used as weights (described in the text), LP – Levinsohn-Petrin estimator. The estimation for Russia is performed on a subset of firms with available data on material inputs.

**Table A5: Blundell-Bond GMM Estimates of Ownership Effects, 1992-2000**

	Czech Republic		Russia	
	BB-IV1	BB-IV2	BB-IV1	BB-IV2
Foreign	0.620** (0.048)	0.623** (0.049)	1.242** (0.058)	1.249** (0.058)
Mixed	0.122** (0.037)	0.130** (0.038)	0.181** (0.034)	0.185** (0.032)
Private	0.183** (0.054)	0.187** (0.055)	0.127** (0.026)	0.134** (0.026)
No. of obs.	15646	15507	140219	139891
No. of firms	3869	3780	24510	24412

**Notes:** The dependent variable is log of revenue. Coefficients are estimated effects of different types of ownership relative to state ownership. Robust standard errors are in parentheses; \* significant at 5%; \*\* significant at 1%. The estimates are obtained from the translog production function specified in equation (1) and which includes industry dummies, year dummies, and controls for data anomalies. BB is Blundell-Bond system GMM estimator. First four lags of levels and differences in inputs and ownership are used as instruments for differences and levels, respectively. BB-IV1 uses ministries under central planning as additional instruments, BB-IV2 uses regional political influence and unemployment rate as additional instruments..

**Table A6: Sensitivity of Estimates to Definitions of Foreign Ownership**

<b>Panel A. Foreign Ownership Subcategories, Russia</b>					
	<b>Distribution %</b>	<b>OLS</b>	<b>FE</b>	<b>RE</b>	<b>WM</b>
Foreign >50%	1.13	1.227** (0.059)	0.370** (0.056)	0.662** (0.047)	0.395** (0.063)
Foreign ≤50%	1.74	0.969** (0.047)	0.084* (0.041)	0.347** (0.035)	0.130** (0.044)
Unknown foreign share	0.33	0.525** (0.062)	0.073 (0.049)	0.250** (0.045)	0.127* (0.054)
Mixed	33.85	0.157** (0.013)	-0.047** (0.009)	-0.003 (0.008)	-0.029** (0.010)
Private	33.00	0.190** (0.014)	-0.060** (0.011)	-0.003 (0.010)	-0.035* (0.014)

  

<b>Panel B. Majority Foreign Ownership vs. Other Ownership</b>					
	<b>FE</b>	<b>RE</b>	<b>IV1-RE</b>	<b>IV2-RE</b>	<b>WM</b>
<i>Czech Republic</i>					
Foreign >50%	0.184** (0.024)	0.222** (0.020)	0.288** (0.021)	0.287** (0.021)	0.128** (0.034)
<i>Russia</i>					
Foreign >50%	0.370** (0.053)	0.562** (0.046)	1.580** (0.053)	1.641** (0.054)	0.363** (0.058)
Unknown foreign share	0.068 (0.045)	0.136** (0.043)	0.245** (0.033)	0.249** (0.033)	0.091 (0.049)

**Notes:** Number of observations and firms is the same as in Table 2. The dependent variable is log of revenue. Panel A reports estimated effects of different types of ownership relative to state ownership. Panel B reports estimated effects of majority foreign ownership relative to other categories of ownership. To account for arbitrary serial correlation, we report Arellano (1987) firm-clustered standard errors in parentheses; \* significant at 5%; \*\* significant at 1%. The estimates are obtained from the translog production function specified in equation (1) and which includes industry dummies, year dummies, and controls for data anomalies. RE – random effects estimator, FE – fixed effects estimator, IV1 uses ministries under central planning as instruments, IV2 uses regional political influence and unemployment rate as instruments, WM – weighted matching estimator with propensity scores used as weights (described in the text).

**Table A7: Quantile Estimates of the Efficiency Gains of Foreign Firms Relative to Other Types of Ownership**

	Czech Republic			Russia		
	10 <sup>th</sup>	50 <sup>th</sup>	90 <sup>th</sup>	10 <sup>th</sup>	50 <sup>th</sup>	90 <sup>th</sup>
<b>Foreign-State</b>						
1992-1994	0.187** (0.057)	0.285** (0.042)	0.389** (0.067)	0.134* (0.054)	0.455** (0.036)	1.040** (0.052)
1995-1997	0.347** (0.038)	0.432** (0.033)	0.470** (0.051)	0.517** (0.047)	0.850** (0.025)	1.388** (0.032)
1998-2000	0.615** (0.065)	0.449** (0.046)	0.448** (0.075)	0.617** (0.050)	0.980** (0.026)	1.356** (0.034)
<b>Mixed-State</b>						
1992-1994	0.162 (0.090)	0.156* (0.066)	0.155 (0.104)	0.213** (0.016)	0.136** (0.011)	0.059** (0.017)
1995-1997	0.121** (0.037)	0.063 (0.032)	0.041 (0.050)	0.169** (0.024)	0.161** (0.012)	0.138** (0.017)
1998-2000	0.551** (0.069)	0.115* (0.048)	0.000 (0.079)	0.075* (0.032)	0.162** (0.016)	0.188** (0.021)
<b>Private-State</b>						
1992-1994	0.019 (0.035)	0.042 (0.025)	0.072 (0.038)	0.193** (0.019)	0.109** (0.013)	0.064** (0.019)
1995-1997	0.141** (0.031)	0.146** (0.026)	0.101** (0.039)	0.230** (0.024)	0.186** (0.013)	0.130** (0.017)
1998-2000	0.439** (0.062)	0.163** (0.045)	0.127 (0.072)	0.163** (0.031)	0.208** (0.016)	0.248** (0.020)
<b>Foreign-State</b>						
95/97-94/92	0.160** (0.004)	0.147** (0.002)	0.081** (0.006)	0.383** (0.005)	0.395** (0.002)	0.348** (0.004)
98/00-95/97	0.269** (0.004)	0.018** (0.003)	-0.023** (0.007)	0.100** (0.005)	0.130** (0.001)	-0.031** (0.002)
<b>Foreign-Mixed</b>						
95/97-94/92	0.200* (0.090)	0.240** (0.075)	0.195 (0.113)	0.426** (0.072)	0.370** (0.044)	0.269** (0.059)
98/00-95/97	-0.161** (0.048)	-0.035 (0.042)	0.018 (0.064)	0.195** (0.063)	0.129** (0.034)	-0.082 (0.043)
<b>Foreign-Private</b>						
95/97-94/92	0.038 (0.056)	0.043 (0.045)	0.052 (0.069)	0.346** (0.073)	0.318** (0.044)	0.282** (0.060)
98/00-95/97	-0.029 (0.040)	0.001 (0.032)	-0.049 (0.050)	0.167** (0.063)	0.108** (0.034)	-0.150** (0.043)

**Notes:** Standard errors in parentheses are computed by the Delta method (Greene, 2003); \* significant at 5%; \*\* significant at 1%. The estimates of the coefficients and covariance matrices are obtained from the Chow quantile regressions of output on capital and labor inputs (translog specification), ownership dummies, industry dummies, and controls for data anomalies.

