

ORGANIZATION'S FORMATION: COLLECTIVE ACTION THEORY PERSPECTIVE FOR HOA

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Ability to make collective agreements determines life of many organizations. But does it matter for the decision to make a new organization? On the data of 82 homeowners associations (HOAs) in Moscow and Perm factors that underpin HOA formation are studied. A logit-regression analysis is used. Physical conditions of the housing stock, size of the buildings and socio-economic parameters of homeowners' community are revealed; ability of tenants to resolve the collective action problem in operating housing infrastructure is shown to be of primary importance. Thus HOA formation by homeowners is a signal of their ability to manage a house. Collective action paradox begins to play role not only *ex post*, but also *ex ante*, prior to organization's establishment.

1. Motivation for the study

This study is a part of a project devoted to homeowners associations in Russia. HOA efficiency factors were studied in its first part. Based on the same survey data this study can also provide an empirical link between organizational efficiency factors and factors that underpin formation of an organization. In the first part it is shown that ability to make collective agreements is crucial for HOA efficiency (Borisova et al., 2011). In current part we show that it matters for HOA establishment as well.

Mass media provides a lot of information about factors that should be taken into account for the decision to set up a HOA in Russia (see for example Civic hearings..., 2009). But these are just cases that say little about overall correlations. However this question seems to be very important because it touches upon the quality of life of a vast majority of people. Despite of its promise and appeal, HOA formation proved to be highly controversial, and tenants often failed to make proper use of the opportunity to collectively manage their apartment buildings. Moreover many HOAs were pre-established by developers or imposed by municipal governments without proper consultations and consent of the tenants. Current study seeks to establish the main factors that underpin HOA set up and applies econometric techniques to do so. There were no such attempts previously done.

2. Data

The study is based on a survey of 82 homeowners associations located in Russia's national capital Moscow and a large industrial city of Perm in the Northern Urals¹. A random sample was created, with controls over three dimensions: apartment price; time elapsed since building construction/capital repair; and the year HOA was created. In each HOA, the chairperson and nine other randomly selected tenants were interviewed.

Factors that underpin HOA formation are divided into two parts: 1) housing stock characteristics, 2) tenant community indicators. First include age and size of the building. Both can have either positive or negative impact on HOA formation. On the one hand, good physical conditions might lead to greater probability because of the lower costs for HOA to operate such a building. On the other hand old housing infrastructure can underpin HOA creation in order to

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renovate the house. Complexity of the collective action problem grows with the number of participants (Olson, 1965), and this, *ceteris paribus*, makes HOA operations more complicated in large buildings. Lack of socialization among tenants in such buildings further exacerbates the problem. On the other hand, there is an economy of scale in running common facilities in residential housing, which favors bigger apartment buildings – the latter can get bulk discounts from service providers, afford high quality technical, legal and accounting services, etc.

Factors from the second group are comprised mainly of different social capital measures, which demonstrate tenant’s capacity to resolve the collective action problem and thus should have positive impact for HOA establishment². We distinguish between two broad categories of social capital — generic and specific. Generic social capital comprises traditional ingredients such as trust, cohesion, social inclusion and communication, mutual assistance etc., whereas specific social capital enables tenants to make proper use of the institution of HOA, and in particular of the decision-making procedures that such institution involves.

Our measurement of generic social capital is based on respondents’ answers about whether they can count on neighbors’ support; how often a respondent assisted his/her neighbors; how often he/she actually received neighbors’ support; how many neighbors and how well a respondent knows. Specific social capital is reflected in answers to the question on how active respondents are in HOA decision-making; in the reported ability to have one’s voice heard in the process; and in the ease of reconciling different views and reaching an agreement over HOA affairs.

The impact of economic inequality is ambiguous: on the one hand homeowners might believe that a few wealthiest individuals will bear costs, on the other, they may be concerned about reaching consensus over community affairs in heterogeneous communities.

Definitions of the main variables and their summary statistics presented in Table 1.

3. Methodology

In our empirical strategy we apply logit-regression analysis where the dependent variable reflects the cause of HOA formation. In doing so we distinguish between HOAs that were created by homeowners and imposed by third parties (municipality or developer). Thus the dependent variable equals 1 for the first group and 0 for the second. Three corrections of the

² For definitions of social capital see for example (Guiso et al., 2010).

variable were used (Table 2). The first row represents raw statistics for voluntary and imposed HOAs. Second excludes form voluntary created those HOAs that had the aim for capital repairs funding because physical conditions influence in this group might be different. Third excludes from voluntary created those HOAs that had the aim for capital repairs funding and includes those HOAs that were formed from housing cooperatives. The last group is special because of mixed story of their creation.

