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Corporate governance and firm performance within the Russian agri-food sector: does ownership structure matter?

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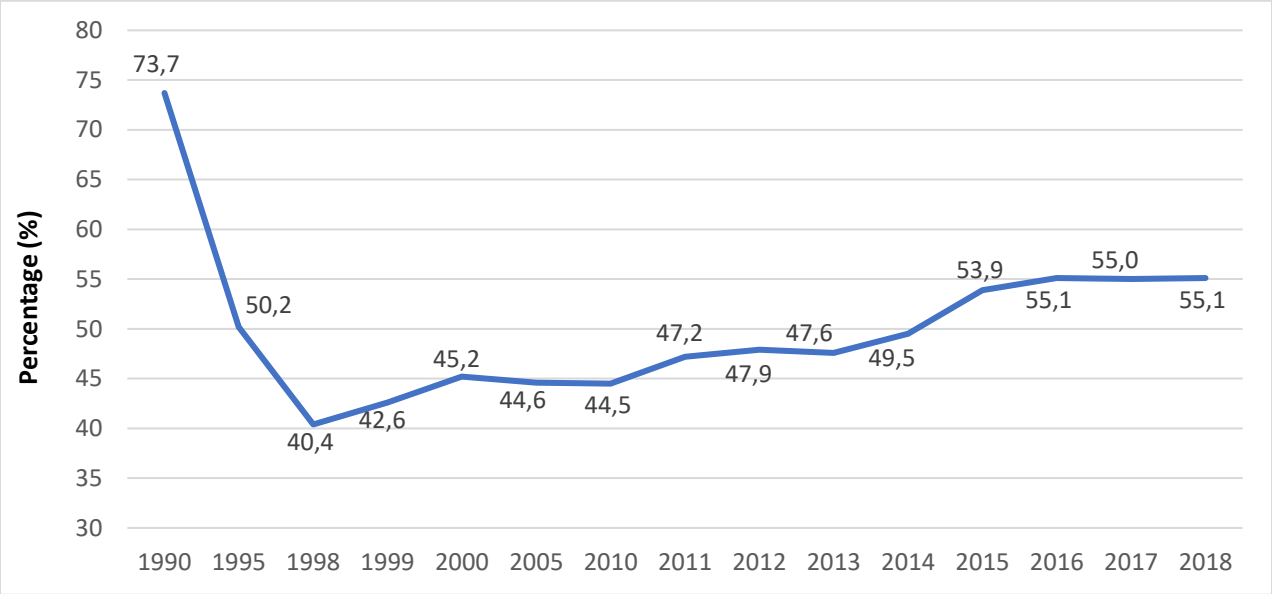

Figure S1. The share of corporate farms in the structure of the gross agricultural production in Russia from 1990 to 2018.

Table S1. Correlation matrix of independent variables.

		1	2	3	4	5	6	7	8	9	10	11
1	CR1	1.00										
2	CR3	0.74	1.00									
3	SHARE_DIR	0.00	-0.04	1.00								
4	SHARE_GOV	0.19	0.16	-0.14	1.00							
5	SHARE_AGHL	0.33	0.31	-0.38	-0.14	1.00						
6	BSIZE	-0.36	-0.32	-0.12	-0.01	-0.12	1.00					
7	BOD_IND	-0.18	-0.23	0.31	-0.20	-0.11	0.11	1.00				
8	BOD_DIV	-0.11	-0.05	0.06	0.08	-0.10	0.04	0.05	1.00			
9	FSIZE	0.24	0.25	-0.31	-0.01	0.40	0.06	-0.14	-0.11	1.00		
10	FAGE	-0.05	-0.02	-0.09	-0.16	0.04	-0.02	-0.14	0.04	-0.07	1.00	
11	LEVERAGE	0.16	0.19	-0.20	-0.10	0.13	-0.09	-0.23	-0.01	0.20	0.20	1.00

Table S2. The impact of ownership concentration on firm performance.[1]

	RE model with Driscoll-Kraay robust SE				2SLS regression			
Variables	**(1) ROA**	**(2) ROA**	**(3) ROS**	**(4) ROS**	**(1) ROA**	**(2) ROA**	**(3) ROS**	**(4) ROS**
CR1	0.13**		0.35*		0.13*		0.36*	
	(0.04)		(0.22)		(0.07)		(0.2)	
CR1_sqr	-0.13***		-0.35**		-0.14**		-0.35**	
	(0.03)		(0.19)		(0.06)		(0.15)	
CR3		0.17***		0.39***		0.17*		0.38
		(0.02)		(0.08)		(0.10)		(0.26)
CR3_sqr		-0.15***		-0.34***		-0.14*		-0.32
		(0.02)		(0.07)		(0.07)		(0.19)
BSIZE	-0.00**	-0.00*	-0.00	0.00	-0.00*	-0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
BOD_IND	0.02	0.02	0.07*	0.07**	0.02**	0.02**	0.07***	0.07***
	(0.01)	(0.01)	(0.03)	(0.03)	(0.01)	(0.01)	(0.03)	(0.03)
BOD_DIV	0.05**	0.05**	0.09***	0.09***	0.05***	0.05***	0.09**	0.09**
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.04)	(0.04)
FAGE	-0.00	-0.00	-0.00**	-0.00**	-0.00	-0.00	-0.00**	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FSIZE	0.01**	0.01**	0.04***	0.04***	0.01***	0.01***	0.04***	0.04***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)
LEVERAGE	-0.14***	-0.14***	-0.23***	-0.23***	-0.14***	-0.14***	-0.23***	-0.23***
	(0.00)	(0.01)	(0.03)	(0.03)	(0.01)	(0.01)	(0.03)	(0.03)
_cons	-0.05	-0.07	-0.44*	-0.46**	-0.05	-0.11*	-0.45***	-0.47***
	(0.08)	(0.08)	(0.18)	(0.12)	(0.04)	(0.06)	(0.11)	(0.13)
R-squared	0.20	0.20	0.13	0.13	0.20	0.20	0.13	0.13