**Table A8: First Stage Results for Table 2 Results (IV1), Czech Republic**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Ministry 1	-0.041* (0.024)	...	...	0.518** (0.264)
Ministry 2	0.007 (0.053)	-0.001 (0.009)	-0.269** (0.118)	0.038 (0.050)
Ministry 3	0.047 (0.081)	-0.007*** (0.002)	-0.260** (0.127)	0.045 (0.063)
Ministry 5	0.016 (0.065)	-0.005 (0.005)	-0.122 (0.137)	0.032 (0.052)
Ministry 6	0.025 (0.060)	0.002 (0.011)	-0.031 (0.125)	-0.006 (0.014)
Ministry 7	0.001 (0.049)	-0.001 (0.009)	0.037 (0.123)	-0.005 (0.016)
Ministry 9	0.005 (0.050)	0.001 (0.010)	-0.057 (0.124)	0.006 (0.020)
Year 1993	0.922*** (0.016)	0.035 (0.062)	0.187 (0.233)	-0.020*** (0.004)
Year 1994	0.954*** (0.008)	0.106 (0.126)	0.263 (0.204)	-0.025*** (0.005)
Year 1995	0.909*** (0.002)	0.044 (0.070)	0.253 (0.208)	-0.022*** (0.005)
Year 1996	0.970*** (0.004)	0.558** (0.260)	0.399*** (0.126)	-0.042*** (0.008)
Year 1997	0.962*** (0.006)	0.050 (0.075)	0.411*** (0.123)	-0.029*** (0.006)
Year 1998	0.948*** (0.010)	0.144 (0.146)	0.350** (0.177)	-0.035*** (0.009)
Year 1999	0.979*** (0.003)	0.177 (0.165)	0.229 (0.228)	-0.050*** (0.012)
Year 2000	0.959*** (0.008)	0.129 (0.135)	0.345* (0.181)	-0.038*** (0.010)
1 <sup>st</sup> stage significance of instruments	$\chi^2=15^{**}$	$\chi^2=22^{***}$	$\chi^2=111^{***}$	$\chi^2=152^{***}$

**Notes:** N=19,553; \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Ministry 4 and year 1992 are omitted categories.



**Table A9: First Stage Results for Table 2 Results (IV2), Czech Republic**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Municipal share of parliament seats	-0.002*** (0.001)	0.000 (0.000)	0.005*** (0.002)	0.000 (0.000)
Seats hold by communist parties, %	-0.000 (0.002)	0.000 (0.000)	0.010 (0.006)	-0.002** (0.001)
Unemployment rate	0.001 (0.001)	0.001** (0.000)	-0.001 (0.004)	0.002* (0.001)
Year 1993	0.901*** (0.038)	0.038 (0.062)	0.259 (0.173)	-0.022*** (0.005)
Year 1994	0.943*** (0.021)	0.115 (0.126)	0.341** (0.142)	-0.028*** (0.006)
Year 1995	0.886*** (0.045)	0.051 (0.074)	0.323** (0.148)	-0.023*** (0.005)
Year 1996	0.964*** (0.008)	0.599** (0.244)	0.460*** (0.075)	-0.046*** (0.008)
Year 1997	0.952*** (0.012)	0.063 (0.085)	0.454*** (0.084)	-0.032*** (0.007)
Year 1998	0.929*** (0.021)	0.176 (0.159)	0.409*** (0.129)	-0.039*** (0.010)
Year 1999	0.972*** (0.008)	0.225 (0.184)	0.303* (0.172)	-0.056*** (0.013)
Year 2000	0.943*** (0.017)	0.165 (0.153)	0.404*** (0.133)	-0.043*** (0.011)
1 <sup>st</sup> stage significance of instruments	$\chi^2=17$ ***	$\chi^2=13$ **	$\chi^2=16$ ***	$\chi^2=26$ ***

**Notes:** N=19,597; \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Food industry and year 1992 are omitted categories.

**Table A10: First Stage Results for Table 2 Results (IV3), Czech Republic**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Municipal seats x ministry 1	-0.008 (0.023)	...	...	0.010** (0.004)
Municipal seats x ministry 2	0.001 (0.002)	-0.000 (0.000)	-0.014** (0.007)	0.001* (0.001)
Municipal seats x ministry 3	0.001 (0.004)	-0.001 (0.001)	-0.016 (0.015)	0.003** (0.001)
Municipal seats x ministry 5	-0.005 (0.006)	-0.001 (0.001)	-0.019 (0.014)	0.003** (0.001)
Municipal seats x ministry 6	0.001 (0.001)	0.002* (0.001)	0.009** (0.004)	-0.001 (0.001)
Municipal seats x ministry 7	0.001 (0.001)	0.000 (0.000)	-0.004 (0.004)	-0.001 (0.001)
Municipal seats x ministry 8	0.005 (0.020)	-0.004 (0.003)	0.111* (0.058)	-0.001 (0.009)
Communist seats x ministry 1	0.004 (0.025)	...	...	-0.006 (0.005)
Communist seats x ministry 2	-0.005* (0.003)	-0.001 (0.000)	-0.008 (0.008)	0.001 (0.001)
Communist seats x ministry 3	-0.002 (0.004)	-0.001 (0.001)	0.017 (0.016)	-0.002 (0.001)
Communist seats x ministry 5	0.001 (0.006)	0.002* (0.001)	0.035** (0.014)	-0.002 (0.001)
Communist seats x ministry 6	-0.004* (0.002)	-0.000 (0.000)	0.001 (0.005)	0.001 (0.001)
Communist seats x ministry 7	0.000 (0.002)	-0.000 (0.000)	0.024*** (0.005)	-0.001 (0.001)
Communist seats x ministry 8	-0.017 (0.030)	0.003** (0.001)	-0.103 (0.071)	0.002 (0.006)
Unemployment rate x ministry 1	-0.013 (0.046)			0.000 (0.012)
Unemployment rate x ministry 2	0.004 (0.003)	0.001*** (0.000)	0.015* (0.009)	-0.002 (0.001)
Unemployment rate x ministry 3	0.010 (0.007)	-0.000 (0.001)	-0.056 (0.034)	0.004 (0.002)
Unemployment rate x ministry 5	0.005 (0.007)	0.002** (0.001)	-0.040* (0.021)	-0.001 (0.002)
Unemployment rate x ministry 6	0.006** (0.002)	0.000 (0.000)	-0.020*** (0.006)	-0.002 (0.001)
Unemployment rate x ministry 7	-0.003 (0.002)	0.000 (0.001)	-0.017*** (0.006)	0.001 (0.001)
Unemployment rate x ministry 8	0.010 (0.012)	0.003 (0.005)	-0.078** (0.037)	-0.002 (0.022)
Year 1993	0.929*** (0.016)	0.028 (0.053)	0.195 (0.246)	-0.020*** (0.004)
Year 1994	0.959*** (0.007)	0.084 (0.110)	0.264 (0.220)	-0.027*** (0.006)
Year 1995	0.914*** (0.002)	0.030 (0.055)	0.267 (0.216)	-0.022*** (0.005)
Year 1996	0.972*** (0.004)	0.498* (0.272)	0.429*** (0.117)	-0.043*** (0.008)

