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RELATIONSHIP BETWEEN SOCIAL CAPITAL OF BOARD OF DIRECTORS AND  
FINANCIAL RESULTS OF RUSSIAN MULTINATIONAL COMPANIES

Master's Thesis by the 2<sup>nd</sup> year student

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## **ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ**

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## АННОТАЦИЯ

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Факультет	Высшая школа менеджмента
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Описание целей, задач и основных результатов исследования	<p>Социальный капитал совета директоров считается значимым для финансовых показателей фирмы, особенно, когда фирмы выходят на международный рынок, где связи могут являться конкурентным преимуществом. Социальный капитал совета директоров особенно значим для мультинациональных компаний в связи с их деятельностью на нескольких рынках. Целью диссертации является исследовать взаимосвязь социального капитала совета директоров и финансовых показателей российских мультинациональных компаний. Эмпирическое исследование проведено в форме регрессионного анализа на примере данных по 61 российской мультинациональной компании. Результаты исследования доказывают, что существует взаимосвязь между внешним социальным капиталом совета директоров и финансовыми показателями компаний. Исследование имеет как теоретический вклад в исследования социального капитала совета директоров, так и практическую значимость для менеджеров, которым следует учитывать фактор социального капитала для создания эффективного совета директоров.</p>
Ключевые слова	Социальный капитал, совет директоров, мультинациональные компании

## ABSTRACT

Master Student's Name	Anna E. Ostrovskaya
Master Thesis Title	The relationship between social capital of Board of Directors and financial results of Russian multinational companies
Faculty	Graduate School of Management
Major subject	International Management
Year	2016
Academic Advisor's Name	Tatiana A. Garanina
Description of the goal, tasks and main results	<p>Social capital of board of directors is considered to be significant for the firm financial results, especially for firms that compete in a global market, where strong external network can be a competitive advantage. Social capital of board of directors is particularly significant for multinational enterprises (MNEs) due to their competition in foreign markets. Goal of this thesis is to evaluate the relationship between social capital of board of directors and financial results of Russian MNEs. The empirical research is conducted in a form of a regression model for data collected from 61 Russian MNE. The results of the research show that there is a relationship between external social capital, which is embedded in networks with other boards and governmental organisations, and financial results of MNEs. The empirical research possesses theoretical contribution to the emerging interest in social capital of board of directors research, as well as a practical implication for managers who can benefit from taking into consideration social capital for creation of an efficient board.</p>
Keywords	Social capital, board of directors, MNEs

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## **1. INTRODUCTION**

### **1.1. Research background**

Creation of knowledge based management and investment into intellectual capital has recently become one of the main objectives of companies around the world; especially multinational corporations that require global management of its international affiliates profit from strong intellectual capital as it leads to a competitive advantage.

In the company it is board members, owners and executive directors who are responsible for making key decisions in the companies. Thus, board members are responsible for achievement of firm's financial, strategic and other goals. Hence, intellectual capital of board of directors is crucial for the company, as it is largely interconnected with the decisions the board makes. The influence of the intellectual capital of the board of directors is a topic of research in terms of the financial performance of the firm.

The topic relevance is explained by the recently increased interest in the corporate governance in general, and board of directors in particular. Companies seek improvement in the board, as it defines the strategy of the company. Increased competition within the country leads Russian companies to expansion, hence, they decide to develop as multinational enterprises. The board makes a decision to do that, hence, some particular traits of the board members might influence the performance of a multinational company.

Finally, many studies currently focus on the social capital of the board of directors and some researchers claimed that the amount of studies with social capital in it has increased in the last decade (Martín-de-Castro et al., 2011). Although these studies focused on samples of companies from both developed countries (Hillman, A., 2005) and developing countries (Kim Y., 2005), as well as both external and internal social capital of the board of directors, there is no prior research on the social capital of board of directors conducted on the sample of Russian capitals. Moreover, several studies (Goerzen and Beamish, 2005) claimed that social capital is highly important for multinational companies, as it increases their chances of success.

The effect of alliance networks on individual firm performance has become a critical question to both managers and scholars (Goerzen, 2005). Therefore, this research contributes to the broad research of social capital of board of directors, supporting it with the evidence from Russian multinational companies.

## **1.2. Research question**

The research question that is raised according to the goal of the research is: is there a relationship between social capital of board of directors and financial results of Russian MNEs?