[1] *** = $P<0.01$; ** = $P<0.05$; * = $P<0.1$; standard errors in parentheses.

Table S3. The impact of ownership identity on firm performance, random effects model with Driscoll-Kraay robust standard errors.[1]

	ROA			ROS		
Variables	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
SHARE_DIR	0.077*** (0.018)			0.289** (0.102)		
SHARE_DIR_sqr	-0.112*** (0.007)			-0.381** (0.107)		
SHARE_GOV		0.219** (0.059)			0.034 (0.134)	
SHARE_GOV_sqr		-0.283** (0.085)			-0.181 (0.196)	
SHARE_AGHL			0.034* (0.015)			0.057** (0.016)
FAGE	-0.001 (0.000)	-0.001* (0.000)	-0.000 (0.000)	-0.003** (0.001)	-0.004** (0.000)	-0.003** (0.001)
FSIZE	0.011* (0.004)	0.011** (0.004)	0.008 (0.005)	0.041*** (0.009)	0.038*** (0.007)	0.033** (0.008)
LEVERAGE	-0.142*** (0.01)	-0.144*** (0.009)	-0.144*** (0.011)	-0.228*** (0.030)	-0.242*** (0.033)	- 0.236*** (0.029)
BSIZE	-0.004* (0.002)	-0.004* (0.002)	-0.002 (0.001)	-0.002 (0.005)	0.001 (0.005)	0.003 (0.006)
BOD_IND	0.024* (0.012)	0.022 (0.013)	0.025 (0.013)	0.066* (0.027)	0.059* (0.024)	0.074** (0.026)
BOD_DIV	0.048** (0.014)	0.05** (0.015)	0.052*** (0.012)	0.087*** (0.019)	0.102*** (0.019)	0.098*** (0.019)
_cons	-0.016 (0.092)	-0.015 (0.077)	0.006 (0.086)	-0.366* (0.154)	-0.331** (0.114)	-0.312* (0.127)
R-squared	0.196	0.204	0.188	0.134	0.132	0.126

[1] *** = $P<0.01$; ** = $P<0.05$; * = $P<0.1$; standard errors in parentheses.

Table S4. The impact of ownership identity on firm performance, two-stage least squares model.

	ROA			ROS		
Variables	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
SHARE_DIR	0.1318** (0.0515)			0.2813** (0.1312)		
SHARE_DIR_sqr	-0.1852*** (0.0645)			-0.3863** (0.1642)		
SHARE_GOV		0.2678* (0.141)			0.1316 (0.3689)	
SHARE_GOV_sqr		-0.3444** (0.148)			-0.2603 (0.3872)	
SHARE_AGHL			0.0395** (0.0188)			0.0993** (0.0497)
FAGE	-0.001* (0.0006)	-0.0012** (0.0006)	-0.0009 (0.0006)	-0.0035** (0.0016)	-0.0036** (0.0016)	-0.0034** (0.0016)
FSIZE	0.0114*** (0.0026)	0.0112*** (0.0024)	0.0073** (0.0031)	0.0402*** (0.0067)	0.0388*** (0.0064)	0.0295*** (0.0079)
LEVERAGE	-0.1406*** (0.0124)	-0.1428*** (0.012)	-0.1441*** (0.0125)	-0.2293*** (0.0324)	-0.2397*** (0.0323)	-0.2358*** (0.0327)
BSIZE	-0.0048** (0.0023)	-0.0037* (0.0022)	-0.0019 (0.0023)	-0.0019 (0.0059)	0.0012 (0.0057)	0.0048 (0.0059)
BOD_IND	0.0229** (0.0101)	0.0214** (0.0098)	0.0257*** (0.0098)	0.0683** (0.0265)	0.0628** (0.0264)	0.0749*** (0.0259)
BOD_DIV	0.0468*** (0.0154)	0.0493*** (0.0151)	0.0522*** (0.0156)	0.0876** (0.0406)	0.0991** (0.0408)	0.1011** (0.0413)
_cons	-0.0173 (0.0392)	-0.0138 (0.036)	0.0108 (0.0404)	-0.3558*** (0.1008)	-0.3371*** (0.0956)	-0.2784*** (0.1045)
R-squared	0.1976	0.2049	0.1872	0.1340	0.1317	0.1227

[1] *** = $P<0.01$; ** = $P<0.05$; * = $P<0.1$; standard errors in parentheses.