Year 1997	0.966*** (0.006)	0.031 (0.056)	0.451*** (0.107)	-0.030*** (0.007)
Year 1998	0.952*** (0.011)	0.098 (0.116)	0.413*** (0.160)	-0.038*** (0.010)
Year 1999	0.981*** (0.004)	0.118 (0.132)	0.316 (0.210)	-0.053*** (0.013)
Year 2000	0.962*** (0.009)	0.084 (0.104)	0.412** (0.163)	-0.041*** (0.011)
Region 32	0.018 (0.013)	-0.003 (0.002)	-0.028 (0.035)	0.001 (0.006)
Region 33	0.009 (0.015)	-0.004*** (0.002)	0.002 (0.041)	0.014 (0.010)
Region 34	-0.004 (0.012)	-0.005*** (0.001)	0.001 (0.038)	0.025** (0.013)
Region 35	0.007 (0.013)	-0.006*** (0.001)	0.042 (0.037)	0.012 (0.010)
Region 36	-0.007 (0.010)	-0.004*** (0.001)	0.004 (0.031)	0.021** (0.009)
Region 37	-0.021** (0.008)	-0.004*** (0.001)	0.045 (0.030)	0.018** (0.008)
Region 38	-0.020** (0.009)	-0.006*** (0.001)	0.073** (0.033)	0.028** (0.011)
Industry = Fuels	-0.005 (0.034)	0.010 (0.009)	-0.312*** (0.085)	0.023 (0.024)
Industry = Mining	0.078** (0.036)	-0.006*** (0.001)	-0.035 (0.062)	0.008 (0.012)
Industry = Textile	-0.004 (0.011)	0.000 (0.002)	0.017 (0.029)	-0.003 (0.004)
Industry = Wood	0.025 (0.021)	-0.000 (0.003)	-0.001 (0.048)	-0.006 (0.004)
Industry = Paper	0.048** (0.020)	-0.002 (0.002)	-0.100** (0.039)	0.012 (0.009)
Industry = Chemicals	0.039** (0.017)	-0.002 (0.002)	-0.011 (0.035)	-0.003 (0.004)
Industry = Building materials	0.077*** (0.020)	-0.002 (0.002)	-0.113*** (0.034)	-0.000 (0.005)
Industry = Metals	0.008 (0.011)	-0.003** (0.001)	0.007 (0.027)	0.006 (0.005)
Industry = Machinery n.e.c	0.003 (0.011)	-0.000 (0.002)	-0.024 (0.027)	0.003 (0.004)
Industry = Electrical equipment	0.040*** (0.015)	-0.002 (0.002)	-0.075** (0.030)	0.008 (0.006)
Industry = Transport equipment	0.052*** (0.020)	0.002 (0.003)	-0.123*** (0.038)	0.002 (0.006)
Industry = Other manufacturing	0.004 (0.013)	-0.001 (0.002)	0.016 (0.035)	-0.001 (0.005)
Industry = Electricity	0.056** (0.023)	-0.003 (0.002)	0.018 (0.040)	-0.010*** (0.002)
Industry = Undefined	-0.039*** (0.010)	0.003 (0.006)	0.114* (0.061)	-0.001 (0.012)
1 <sup>st</sup> stage significance of instruments	$\chi^2=34^{**}$	$\chi^2=41^{***}$	$\chi^2=153^{***}$	$\chi^2=165^{***}$

**Notes:** N=19,489; \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Food industry and year 1992 are omitted categories.

**Table A11: First Stage Results for Table 2 Results (IV1), Russia**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Ministry 1	-0.002* (0.001)	0.185*** (0.066)	-0.111*** (0.009)	0.065 (0.060)
Ministry 2	0.001 (0.002)	0.145** (0.064)	-0.096*** (0.010)	0.017 (0.051)
Ministry 3	-0.003*** (0.001)	0.104* (0.058)	-0.085*** (0.014)	0.058 (0.060)
Ministry 4	-0.002*** (0.001)	0.135** (0.062)	-0.091*** (0.012)	0.045 (0.057)
Ministry 5	-0.002*** (0.001)	0.132** (0.060)	-0.096*** (0.014)	0.041 (0.055)
Ministry 6	-0.003*** (0.000)	0.090 (0.059)	-0.078*** (0.016)	0.068 (0.066)
Ministry 7	-0.000 (0.002)	0.114* (0.062)	-0.106*** (0.006)	0.153* (0.081)
Ministry 8	-0.003*** (0.000)	0.126* (0.066)	-0.085*** (0.014)	0.049 (0.064)
Ministry 9	-0.003*** (0.000)	0.013 (0.045)	-0.090*** (0.012)	0.251*** (0.093)
Ministry 10	-0.003*** (0.000)	-0.076*** (0.022)	-0.111*** (0.004)	0.539*** (0.095)
Ministry 11	-0.003*** (0.000)	0.184*** (0.070)	-0.096*** (0.010)	0.044 (0.059)
Ministry 12	-0.003*** (0.001)	0.073 (0.056)	-0.077*** (0.017)	0.084 (0.069)
Ministry 13	-0.003*** (0.001)	0.014 (0.047)	-0.072*** (0.019)	0.150* (0.084)
Ministry 14	-0.002*** (0.001)	-0.040 (0.032)	-0.109*** (0.005)	0.428*** (0.098)
Ministry 15	...	0.030 (0.054)	-0.028 (0.034)	0.004 (0.055)
Ministry 16	-0.003*** (0.001)	0.085 (0.061)	-0.082*** (0.015)	0.085 (0.073)
Ministry 17	-0.002*** (0.001)	0.082 (0.054)	-0.080*** (0.017)	0.054 (0.058)
Ministry 18	-0.003*** (0.000)	-0.019 (0.037)	-0.102*** (0.008)	0.342*** (0.096)
Ministry 19	-0.003*** (0.000)	-0.080*** (0.021)	0.194*** (0.066)	-0.067*** (0.024)
Ministry 20	...	-0.075*** (0.022)	-0.104*** (0.007)	0.481*** (0.097)
Ministry 22	-0.004*** (0.000)	0.047 (0.049)	-0.073*** (0.019)	0.095 (0.066)
Ministry 23	-0.003*** (0.000)	0.058 (0.052)	-0.055** (0.023)	0.016 (0.050)
Ministry 24	-0.003*** (0.000)	0.008 (0.042)	-0.102*** (0.008)	0.278*** (0.092)
Ministry 25	...	-0.117*** (0.009)	0.596*** (0.084)	-0.104*** (0.007)
Ministry 26	-0.003*** (0.000)	0.101* (0.058)	-0.071*** (0.019)	0.011 (0.049)