Table 1. Summary statistics for main variables

	Obs	Mean	Std. Dev.	Min	Max
1. Building age	82	19.3	17.4	1	93
2. Building size	82	456	423	36	2500
3. Activity in HOA decision-making	81	3.56	0.670	1.7	4.7
4. Ability to have one's voice heard	81	3.79	0.725	2.2	5
5. Ease of reconciling different views and reaching an agreement over HOA affairs	81	3.63	0.480	2.1	5
6. Perception of availability of neighbors' support	76	3.18	0.408	1.7	4
7. Neighbors' support	82	1.99	0.680	0.683	3.89
8. Social inclusion	82	1.02	0.707	0.379	4.58
9. Participation in meetings	81	1.98	1.23	0.595	7.01
10. Inequality	82	2.28	0.672	1	3
11. Education	82	4.00	0.794	2	5
12. Wealth	80	4.03	0.672	2.6	5.5

Notes. *Building age* is the number of years since construction. *Building size* is the number of tenants in an apartment building. *Activity in HOA decision-making*, *ability to have one's voice heard* and *ease of reconciling different views and reaching an agreement over HOA affairs* are measured in 1 (least) to 5 (most) scale. *Perception of availability of neighbors' support* is measured in 1 (least) to 5 (most) scale. *Neighbors' support* aggregates five types of mutual assistance provided to or received from one's neighbors: lending money; lending household items; discussing personal problems; house sitting; and babysitting. Indexes of provided and received assistance are calculated as the numbers of the above types of assistance marked by a respondent, normalized to a maximum total of one. The first principal component of the above indexes is the aggregate measure of neighbors' support. *Social inclusion* indicates how many neighbors and how well a respondent knows, it is the first principal component of two measures – the number of neighbors to whom a respondent talks in his/her everyday life, and of those whom he/she visits. *Participation in meetings* is the first principal component of the total number of tenants general meetings per year and the number of the meetings that the respondent attended. *Inequality* aggregates tenants' assessments of socio-economic inequality in their apartment building in 1 (least) to 3 (most) scale. *Education* is measured by the percentage of tenants whose educational level is a community college degree and higher. *Wealth* is measured by the percentage of tenants whose income and assets are sufficient for adequate food, clothing, household appliances but not enough to afford a new car or apartment.

Table 2. Causes of HOA formation

	Voluntary	Imposed
1. Basic variable	42	40
2. Capital repairs correction	30	52
3. Housing cooperatives correction	41	41

The main independent variable block consisted of age and size of the building, one generic and one specific social capital measure and inequality. Overall different combinations of social capital measures reflecting robust checks were used. Education and wealth influence were studied independently due to their correlation with social capital (see for example Helliwell, Putnam, 2007) and with each other.

4. Results and discussion

The study revealed that HOA set up is dependent on several parameters (Table 3 presents the main results). Homeowners do take into account not only physical characteristics of the buildings, but also socio-economic indicators of the tenant community. Specific social capital measures are shown to be of primary importance, although education and wealth also matter. The only exception is the first column where specific social capital turned out to be insignificant because of the capital repairs aim noise. Thus, taking into account previous study results (Borisova et al., 2011) we can conclude that voluntary creation of HOAs is a credible signal of tenants' ability to utilize the benefits of joint ownership and management of housing infrastructure. It's just the same as the decision to have a higher education is a signal of abilities in a classic job-market signalling model of Michael Spence (Spence, 1973). Thereby massive forced implementation of HOAs may be counterproductive.

Table 3. Logit-regression analysis

	1	2	3
Log building age	0.582*	-0.0160	0.517
	(0.327)	(0.332)	(0.317)
Log building size	1.235***	0.777**	0.574*
	(0.394)	(0.380)	(0.334)
Perception of availability of neighbors' support	0.147	0.190	0.495
	(0.715)	(0.692)	(0.685)
Inequality	-0.142	0.789	0.126
	(0.689)	(0.711)	(0.638)
Activity in HOA decision-making	0.523	1.286***	1.024**
	(0.394)	(0.465)	(0.417)
Constant	-10.67**	-12.01***	-10.20**
	(4.384)	(4.614)	(4.235)
Number of observations	75	75	75
Pseudo- R^2	0.159	0.137	0.120

Notes. Cause of HOA formation is the dependent variable. Column numbers correspond to row numbers of Table 2. *, **, and *** indicate significance at resp. 10%, 5%, and 1% level.

In a broad theoretical concept our results mean that collective action paradox begins to play role not only *ex post* (as Mancur Olson noted), but also *ex ante*, prior to organization's establishment. This provides a new inside for the study of organization's formation.

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