## **1.3. Research goal and objectives**

The goal of the research is to examine the relationship between the social capital of the Board of Directors and the financial performance of Russian multinational corporations.

The following objectives are set in order to achieve the goal:

- To study existing literature on the relationship of social capital of the board of directors and the firm's financial performance;
- To create an empirical model for the research;
- To collect and describe data for analysis;
- To apply the regression model to the sample;
- To make managerial implications of the obtained results.

Methodology of the study consists of application of regression models to the sample of Russian multinational companies. The set of independent variables remains the same, while two dependent variables are used (market capitalization and ROA), which act as metrics for firm accounting- and market-based financial performance.

## **1.4. Expected findings**

This paper is expected to make both theoretical and practical contribution. Its main scientific value is an attempt to fill the gap in existing theory of social capital of board of directors with evidence from the Russian market. Practical implications of the research are expected to provide managers with information and evidence on the statistically significant relationship between the board social capital and financial performance of the firm. The information is useful to managers for choosing the board members in multinational enterprises, bearing in mind that they want to improve the financial performance of the company.

Expected result of this study is to find a positive relationship between the external and internal social capital of the board of directors and financial performance of Russian multinational

companies. All regression coefficients are expected to stay statistically significant and of the same sign regardless of the dependent variable used (market capitalization and ROA). However, if the opposite is found, it will be seen as valuable evidence of social capital of board of directors having less impact than the boards' human capital in terms of firm's performance.

## **1.5. Organization of the research**

The research consists of introduction, two main chapters: theoretical framework and empirical study, and a chapter with conclusion, discussion, theoretical and managerial implications and limitations of the research.

First part is theoretical framework of social capital of board of directors, which consists of two sections. The first section of the theoretical framework is devoted to the background analysis of the key concept of social capital: its definition, theories, components and significance for multinational enterprises. The second section of the theoretical framework is focused on the profound review of social capital in application towards board of directors': definition, components and importance of social capital of the board of directors. It is followed by a detailed analysis of existing theoretical frameworks and empirical research on the social capital of the board of directors and its effects on the firm's financial results. Theoretical part is summarized by a formulation of a research gap from the conducted literature review.

Second part is devoted to the empirical study of the social capital of board of directors based on the research gap identified in the first part. Chapter starts with the hypotheses formulation, explanation of methodology, variables and data collection process. The collected sample is then analysed in detail, descriptive statistics are presented and the regression analysis is conducted. Empirical part is summarized by the analysis of the results of regression.

The paper closes with the discussion of the findings, comparison of the findings with the relevant research, theoretical contribution of the research, managerial implications of the findings, limitations of the work and suggestions for further research.

## 2. THEORETICAL BACKGROUND OF BOARD OF DIRECTORS' SOCIAL CAPITAL

### 2.1. Social capital definition and theory

#### 2.1.1. Concept of social capital

Social capital is a part of a larger construct, namely, intellectual capital. One of the first researchers to track the components of intellectual capital were Edvinsson and Malone (1997). They divided intellectual capital into the following sub-categories: 1) human capital, which included employees' knowledge, skills and network, and 2) organizational (alternatively referred to as structural capital) capital, which consisted of software systems, trademarks and supply chains. Sveiby (1997), Stewart (1998) and Bontis (1998) separated networks from human capital and proposed a third component into the intellectual capital construct, which they referred to as relational (or "customer") capital. Relational capital included relationships with all shareholders and, thus, the networks created by these relationships. Hence, intellectual capital was commonly presented as:

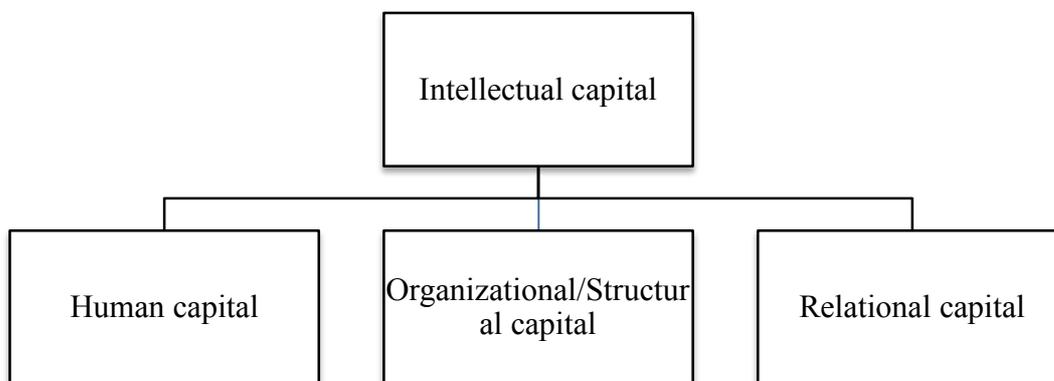


Figure 1. Intellectual capital components

**Human capital** was defined by Bontis (1998) as tacit knowledge of the employees, based on their age, education and prior work experience in related industries (Hudson, 1993). Thus, human capital includes individual knowledge and motivation of a human that can be used for practical output in form of goods, services or information. Some researchers argued that human capital is the major part of the intellectual capital, since the company is a collection of individual employees, who all possess tacit knowledge (Nahapiet and Ghosal, 1998).

**Structural capital** was defined as relations and tools existing within the organization and supporting employees' performance (and thus, the human capital). Stewart (1998) defined structural capital as a stock that supports knowledge transfer in the organization. Bontis (1998) includes into structural capital such intellectual property components as databases, patents and trademarks. Organizational capital plays an important role in the knowledge transfer within the company as it includes systems and databases, which accumulate knowledge and improve the knowledge between the employees.

**Relational (or “customer”) capital** reflects the relationships outside the organization, such as relationships with existing and potential clients, suppliers, business partners and other agencies. Putnam (2001) also included social norms and trust under the customer capital. This component of the intellectual capital is connected with the organization's stakeholders and it reflects the benefits acquired by the organization through the networking with these stakeholders.

Following the authors who discussed the intellectual capital components in their research, we can notice that most differentiate human, structural and relational capital (see Table 1 below).

Table 1. Distinguished components of intellectual capital

Year	Author	Human capital	Structural capital	Relational capital
1997	Sveiby	+	+	+
	Edvinsson and Malone	+	+	-
	Stewart	+	+	+
1998	Nahapiet and Gholsal	+	+	+
	Bontis	+	+	-
	Sullivan	+	+	-
1999	Horibe	+	+	+
	OECD	+	+	-
2000	Lovingsson et al.	+	+	-
	Galunic and Anderson	+	+	+
	Petty and Guthrie	+	+	+
2001	Guthrie	+	+	+

As seen in the Table 1, human capital and structural capital were prevailing in research until recently. Martín-de-Castro et al. (2011) noticed that relational capital received less attention from the researchers in comparison to the other two types of intellectual capital.

Burt (1992) and Coleman (1990) were pioneers in the development of social capital: in their research they referred to social capital instead of relational capital. Since late 90s, following Burt and Coleman, researchers began to discover the social capital – all potential resources available via the relationships within and outside the organization (Nahapiet and Ghosal, 1998). Castro et al. (2011) noticed that since the 2000s relational capital was split into business and social capital. Business capital referred to the relationship with customers, suppliers and partners, whereas social capital was described as the general value of firm’s networks. Such researchers as McElroy (2002) and Chen et al. (2005) revised the intellectual capital typology, including human, structural and social capital into it.

Thus, this discussion on social capital is relevantly new, and more research is required in the field of social capital. The next part of this chapter will focus on social capital definitions, theories and components, which researchers include into social capital.

### 2.1.2. Definition of social capital

The concept of social capital originated in sociological research and was discussed by sociologists, such as Coleman (1990), Burt (1992) and Putnam (1995). Only in the 90s did the concept appear in the managerial and organizational research. The following definitions of social capital were shaped by the researchers (Table 2):

Table 2. Social capital definition

Year	Author	Definition
1990	Coleman	“Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structures, and they facilitate certain actions of individuals who are within that structure“
1992	Burt	“Relations within and beyond the firm. A network as your access to people with specific resources, which creates a correlation between theirs and yours”