Ministry 27	-0.004*** (0.001)	0.103* (0.054)	-0.094*** (0.018)	0.066 (0.058)
Ministry 28	-0.003*** (0.001)	0.044 (0.052)	-0.059*** (0.023)	0.053 (0.063)
Ministry 29	-0.003*** (0.000)	0.055 (0.051)	-0.085*** (0.014)	0.181** (0.082)
Ministry 30	...	0.176** (0.075)	-0.103*** (0.007)	0.052 (0.068)
Ministry 31	-0.003*** (0.001)	0.105* (0.056)	-0.089*** (0.017)	0.062 (0.059)
Ministry 32	-0.003*** (0.000)	0.070 (0.052)	-0.081*** (0.017)	0.093 (0.066)
Ministry 33	-0.004*** (0.001)	0.077 (0.048)	-0.111*** (0.022)	0.116* (0.061)
Year 1993	0.005** (0.002)	0.963*** (0.001)	0.978*** (0.000)	-0.200*** (0.008)
Year 1994	0.001 (0.001)	0.966*** (0.001)	0.980*** (0.000)	-0.207*** (0.008)
Year 1995	0.003 (0.002)	0.968*** (0.001)	0.980*** (0.000)	-0.203*** (0.008)
Year 1996	0.003 (0.002)	0.960*** (0.001)	0.978*** (0.000)	-0.179*** (0.007)
Year 1997	0.004* (0.002)	0.959*** (0.001)	0.976*** (0.000)	-0.165*** (0.007)
Year 1998	0.012*** (0.004)	0.955*** (0.001)	0.973*** (0.000)	-0.161*** (0.007)
Year 1999	0.005* (0.002)	0.956*** (0.001)	0.972*** (0.000)	-0.158*** (0.007)
Year 2000	0.012*** (0.004)	0.951*** (0.001)	0.971*** (0.000)	-0.158*** (0.007)
1 <sup>st</sup> stage significance of instruments	$\chi^2=210$ ***	$\chi^2=1446$ ***	$\chi^2=1798$ ***	$\chi^2=1738$ ***

**Notes:** N=140,658; \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Ministry 21 and year 1992 are omitted categories. The reason for coefficients on year effects being close to one is because of almost no private/mixed firms in 1992.

**Table A12: First Stage Results for Table 2 Results (IV2), Russia**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Reform party (dummy)	0.003*** (0.001)	-0.034*** (0.004)	0.026*** (0.005)	0.023*** (0.005)
Communist party (dummy)	0.002** (0.001)	-0.029*** (0.004)	0.043*** (0.005)	-0.010** (0.004)
Regional administrator (dummy)	0.001 (0.001)	0.006 (0.005)	-0.082*** (0.007)	0.051*** (0.005)
Unemployment rate (%)	-0.000** (0.000)	-0.002*** (0.000)	0.001*** (0.000)	0.002*** (0.000)
Year 1993	0.007** (0.003)	0.960*** (0.001)	0.936*** (0.001)	-0.194*** (0.007)
Year 1994	0.002 (0.002)	0.963*** (0.001)	0.936*** (0.001)	-0.200*** (0.008)
Year 1995	0.004 (0.002)	0.964*** (0.001)	0.935*** (0.001)	-0.196*** (0.008)
Year 1996	0.004 (0.002)	0.956*** (0.001)	0.932*** (0.001)	-0.173*** (0.007)
Year 1997	0.005* (0.003)	0.955*** (0.001)	0.926*** (0.001)	-0.159*** (0.007)
Year 1998	0.014*** (0.005)	0.951*** (0.001)	0.922*** (0.001)	-0.157*** (0.007)
Year 1999	0.006* (0.003)	0.952*** (0.001)	0.920*** (0.001)	-0.153*** (0.007)
Year 2000	0.014*** (0.005)	0.947*** (0.001)	0.922*** (0.001)	-0.152*** (0.007)
1 <sup>st</sup> stage significance of instruments	$\chi^2=47***$	$\chi^2=167***$	$\chi^2=615***$	$\chi^2=298***$

**Notes:** N=140,330; \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Other party and year 1992 are omitted categories.

**Table A13: First Stage Results for Table 2 Results (IV3), Russia**

	<b>Foreign</b>	<b>Mixed</b>	<b>Private</b>	<b>State</b>
Reform party x ministry 1	-0.038*** (0.014)	-0.190 (0.196)	0.022 (0.017)	0.204 (0.193)
Reform party x ministry 2	-0.032** (0.014)	-0.185 (0.198)	0.022 (0.017)	0.171 (0.197)
Reform party x ministry 3	-0.035** (0.014)	-0.235 (0.191)	0.026 (0.018)	0.165 (0.194)
Reform party x ministry 4	-0.037** (0.014)	-0.186 (0.197)	0.023 (0.018)	0.165 (0.195)
Reform party x ministry 5	-0.041*** (0.014)	-0.173 (0.199)	0.026 (0.018)	0.139 (0.194)
Reform party x ministry 6	-0.033** (0.015)	-0.153 (0.208)	0.019 (0.017)	0.286 (0.206)
Reform party x ministry 7	-0.034** (0.014)	-0.245 (0.192)	0.022 (0.017)	0.196 (0.198)
Reform party x ministry 8	0.012 (0.196)	-0.212 (0.200)	0.027 (0.019)	0.109 (0.206)
Reform party x ministry 9	-0.036** (0.015)	-0.342* (0.179)	0.023 (0.018)	0.304 (0.197)
Reform party x ministry 10	-0.002*** (0.000)	-0.486*** (0.168)	0.019 (0.017)	0.407** (0.203)
Reform party x ministry 11	-0.002*** (0.000)	-0.101 (0.211)	0.021 (0.017)	0.122 (0.199)
Reform party x ministry 12	-0.041*** (0.015)	-0.156 (0.206)	0.021 (0.017)	0.188 (0.204)
Reform party x ministry 13	...	-0.240 (0.200)	0.028 (0.019)	0.118 (0.203)
Reform party x ministry 14	-0.002*** (0.000)	-0.243 (0.193)	0.020 (0.017)	0.227 (0.197)
Reform party x ministry 15	...	-0.152 (0.211)	0.027 (0.019)	0.112 (0.203)
Reform party x ministry 16	-0.034** (0.016)	-0.272 (0.199)	0.027 (0.019)	0.152 (0.221)
Reform party x ministry 17	-0.028** (0.014)	-0.168 (0.199)	0.023 (0.018)	0.170 (0.194)
Reform party x ministry 18	-0.041*** (0.015)	-0.411** (0.170)	0.012 (0.015)	0.414** (0.196)
Reform party x ministry 19	-0.036** (0.015)	-0.487*** (0.163)	0.044* (0.024)	-0.056 (0.197)
Reform party x ministry 20	...	-0.308* (0.186)	0.025 (0.018)	0.275 (0.199)
Reform party x ministry 21	...	-0.236 (0.224)	0.028 (0.019)	0.248 (0.271)
Reform party x ministry 22	-0.039*** (0.015)	-0.168 (0.199)	0.025 (0.018)	0.090 (0.193)
Reform party x ministry 23	-0.034** (0.015)	-0.219 (0.193)	0.027 (0.019)	0.091 (0.196)
Reform party x ministry 24	-0.035** (0.015)	-0.263 (0.188)	0.023 (0.018)	0.237 (0.194)
Reform party x ministry 25	...	-0.232 (0.272)	0.043* (0.024)	-0.227 (0.236)



