**Corporate governance in the context of digitalization of non-profit organizations in Russia**

Efficiency of employees and internal business process is a crucial aspect of NPO survival and productivity. In modern world efficiency is highly connected with innovations, new technologies and digitalization. The digital transformation of non-profit organizations includes not only the introduction of modern equipment and software, but also complex changes in approaches to the management of non-profit organizations, organizational culture and communications. It is well-known that changes in corporate governance affects many aspects of organization behavior. In this research we show that an existence of a Supervisory Board/Board of Trustees affects positively and significantly digitalization of non-profit organizations in Russia. To separate correlation from causation we use the following channel of exogenous variation in existence of boards. According to the Russian legislation (Civil Code of Russia Federation, article 118, part 4), NPOs registered in the legal form of a fund are required to have a Supervisory Board.

For non-profit organizations that have close ties with government authorities and business, the use of digital management solutions can be interpreted as a direction to strengthen internal management systems (Bonomi et al., 2017). Digitalization can improve the performance of core business processes in a nonprofit organization, especially those that can be simplified with information technology (Rathi, Given, 2017), digital competencies in employees (Schatteman & Li-Yin, 2020) and cyber security in NPO (Hoy & Phelps, 2009). Digitalization increases the level of transparency of NPOs (Saxton & Guo, 2011), also measured by the percentage of donations from the population for charitable purposes: a higher level of transparency is associated with a higher level of efficiency (Jiang et al., 2018).

Research question

Do Supervisory Boards/Boards of Trustees in NPOs affect their digitalization of non-profit organizations in Russia?

Sample description and analytical strategy

We use a survey of NPOs which was conducted in 2018 in Russia. Leaders of 1000 NPOs were interviews face-to-face. This survey is representative on All-Russian level.

Dependent variables, which represent different sides of digitalization of NPOs:

A. “What software and IT channels are used by your organization and its employees?” Responders were given 7 answer options, and could choose any combination of the following:

1. “CRM programs (automatization of the system of interaction with clients and customers by means of collecting and analyzing data, improving business processes and analyzing outcomes)”,

2. “A system for planning and setting tasks,”

3. “Chats, social media groups for employees and volunteers,”

4. “Cloud and remote services for common data storage,”

5. “Corporate portals,”

6. “Other (specify),”

7. “None of the above.”

Responders could select any number of answers. By adding up the number of answers we created variable *general IT.*

B. What software and IT channels does your organization use to communicate with its target audience?” Responders were given 7 answer options, and could choose any combination of the following:

1. “Website,”

2. “Social media (Facebook, Odnoklassniki, Vkontakte, etc.,”

3. “Mobile apps,”

4. “Volunteer search platforms,”

5. “Email mailing lists,”

6. “Other (specify),”

7. “None of the above.”

Responders could select any number of answers. By adding up the number of answers we created variable *communication IT.*

C. “How is your organization represented online?”

There were 12 answer options:

1. “The organization has its own website,”

2. “The organization has social media accounts,”

3. “Audit results are posted on the organization website,”

4. “Employees regularly participate in themed forums/on blogs/ in groups/ on social media,”

5. “The NGO posts information and publications on themed websites, in online editions,”

6. “Information about the NGO is available through themed online catalogs or databases, reference guides,”

7. “The organization regularly posts themed video or audio content on specialized hosting platforms,”

8. “The organization sends out regular newsletters,”

9. “The NGO is advertised online,”

10. “The organization forwards news for posting on the website of the Social Information Agency,”

11. “Other (specify),”

12. “The NGO is not represented online.”

Responders could select any number of answers. By adding up the number of answers we created variable *online representation*.

Main explanatory variable/regressor of interest.

Based on answers to the question: "Does your organization have a board of trustees / supervisory board?" an interest regressor was created that is responsible for the presence of a board in the NPO (the name of the variable is board of trustees / supervisory board). We used binary coding (the answer "Yes" was coded as "1" and "Not available" was coded as "0"). Although legally, boards of trustees and supervisory boards have different functions, in practice their areas of responsibility overlap very much, therefore, in this study, these two types of boards were not separated.

Endogeneity and instrumental variables.

In our models, we have a problem of endogeneity: 1) simultaneous causality (digitalization can improve knowledge of best management practices, which a creation of a board included in) 2) omitted variable bias (many other factors can affect both existence of a board and level of digitalization). Based on regulatory requirements, that all funds in Russia should have a Supervisory Board we use an instrumental variable: fund/ non-fund separation.

Control variables: area of specialization of NPO; is a NPO socially oriented; who are founders of NPOs; is it a membership NPO; legal forms of NPO. We use TSLS and Poisson models.

Main findings and contributions

With the help of regression analysis, it was revealed that the presence of a board of trustees and supervisory boards has a positive and significant effect on the number of general information technologies (IT) used, IT for communication purposes and on the presence on the Internet. The existence of a supervisory board/board of trustees affects positively and significantly all three dependent variables: *general IT* increase - by 1 point, *communication IT* - by 0.5, *online representatio*n - by 2. Combining these results with results from Malakhov, Yakobson (2021), where it is shown on the same data that existence of boards cause an increase in information openness of NPOs, we can state that boards can help to affect two main characteristics of NPOs – openness and efficiency. Therefore, the government can increase efficiency and transparency of NPOs by stimulating them to have boards which is in case of Russia is very important.

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