1992	Bourdieu	“The sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition”
1995	Putnam	“Features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit”
1998	Nahapiet and Ghoshal	“Sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit”
2001	Lin	“Investment in social relations with expected returns”
2002	Kwon and Adler	“The goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action”
2003	Hillman and Daziel	“Resources accessible through the network of relationships possessed by an individual or a social unit”
2004	Luo, Xueming, et al.	“An intangible asset that is created through social relations that can be leveraged to facilitate action and achieve and sustain a competitive advantage”
2005	Burt	“Advantage created by a person’s location in a structure of relationships”
2012	Lee, Ji-Hwan, Chul Choi, and Jae Min Kim	“A set of individuals or groups that are connected to one another through socially meaningful relationships”

A large contribution into the research of social capital was made by Nahapiet and Ghoshal (1998). The authors noticed that there was no universal definition of social capital, since some researchers believed that social capital only referred to the structure of relationships or networks (Baker, 1990), whereas others included the potential value, which can be derived from such networks (Putnam, 1995). For instance, Nahapiet and Ghosal (1998) defined social capital as realized and potential resources the organization can exploit through the individual employees to achieve the goal of the company and divided it into three separate dimensions:

1. Structural – the structure of the relationships and the map of connections within the network with the possibility of stronger ties. Coleman (1988) also included the networks created for different purpose, but which could be used for another;

2. Relational – personal relationships, developed through the repeated interactions between the individuals of the network. This dimension also includes emotional attachment, expectations and trust level of different actors of the network;
3. Cognitive – refers to the systems, interpretations and codes created and shared by the agents of one network as resources of network building and development.

The researchers worked on the concept of social capital further and pointed out the networks as the key resource for building social capital, and mentioned that it is dependent on social relations. Thus, among the key characteristics of social capital defined by the researches, the most commonly used are: networks, social relations, reciprocity and trust.

It is important to mention three theoretical dimensions of social capital derived by the researchers. These dimensions were summarized by Putnam (2001) and distinguish forms of social capital and focuses on the ways to measure these dimensions:

1. Bridging and bonding ties: bridging forms of social capital link external relations, whereas bonding forms of social capital link to internal ties (Putnam, 2001). Bridging forms create ties with external partners and, thus, connect heterogeneous social groups, which lead to the competitive advantage of the firm (Burt, 1992). Bonding forms focus on networking and resource sharing within the organization (Coleman, 1988), thus, creating ties in homogeneous groups of actors and taking into account the connections formed between the individuals of one firm, which lead to achievement of the firm's goals (Adler and Kwon, 2002). This theory, if applied to the board of directors, can bring a conclusion that the former perspective would include networks of board members with other companies, e.g. seats on more than one board, or ties with the government on the board. The latter perspective would focus on the networks between the board members of one company and how they influence the decision-making process.
2. Vertical and horizontal ties: vertical forms of social capital include agents of different hierarchical levels, whereas horizontal ties are being formed if the actors are of the same hierarchical level (Putnam, 2001).
3. Strong and weak ties: strong ties have fewer actors in the network, however, these imply greater trust and connectedness between the members. Weak ties are being formed in case of larger amount of actors, which increases heterogeneity of connections and the size of the network.

Another way of distinguishing social capital was proposed by Payne G. T. et al. (2011), who proposed a four-quadrant typology: one axis represented unit of analysis (individual or collective), whereas the second axis included the distinction between internal and external ties, proposed by Adler and Kwon (2002). Based on this distinction the general definition of each quadrant was proposed and dominant perspectives of social capital research were discussed.

In this research bridging and bonding ties are the key dimensions for the analysis, as these summarize two key elements of social capital of board of directors that are going to be discussed later in this chapter.

### **2.1.3. Importance of social capital for MNEs development**

Multinational enterprises are particularly interesting to address in the research of social capital of board of directors for several reasons. Firstly, UNCTAD (2000) noted that multinational enterprises have become the most significant emerging organizational form in the past years, thus it is a relevant topic. Secondly, network management for multinational enterprises is crucial, especially for those who form international joint-stock ventures. It is vitally important for the company to nurture its alliance by improving ties with external stakeholders to achieve competitive advantage in global markets. Last but not least, multinational enterprises offer an important setting in the research of social capital due to the large variation across firms and industries they operate in, which leads to a diversified board of directors with diverse skills, experiences and strategic approaches in managing multinational enterprises (Goerzen, 2005).