Reform party x ministry 26	-0.040*** (0.015)	-0.198 (0.196)	0.026 (0.018)	0.207 (0.196)
Reform party x ministry 27	-0.035** (0.014)	-0.203 (0.194)	0.025 (0.018)	0.165 (0.193)
Reform party x ministry 28	-0.051*** (0.019)	-0.141 (0.212)	0.023 (0.018)	0.213 (0.208)
Reform party x ministry 29	-0.046*** (0.016)	-0.061 (0.216)	0.026 (0.018)	-0.155 (0.197)
Reform party x ministry 30	-0.010* (0.006)	-0.067 (0.113)	0.007 (0.008)	0.076 (0.134)
Reform party x ministry 31	-0.033** (0.014)	-0.191 (0.196)	0.024 (0.018)	0.143 (0.193)
Reform party x ministry 32	-0.036** (0.014)	-0.213 (0.193)	0.027 (0.019)	0.158 (0.193)
Reform party x ministry 33	-0.036** (0.014)	-0.210 (0.193)	0.025 (0.018)	0.169 (0.193)
Communist party x ministry 1	-0.038*** (0.014)	-0.158 (0.200)	0.020 (0.017)	0.201 (0.193)
Communist party x ministry 2	-0.032** (0.014)	-0.110 (0.207)	0.020 (0.017)	0.150 (0.194)
Communist party x ministry 3	-0.035** (0.014)	-0.197 (0.195)	0.024 (0.018)	0.151 (0.193)
Communist party x ministry 4	-0.037*** (0.014)	-0.160 (0.200)	0.022 (0.017)	0.171 (0.193)
Communist party x ministry 5	-0.043*** (0.014)	-0.143 (0.202)	0.025 (0.018)	0.106 (0.193)
Communist party x ministry 6	-0.032** (0.015)	-0.162 (0.203)	0.021 (0.017)	0.204 (0.197)
Communist party x ministry 7	-0.037** (0.015)	-0.211 (0.196)	0.019 (0.017)	0.249 (0.196)
Communist party x ministry 8	...	-0.166 (0.204)	0.024 (0.018)	0.102 (0.201)
Communist party x ministry 9	-0.032** (0.015)	-0.300 (0.183)	0.023 (0.018)	0.277 (0.195)
Communist party x ministry 10	...	-0.459*** (0.167)	0.012 (0.016)	0.493** (0.199)
Communist party x ministry 11	...	-0.172 (0.200)	0.023 (0.018)	0.201 (0.195)
Communist party x ministry 12	-0.042*** (0.015)	-0.090 (0.213)	0.018 (0.016)	0.171 (0.198)
Communist party x ministry 13	-0.043*** (0.016)	-0.133 (0.210)	0.025 (0.018)	0.081 (0.200)
Communist party x ministry 14	...	-0.258 (0.191)	0.019 (0.017)	0.303 (0.196)
Communist party x ministry 15	...	-0.252 (0.201)	0.035* (0.021)	-0.107 (0.205)
Communist party x ministry 16	...	-0.248 (0.194)	0.025 (0.018)	0.197 (0.203)
Communist party x ministry 17	-0.029** (0.014)	-0.168 (0.199)	0.023 (0.018)	0.157 (0.193)
Communist party x ministry 18	-0.040*** (0.015)	-0.393** (0.170)	0.015 (0.016)	0.411** (0.194)
Communist party x ministry 19	-0.030**	-0.513***	0.047*	-0.147

Communist party x ministry 20	(0.014) ...	(0.156) -0.350** (0.178)	(0.025) 0.024 (0.018)	(0.194) 0.322* (0.196)
Communist party x ministry 21	...	-0.450** (0.206)	0.037* (0.022)	0.103 (0.251)
Communist party x ministry 22	-0.036** (0.014)	-0.193 (0.196)	0.025 (0.018)	0.153 (0.193)
Communist party x ministry 23	-0.036** (0.015)	-0.195 (0.196)	0.026 (0.019)	0.109 (0.193)
Communist party x ministry 24	-0.032** (0.015)	-0.250 (0.189)	0.023 (0.018)	0.251 (0.194)
Communist party x ministry 25	...		0.050* (0.027)	-0.063 (0.209)
Communist party x ministry 26	-0.039*** (0.015)	-0.160 (0.201)	0.024 (0.018)	0.166 (0.194)
Communist party x ministry 27	-0.036** (0.014)	-0.197 (0.195)	0.024 (0.018)	0.189 (0.193)
Communist party x ministry 28	...	-0.136 (0.209)	0.023 (0.018)	0.194 (0.199)
Communist party x ministry 29	-0.043*** (0.015)	-0.184 (0.199)	0.026 (0.018)	0.050 (0.196)
Communist party x ministry 31	-0.033** (0.014)	-0.202 (0.194)	0.024 (0.018)	0.171 (0.193)
Communist party x ministry 32	-0.034** (0.014)	-0.212 (0.193)	0.026 (0.018)	0.151 (0.193)
Communist party x ministry 33	-0.034** (0.014)	-0.189 (0.196)	0.023 (0.018)	0.183 (0.193)
Other party x ministry 1	-0.040*** (0.014)	-0.119 (0.206)	0.021 (0.017)	0.115 (0.194)
Other party x ministry 2	-0.034** (0.014)	-0.045 (0.217)	0.020 (0.017)	0.041 (0.196)
Other party x ministry 3	-0.036** (0.014)	-0.169 (0.200)	0.026 (0.018)	0.072 (0.195)
Other party x ministry 4	-0.042*** (0.015)	-0.102 (0.209)	0.022 (0.017)	0.135 (0.196)
Other party x ministry 5	-0.045*** (0.015)	-0.147 (0.202)	0.027 (0.019)	0.077 (0.193)
Other party x ministry 6	...	0.040 (0.242)	0.012 (0.016)	0.286 (0.238)
Other party x ministry 7	-0.036** (0.015)	-0.154 (0.207)	0.024 (0.018)	0.053 (0.200)
Other party x ministry 8	...	-0.183 (0.207)	0.026 (0.019)	0.118 (0.210)
Other party x ministry 9	...	-0.387** (0.181)	0.029 (0.019)	0.198 (0.204)
Other party x ministry 10	...	-0.576*** (0.173)	0.015 (0.016)	0.540** (0.215)
Other party x ministry 11	...	-0.070 (0.217)	0.022 (0.017)	0.122 (0.199)
Other party x ministry 12	...	-0.067 (0.219)	0.020 (0.017)	0.089 (0.202)
Other party x ministry 13	-0.047*** (0.018)	-0.159 (0.214)	0.029 (0.019)	0.053 (0.206)