To achieve sustainable competitive advantage in foreign markets multinational companies need to gather a lot of information from external resources via formal and informal relationships, as well as develop a network of affiliates to achieve competitive advantage. These tasks are commonly done by the board of directors and connected to the development of its external social capital. Firms who operate in global environment and have a large network also have more resources they can access to increase their ability to compete in comparison with firms who operate independently. Firms that possess high social capital have an advantage in the competitive global environment. Therefore, it is crucial for multinational firms to learn how to develop and manage social capital and to create a strong network ties in their domestic markets, as well as globally. Therefore, issue of managing and developing social capital became particularly important for a competitive advantage of multinationals that compete in global markets. (Ireland et al., 2002)

Social capital is an important source of competitive advantage for multinational firms because of

the need for appropriate resources, such as information, technology, knowledge, etc. to compete effectively in global markets. Social capital can give these firms a sustainable competitive advantage. The focus of this work is on the importance and effects of social capital in Russian multinational firms. In this research we focus on the social capital of Russian multinational companies embedded in its board of directors. It is therefore crucial to understand the specifics of Russian MNEs.

## **2.2. Social capital of board of directors**

### **2.2.1. Strategic role of board of directors in the company's performance**

Board of directors plays several roles in the organization. The functions of the board include the appointment of CEO, monitoring of management, search of financing options and many more (Dalton et al. 1998). There is no doubt that these actions of the board affect the firm's financial performance. However, in order to understand how actions of the board affect the firm's performance and what position networks (social capital) have, we need to look at the theories regarding the board's role in the organization.

Researchers distinguish several perspectives on the role of board of directors in the organization. First of all, board of directors is legally enforced to oversee management of the company and its decisions. Board members are legally liable for the decisions made by the directors and their consequences (Johnson et al., 1996). Two frameworks were developed to study the board of directors: agency theory and a resource dependency theory, also referred to as resource-based view.

Agency theory assumes a corporation exists as a set of contract relationships between management and shareholders (Jensen and Meckling, 1976; Fama and Jensen, 1983). Based on this theory researchers concluded that there is a high chance of a conflict of interests between the stockholders and the management of the company. From the point of view of the researchers this issue should be mitigated by a third-party, the board. Thus, the key role of the board is to monitor the management of the company and the company's activities, to ensure that the interest of stockholders is well represented. Additionally, the agency theorists agreed that the board should provide strategic counselling to the management. These roles combined can be viewed as the 'internal' role of the board, since it focuses on the internal relationships of the company.

This theory has been criticized, since often the board can influence the decision-making in a negative way (Fama and Jensen, 1983). Another point of criticism came from the researchers

who claimed that from the managerial perspective board has to agree with the CEO decision (Stiles, 2001). A solution to the agency theory was proposed by Fama and Jensen (1983) who claimed that having outside directors on the board of directors ensures independence of the decisions. The fewer benefits firm performance has for the director and the fewer risks directors have from the negative financial performance, the more objective and rational their decisions will be. Agency theory claims that independent directors are more efficient in terms of management control function and are better at representing shareholders' interests. Hillman and Dalziel (2003) argued that although having independent directors on the board improves objectivity, it does not fully eliminate the problem of organizational performance, since such directors lack industry-specific knowledge to make crucial strategic decisions. Thus, it can be concluded that it is crucial to have a balanced board.

The second perspective on the board was developed by the resource-based view theorists (Pfeffer and Salancik, 1978; Dalton et al., 1998; Hillman and Dalziel, 2003). According to the resource-based view researchers the key role of the board is to attract external resources into the organization (Pfeffer and Salancik, 1978). Based on the resource-based view theory the board members with stronger links to external environment (external networks) influence the company's performance positively (Jackling and Johl, 2009).

Robert I Tricker (1994) worked out a further classification, distinguishing between the external focus and the internal focus of the board, as well as pointing out two new roles: *the conformance role* and *the performance role* (see Table 3 below). The conformance role focused on monitoring the management to ensure it acts in the interest of the stockholders. The performance role is the setting of strategy and objectives. The internal focus of the board is seen as the contribution of ensuring the good strategic management and decision-making within the firm, while the external focus includes the communication with external stakeholders and the representation of the company in the external environment.

Table 3. Role of board of directors

	Conformance	Performance
External focus	External accountability	Strategy
Internal focus	Monitoring	Policy making
	Past and present oriented	Future oriented

Source: Robert I. Tricker, 1994

The agency theory and the resource-based view theory together with the Tricker's classification were studied further and led to a common way of distinguishing between the external role and the internal role of the board of directors.

The internal role consisted of the actions directly connected to the internal processes within the company and includes such actions as:

- Link between shareholders and management;
- Setting organizational strategy, including: investment decisions (Fama and Jensen, 1983), strategic goals (Hendry and Kiel, 2004), strategic guidance;
- CEO appointment/monitoring/firing;
- Oversee decisions of the top management, such as decisions regarding M&A, distribution of financial and humans resources (Hillman and Daziel, 2003).

The external role is connected to the external environment of the company and includes the following responsibilities of the board:

- Linkages to the external environment of the organization;
- Obtaining of necessary resources for the organization;
- Forming board interlocks;
- Contact with the government (which is especially relevant for the countries such as China or Russia, where political connections include significant benefits for the organizations)
- Maintaining stakeholders relations (connected to networking).

Pfeffer (1972) states that the firm benefits from the external resources that the board member bring with them, therefore, the key role of the board is to create access to these resources. Hillman et al. (2000) noted in their research that it is of crucial importance to choose the board members based on the resources they can bring in the organization from the external environment.

Based on the two roles of the board, the hypotheses were formed about different aspects of the board that affect the firm's performance. Such characteristics of the board as board composition, size, age, gender diversity, proportion of non-executive directors and position on multiple boards were studied thoroughly. The detailed overview of the studies and outcomes in these categories can be found in the Appendix. We focus further on the board composition, as the social capital component was not usually studied in the researches on board composition, however, it is a crucial part of it. Board composition includes studies on human capital of the board members,

e.g. research on board interlocks in relation to the independent directors (Carpenter and Westphal, 2001). Little studies examine the board influence with the focus on social capital (Stevenson and Radin, 2009).

In this research author would like to focus on the social capital of the board of directors and its influence on the company's financial results. Thus, the next part of this master thesis will be devoted to the analyses of the prior theoretical and empirical research on the social capital of the board and the relationships between the networks of the board of directors and the firm's performance.

### **2.2.2. Social capital of board of directors: definition and components**

A vast research is focused on the intellectual capital of the board of directors in terms of its influence on the financial performance of the company. It is board of directors who possess certain knowledge, experience and network create the crucial intellectual capital, which can be employed by the firm. However it was only in the early 2000s that research of social capital of board of directors became popular in academic research (Adler and Kwon, 2002). The focus of this research is on board of directors for several reasons:

- 1) Board of directors is a representative sample for the analysis of the social capital, since it is the board that makes key decisions in the firm, hence, influence the firm's financial performance;
- 2) Data collection on personal social capital is only possible for the board member, otherwise, a much larger sample of executives would be required and there would be troubles in acquisition of such sample.

Traditionally intellectual capital of board of directors divided into human and social capital. Social capital is often formulated as board of directors' ties with external stakeholders of the company and the resources available to the board members, and the company, based on these ties. Under social capital researchers include the following elements: ties with governmental organizations, which tend to have positive influence on the financial performance indicators, such as ROA, ROS and Tobin's Q (Hillman and Dalziel, 2003), ties with other board of directors often referred to as multiple directorship or board interlocks, family relations and other ties to CEO and internal networks with the board members of firm's board of directors.

One of the first researchers to apply the concept of social capital to the board of directors were Adler and Kwon (2002) and Kim and Cannella (2008). Kim and Cannella (2008) defined board

social capital as an intangible asset that consists of relationships and potential resources gained from these relations. A range of definitions of social capital in relation to the board of directors is presented in the Table 4.