Other party x ministry 14	...		0.016 (0.017)	0.370* (0.217)
Other party x ministry 15	...	-0.279 (0.231)	0.033 (0.021)	0.017 (0.237)
Other party x ministry 16	...	-0.206 (0.227)	0.033 (0.021)	...
Other party x ministry 17	...	-0.122 (0.206)	0.024 (0.018)	0.087 (0.194)
Other party x ministry 18	...	-0.299 (0.185)	0.019 (0.017)	0.219 (0.196)
Other party x ministry 19	-0.028* (0.015)	-0.383** (0.176)	0.043* (0.024)	-0.187 (0.200)
Other party x ministry 20	...	-0.294 (0.195)		0.248 (0.204)
Other party x ministry 22	...	-0.149 (0.202)	0.027 (0.019)	0.040 (0.193)
Other party x ministry 23	...	-0.132 (0.206)	0.027 (0.019)	0.023 (0.197)
Other party x ministry 24	-0.037** (0.016)	-0.221 (0.194)	0.022 (0.017)	0.171 (0.195)
Other party x ministry 25	...		0.181 (1.897)	-0.236 (0.259)
Other party x ministry 26	-0.039*** (0.015)	-0.092 (0.211)	0.025 (0.018)	0.032 (0.197)
Other party x ministry 27	-0.036** (0.014)	-0.143 (0.202)	0.025 (0.018)	0.103 (0.193)
Other party x ministry 28	...	-0.177 (0.218)	0.026 (0.019)	0.177 (0.220)
Other party x ministry 31	-0.036** (0.014)	-0.141 (0.203)	0.025 (0.018)	0.086 (0.193)
Other party x ministry 32	-0.041*** (0.015)	-0.157 (0.201)	0.028 (0.019)	0.043 (0.193)
Other party x ministry 33	-0.036** (0.014)	-0.155 (0.201)	0.024 (0.018)	0.108 (0.193)
Administrator x ministry 1	-0.043*** (0.014)	-0.112 (0.207)	0.017 (0.016)	0.202 (0.194)
Administrator x ministry 2	-0.036** (0.014)	-0.050 (0.217)	0.017 (0.016)	0.184 (0.196)
Administrator x ministry 3	-0.037** (0.014)	-0.140 (0.204)	0.022 (0.017)	0.158 (0.194)
Administrator x ministry 4	...	-0.082 (0.212)	0.018 (0.016)	0.191 (0.195)
Administrator x ministry 5	-0.043*** (0.014)	-0.062 (0.214)	0.020 (0.017)	0.118 (0.194)
Administrator x ministry 6	...	-0.123 (0.215)	0.021 (0.017)	0.213 (0.209)
Administrator x ministry 7	-0.037** (0.015)	-0.280 (0.189)	0.023 (0.018)	0.256 (0.198)
Administrator x ministry 8	...	-0.125 (0.214)	0.023 (0.018)	0.121 (0.208)
Administrator x ministry 9	...	-0.319* (0.185)	0.021 (0.017)	0.290 (0.198)
Administrator x ministry 10	...	-0.415**	0.016	0.414**

		(0.175)	(0.017)	(0.201)
Administrator x ministry 11	...	-0.069	0.020	0.135
		(0.218)	(0.017)	(0.203)
Administrator x ministry 12	...	-0.061	0.019	0.155
		(0.220)	(0.017)	(0.204)
Administrator x ministry 13	...	-0.279	0.026	0.194
		(0.202)	(0.019)	(0.209)
Administrator x ministry 14	...	-0.223	0.021	0.217
		(0.196)	(0.017)	(0.196)
Administrator x ministry 15	...	-0.238	0.038*	-0.088
		(0.203)	(0.022)	(0.202)
Administrator x ministry 16	-0.037**	-0.068	0.025	-0.025
	(0.017)	(0.228)	(0.019)	(0.221)
Administrator x ministry 17	-0.027*	-0.138	0.021	0.164
	(0.014)	(0.204)	(0.017)	(0.195)
Administrator x ministry 19	...	-0.427**	0.040*	0.041
		(0.176)	(0.023)	(0.199)
Administrator x ministry 20	...	-0.290	0.020	0.306
		(0.191)	(0.017)	(0.201)
Administrator x ministry 21	...	-0.257	0.033	0.149
		(0.225)	(0.021)	(0.278)
Administrator x ministry 22	...	-0.165	0.025	0.125
		(0.200)	(0.018)	(0.194)
Administrator x ministry 23	...	-0.083	0.025	0.049
		(0.213)	(0.018)	(0.197)
Administrator x ministry 24	-0.030**	-0.225	0.021	0.191
	(0.015)	(0.194)	(0.017)	(0.195)
Administrator x ministry 25	...	-0.201	0.046*	-0.195
		(0.325)	(0.025)	(0.231)
Administrator x ministry 26	...	-0.034	0.022	0.131
		(0.219)	(0.017)	(0.198)
Administrator x ministry 27	-0.038***	-0.119	0.022	0.133
	(0.014)	(0.206)	(0.017)	(0.193)
Administrator x ministry 28	-0.048***	-0.146	0.027	0.130
	(0.018)	(0.212)	(0.019)	(0.204)
Administrator x ministry 29	...	-0.233	0.023	0.164
		(0.193)	(0.018)	(0.197)
Administrator x ministry 30	...	0.224*	-0.010	-0.163
		(0.129)	(0.008)	(0.143)
Administrator x ministry 31	-0.033**	-0.124	0.021	0.150
	(0.014)	(0.205)	(0.017)	(0.193)
Administrator x ministry 32	-0.046***	-0.174	0.027	0.126
	(0.015)	(0.199)	(0.019)	(0.194)
Administrator x ministry 33	-0.035**	-0.170	0.022	0.189
	(0.014)	(0.199)	(0.017)	(0.193)
Unemployment rate x ministry 1	0.000***	0.003**	0.000*	-0.011***
	(0.000)	(0.001)	(0.000)	(0.002)
Unemployment rate x ministry 2	0.000	-0.005**	0.000	-0.005
	(0.000)	(0.002)	(0.000)	(0.003)
Unemployment rate x ministry 3	-0.000	0.000	0.000	-0.005**
	(0.000)	(0.002)	(0.000)	(0.002)
Unemployment rate x ministry 4	0.000	-0.003	0.000*	-0.007***
	(0.000)	(0.002)	(0.000)	(0.003)

Unemployment rate x ministry 5	0.001*** (0.000)	-0.003** (0.001)	-0.000 (0.000)	-0.001 (0.002)
Unemployment rate x ministry 6	-0.000 (0.000)	-0.008** (0.004)	0.001* (0.000)	-0.006 (0.005)
Unemployment rate x ministry 7	0.000 (0.000)	0.005 (0.004)	-0.000 (0.000)	-0.004 (0.004)
Unemployment rate x ministry 8	-0.009 (0.008)	-0.001 (0.004)	0.000 (0.000)	-0.001 (0.007)
Unemployment rate x ministry 9	-0.000 (0.001)	0.006* (0.003)	-0.000 (0.000)	-0.003 (0.003)
Unemployment rate x ministry 10	0.001 (0.001)	0.007 (0.005)	0.000 (0.000)	-0.008 (0.005)
Unemployment rate x ministry 11	0.001 (0.001)	-0.000 (0.003)	0.000 (0.000)	-0.007 (0.004)
Unemployment rate x ministry 12	0.001 (0.000)	-0.013*** (0.005)	0.001* (0.000)	-0.002 (0.007)
Unemployment rate x ministry 13	0.001 (0.000)	-0.010 (0.006)	-0.000 (0.000)	0.010 (0.007)
Unemployment rate x ministry 14	-0.000 (0.000)	-0.004 (0.004)	0.000 (0.000)	0.004 (0.004)
Unemployment rate x ministry 15	...	-0.002 (0.007)	-0.000* (0.000)	0.013*** (0.005)
Unemployment rate x ministry 16	0.000 (0.001)	0.004 (0.006)	-0.000 (0.000)	0.002 (0.009)
Unemployment rate x ministry 17	-0.001*** (0.000)	-0.006*** (0.002)	0.000* (0.000)	0.001 (0.002)
Unemployment rate x ministry 18	0.000 (0.000)	0.009*** (0.003)	0.001** (0.000)	-0.015*** (0.003)
Unemployment rate x ministry 19	-0.001* (0.000)	0.013*** (0.004)	-0.001** (0.001)	0.020*** (0.004)
Unemployment rate x ministry 20	...	0.001 (0.004)	-0.000 (0.000)	0.001 (0.004)
Unemployment rate x ministry 21	...	0.006 (0.012)	-0.000 (0.001)	-0.007 (0.025)
Unemployment rate x ministry 22	-0.000 (0.000)	-0.005*** (0.001)	0.000 (0.000)	0.005*** (0.001)
Unemployment rate x ministry 23	-0.000 (0.000)	-0.004* (0.002)	-0.000 (0.000)	0.003 (0.002)
Unemployment rate x ministry 24	-0.000 (0.000)	-0.003 (0.002)	-0.000 (0.000)	0.004 (0.002)
Unemployment rate x ministry 25	...	-0.026 (0.035)	-0.000 (0.000)	-0.007 (0.013)
Unemployment rate x ministry 26	0.000 (0.000)	-0.005** (0.002)	0.000 (0.000)	-0.009** (0.004)
Unemployment rate x ministry 27	-0.000 (0.000)	-0.001 (0.001)	-0.000 (0.000)	-0.001 (0.001)
Unemployment rate x ministry 28	0.001 (0.001)	-0.008 (0.006)	0.000 (0.000)	-0.003 (0.007)
Unemployment rate x ministry 29	0.001 (0.001)	-0.009** (0.005)	-0.000 (0.000)	0.021*** (0.006)
Unemployment rate x ministry 30	-0.005** (0.002)	-0.041 (0.028)	0.004 (0.003)	0.029 (0.029)
Unemployment rate x ministry 31	-0.000	-0.002**	0.000	-0.001

Unemployment rate x ministry 32	(0.000) -0.000	(0.001) -0.002	(0.000) -0.000	(0.001) 0.003**
Unemployment rate x ministry 33	(0.000) -0.000	(0.001) -0.002**	(0.000) 0.000	(0.002) 0.000
Year 1993	(0.000) 0.005**	(0.001) 0.968***	(0.000) 1.000***	(0.001) -0.193***
Year 1994	(0.003) 0.002	(0.017) 0.971***	(0.000) 1.000***	(0.008) -0.203***
Year 1995	(0.002) 0.004	(0.016) 0.973***	(0.000) 1.000***	(0.009) -0.203***
Year 1996	(0.002) 0.004*	(0.016) 0.966***	(0.000) 1.000***	(0.009) -0.176***
Year 1997	(0.002) 0.005*	(0.019) 0.965***	(0.000) 1.000***	(0.008) -0.160***
Year 1998	(0.003) 0.012**	(0.019) 0.961***	(0.000) 1.000***	(0.008) -0.158***
Year 1999	(0.006) 0.005	(0.019) 0.962***	(0.000) 1.000***	(0.007) -0.154***
Year 2000	(0.003) 0.013**	(0.019) 0.957***	(0.000) 1.000***	(0.007) -0.153***
Region 1103	(0.005) 0.001	(0.021) 0.016	(0.000) -0.001	(0.007) -0.012
Region 1104	(0.002) 0.002	(0.011) -0.021**	(0.000) -0.002**	(0.010) 0.159***
Region 1105	(0.003) 0.003	(0.010) 0.053***	(0.001) -0.002**	(0.025) 0.029*
Region 1107	(0.003) 0.003	(0.016) -0.013	(0.001) 0.001	(0.016) -0.066***
Region 1108	(0.003) 0.001	(0.011) 0.099***	(0.001) -0.003**	(0.007) 0.024
Region 1110	(0.002) -0.000	(0.021) -0.056***	(0.001) -0.001*	(0.016) 0.210***
Region 1111	(0.002) 0.003	(0.013) 0.068***	(0.001) -0.002**	(0.033) 0.005
Region 1112	(0.003) -0.001	(0.018) 0.021	(0.001) -0.001	(0.015) -0.023
Region 1114	(0.002) 0.002	(0.016) -0.008	(0.001) 0.000	(0.015) -0.062***
Region 1115	(0.003) 0.007	(0.012) 0.039**	(0.001) -0.001**	(0.009) -0.036***
Region 1117	(0.005) 0.008	(0.016) 0.011	(0.001) -0.000	(0.011) -0.056***
Region 1118	(0.005) 0.004	(0.012) 0.002	(0.000) -0.001	(0.008) -0.024**
Region 1119	(0.003) 0.005	(0.011) -0.003	(0.000) 0.000	(0.011) -0.053***
Region 1120	(0.004) -0.000	(0.012) 0.014	(0.001) -0.001	(0.009) -0.029***
Region 1122	(0.001) 0.000	(0.012) 0.003	(0.000) -0.001*	(0.011) -0.007
Region 1124	(0.002) 0.003	(0.010) 0.019	(0.001) -0.002**	(0.012) 0.023
	(0.003)	(0.013)	(0.001)	(0.016)

Region 1125	0.008 (0.005)	0.095*** (0.019)	-0.003** (0.001)	-0.002 (0.012)
Region 1126	...	0.001 (0.064)	-0.002 (0.001)	0.357** (0.165)
Region 1127	0.008 (0.006)	0.113*** (0.024)	-0.002** (0.001)	0.002 (0.017)
Region 1128	0.001 (0.002)	0.040*** (0.014)	-0.002** (0.001)	-0.033*** (0.010)
Region 1129	0.006 (0.005)	0.033** (0.016)	-0.002** (0.001)	0.011 (0.016)
Region 1130	0.001 (0.003)	-0.012 (0.018)	-0.000 (0.001)	-0.009 (0.022)
Region 1132	-0.001 (0.001)	0.029** (0.012)	-0.001 (0.000)	-0.026** (0.010)
Region 1133	0.001 (0.002)	-0.010 (0.011)	-0.001 (0.001)	0.014 (0.015)
Region 1134	0.003 (0.004)	-0.001 (0.013)	-0.001 (0.001)	-0.009 (0.015)
Region 1136	0.000 (0.002)	0.040*** (0.014)	-0.001** (0.001)	-0.031*** (0.011)
Region 1137	-0.000 (0.002)	0.054*** (0.019)	-0.001* (0.001)	-0.060*** (0.009)
Region 1138	0.000 (0.002)	-0.009 (0.012)	0.000 (0.001)	-0.018 (0.014)
Region 1140	0.024** (0.011)	-0.023** (0.010)	-0.001* (0.001)	0.019 (0.015)
Region 1141	0.004 (0.003)	-0.006 (0.011)	-0.000 (0.000)	-0.005 (0.013)
Region 1142	0.013 (0.010)	0.035* (0.018)	-0.002** (0.001)	-0.001 (0.020)
Region 1144	-0.001 (0.001)	0.004 (0.021)	-0.001* (0.001)	0.058* (0.033)
Region 1145	0.009 (0.006)	0.030** (0.013)	-0.003** (0.001)	0.072*** (0.019)
Region 1146	0.004 (0.003)	-0.003 (0.009)	-0.002** (0.001)	0.070*** (0.015)
Region 1147	0.002 (0.003)	0.006 (0.016)	-0.002** (0.001)	0.024 (0.021)
Region 1149	0.010 (0.007)	0.029* (0.016)	-0.002** (0.001)	0.003 (0.016)
Region 1150	0.002 (0.003)	0.034** (0.013)	-0.002** (0.001)	0.010 (0.014)
Region 1152	0.001 (0.002)	0.060*** (0.018)	-0.002** (0.001)	-0.028** (0.012)
Region 1153	-0.000 (0.001)	0.066*** (0.018)	-0.002** (0.001)	-0.022* (0.013)
Region 1154	0.001 (0.002)	0.044** (0.018)	-0.001* (0.001)	-0.019 (0.015)
Region 1156	0.004 (0.004)	0.054*** (0.017)	-0.002** (0.001)	0.043** (0.019)
Region 1157	0.002 (0.002)	0.010 (0.011)	-0.000 (0.000)	-0.050*** (0.008)
Region 1158	0.005	-0.053***	0.004*	-0.031**

Region 1160	(0.006) -0.000	(0.013) 0.053***	(0.002) -0.002**	(0.013) -0.007
Region 1161	(0.001) 0.001	(0.014) 0.021	(0.001) -0.001*	(0.011) -0.028**
Region 1163	(0.002) 0.007	(0.014) -0.051***	(0.001) 0.002*	(0.012) 0.011
Region 1164	(0.005) 0.013	(0.011) 0.046**	(0.001) -0.002**	(0.014) -0.012
Region 1165	(0.008) 0.009*	(0.019) -0.009	(0.001) -0.002**	(0.016) 0.098***
Region 1166	(0.005) 0.003	(0.010) -0.053***	(0.001) 0.002	(0.020) 0.038*
Region 1168	(0.004) 0.001	(0.012) -0.042***	(0.001) 0.003*	(0.021) -0.043***
Region 1169	(0.002) 0.002	(0.012) 0.011	(0.002) -0.002**	(0.011) 0.041**
Region 1170	(0.003) 0.009	(0.015) 0.036**	(0.001) -0.002**	(0.021) -0.017
Region 1171	(0.006) 0.001	(0.015) -0.000	(0.001) -0.001*	(0.013) 0.026*
Region 1173	(0.002) 0.001	(0.011) 0.027*	(0.001) -0.002**	(0.015) 0.114***
Region 1175	(0.002) 0.003	(0.014) 0.018	(0.001) -0.002**	(0.022) 0.006
Region 1176	(0.003) 0.001	(0.012) 0.048**	(0.001) -0.001	(0.013) -0.062***
Region 1177	(0.003) ...	(0.021) -0.104***	(0.001)	(0.010) 0.642***
Region 1178	0.006 (0.005)	-0.004 (0.012)	-0.001 (0.001)	0.006 (0.015)
Region 1179	0.000 (0.006)	-0.040** (0.018)	0.001 (0.001)	0.023 (0.028)
Region 1180	-0.000 (0.001)	-0.014 (0.011)	-0.003** (0.001)	0.144*** (0.023)
Region 1181	-0.001 (0.001)	0.051*** (0.019)	-0.001* (0.001)	-0.018 (0.015)
Region 1182	-0.002* (0.001)	-0.011 (0.015)	-0.003** (0.001)	0.234*** (0.038)
Region 1183	-0.000 (0.003)	0.091*** (0.025)	-0.003** (0.001)	0.039* (0.023)
Region 1184	...	-0.033 (0.031)	-0.001 (0.001)	0.062 (0.053)
Region 1185	...	-0.001 (0.026)	-0.003** (0.001)	0.309*** (0.061)
Region 1186	0.007 (0.005)	0.018 (0.016)	-0.002** (0.001)	0.015 (0.019)
Region 1187	0.004 (0.004)	0.011 (0.015)	0.000 (0.001)	-0.029** (0.013)
Region 1188	0.001 (0.002)	0.086*** (0.022)	-0.002** (0.001)	0.018 (0.019)
Region 1189	0.003 (0.004)	0.042** (0.017)	-0.003** (0.001)	0.140*** (0.027)



Region 1190	-0.002*** (0.001)	-0.028 (0.017)	-0.003** (0.001)	0.342*** (0.058)
Region 1191	...	0.029 (0.025)	0.003 (0.002)	-0.081*** (0.008)
Region 1192	0.002 (0.003)	0.027** (0.013)	-0.003** (0.001)	0.178*** (0.025)
Region 1193	...	-0.033 (0.023)	-0.003** (0.001)	0.254*** (0.063)
Region 1194	0.006 (0.006)	0.039** (0.017)	-0.003** (0.001)	0.085*** (0.026)
Region 1195	-0.001 (0.002)	0.057** (0.023)	-0.002** (0.001)	-0.026 (0.017)
Region 1197	-0.001 (0.001)	0.050*** (0.018)	-0.003** (0.001)	0.147*** (0.030)
Region 1198	0.001 (0.003)	-0.037*** (0.013)	-0.002** (0.001)	0.158*** (0.032)
Region 1199	-0.002*** (0.001)	0.164*** (0.047)	-0.003** (0.001)	-0.044** (0.021)
Industry = Fuels	0.004** (0.002)	0.011 (0.007)	-0.002** (0.001)	0.068*** (0.011)
Industry = Mining	0.000 (0.001)	-0.003 (0.009)	-0.000 (0.000)	0.030** (0.013)
Industry = Textile	0.000 (0.001)	-0.026*** (0.005)	0.003** (0.001)	-0.030*** (0.004)
Industry = Wood	0.002** (0.001)	-0.006 (0.005)	-0.001** (0.001)	0.044*** (0.007)
Industry = Paper	0.008*** (0.003)	-0.058*** (0.011)	-0.000 (0.000)	0.079*** (0.015)
Industry = Chemicals	0.005*** (0.002)	-0.036*** (0.007)	0.001* (0.001)	0.017* (0.009)
Industry = Building materials	0.000 (0.001)	-0.027*** (0.005)	0.002** (0.001)	0.001 (0.005)
Industry = Metals	0.001 (0.001)	-0.011** (0.006)	0.001* (0.001)	-0.019*** (0.006)
Industry = Machinery n.e.c	0.001 (0.001)	-0.017*** (0.005)	0.000 (0.000)	0.031*** (0.007)
Industry = Electrical equipment	0.000 (0.001)	-0.014** (0.006)	-0.000 (0.000)	0.034*** (0.008)
Industry = Transport equipment	0.001 (0.001)	0.012* (0.007)	-0.000 (0.000)	0.003 (0.008)
Industry = Other manufacturing	-0.000 (0.001)	-0.042*** (0.008)	0.004** (0.002)	-0.015** (0.007)
Industry = Electricity	0.001 (0.001)	-0.037*** (0.007)	-0.003** (0.001)	0.122*** (0.013)
Industry = Non-manufacturing	-0.002*** (0.001)	0.007 (0.017)	0.000 (0.001)	-0.017 (0.017)
Industry = Undefined	0.045** (0.021)	-0.065*** (0.019)	0.000 (0.001)	0.044 (0.035)
1 <sup>st</sup> stage significance of instruments	$\chi^2=265***$	$\chi^2=1778***$	$\chi^2=1920***$	$\chi^2=2082***$
N	128355	139542	140200	140301

**Notes:** \* significant at 1%, \*\* significant at 5%, \*\*\* significant at 1%. Coefficients are estimated marginal effects on the probability of being in one of the four categories of ownership. The fitted ownership probabilities are then used as instruments for ownership categories in the revenue function reported in Table 2. Food industry and year 1992 are omitted categories.