Table 4. Definitions of social capital of board of directors

Year	Author	Definition
2005	Kim, Y.	“Degree to which outside board members have outside contacts within an institutional environment”
2008	Kor, Y. Y., Chamu Sundaramurthy	“Collective ability to access information and resource networks through external and internal connections”
2008	Kim, Y., Cannella, A. A.	“Interpersonal linkages between individuals, both inside and outside the firm, that are important to board”
2008	Lester, R. H.	“Expertise, knowledge, skills, and social networks [of each board member]”
2009	Stevenson, William B., and Robert F. Radin.	“Benefits of social relations on the board”
2010	Haynes, K.T., Hillman, A.	“Ability of the board to provide resources to the firm”
2011	Tian, Jie Jenny, Jerayr John Haleblian, and Nandini Rajagopalan	“Co-working experience on the board and external directorship ties to other corporate boards”
2011	Johnson S., et al.	“Ties to external organizations and high status, or prestige”
2012	Johnson, Scott G., Karen Schnatterly, and Aaron D. Hill	“Directors’ social relationships affect how both individual directors and the board as a whole function. Broadly, social capital can be divided into three types: directors’ ties to other firms, personal relationships with firm managers, or social standing”
2012	Lee, J., et al.	“Social networks on the basis of their [directors’] personal affiliation in terms of educational and career background”
2015	Barroso-Castro, C. et al.	“An asset that represents both the relationships and the potential resources arising from the relations”
2015	Melkumov, D., Khoreva, V.	“Level of their [directors’] external interconnectedness”

Based on the definitions provided in the Table 4, we can claim that the key parts of social capital are: networks, relationships, access to resources, trust and reciprocity. Social capital of the board of directors is seen as an important factor of firm performance due to its influence on chances to gain better business partners, leverage firm's activities, and improve the firm's investor perspective and, thus, market value. However, social capital is dynamic and embedded into the relationships of the board members, which means that the corporation itself does not possess the social capital of the board of directors and its resources.

Social capital of the board of directors is linked directly to the networks or relationships of the board members. The theory of social capital of the board of directors is related to the resource-based view theory of CG (Pfeffer and Salancik, 1978), which claims that the companies gain competitive advantage from relationships with external organizations. Due to these relationships the board members have access to the resources that can play a crucial role for the company's competitive advantage (Hillman and Daziel, 2003).

Prior research of the social capital of the board of directors is divided into the studies of connections of the board members a) with other board of directors, b) with board members within on board of directors and b) with the government. Adler and Kwon (2002) developed the concept of the board social capital and divided it into external and internal social capital, or "bridging" and "bonding" ties of board members. Internal ties are the ties between board members within one board of directors, whereas external ties led to the relationships with external parties. Networks between the board members are considered to be a mechanism for negotiation during the board meetings. The presence or absence of external network ties of the board members will improve the understanding of the influence of social capital on the financial performance of the company. The interlocks with other boards are one type of board social capital, which lead to knowledge exchange (Stevenson and Radin, 2009). As government is a major external organization that has an ability to influence the firm's activities, having a board member who is linked to the government is crucial for the companies to build relationships with this institution. Moreover, these ties can be seen as access to information unavailable for other companies.

After having analysed definition of social capital of board of directors based on the theoretical and empirical works, the components of the concept must be researched. Since researchers distinguish between two types of social capital of board of directors – internal and external, – to understand the difference both terms are reviewed below.

### *Internal social capital*

Internal social capital or ‘bonding’ is formed by the interactions among board members and their experience of working together. This type of social capital is established and owned by all board members within one board (Adler and Kwon, 2002). Since the effectiveness of the board performance is dependent on how well the members interact with each other in a limited time-span of board meetings, it is crucial that they have an established network. Lack of positive dynamics among the board members lowers the effectiveness of the meetings. Moreover, outside directors learn more about the firm performance from other board members than from any other source of information. It affects strategic decisions, choice of CEO and other important decisions. Longer co-working experience strengthens the understanding of strategic challenges of the firm and efficiency of their resolution.

Co-working experience is a platform for directors to share individual knowledge and coordinate their expertise to develop trust and realization of who is capable of what within the board. This understanding of expertise location among group members is particularly important for groups in which members’ special expertise or unique past experiences provide some members with access to information that others do not have, and it has been found to have positive effects on group task performance. Directors who have longer co-working history tend to develop a group-level knowledge based on their co-working experience. Stevenson and Radin (2009) found that ties to other board members who met outside the boardroom were important predictors of social influence than human capital or ties across boards. However, other researchers found that an internal network is positively related to the firm performance only up to a certain extent, after which there is a negative relationship between the internal social capital and firm performance (Kim, 2005). This curvilinear relationship between internal social capital and firm performance is going to be further discussed in the research of Barroso-Castro (2015). The argument behind this curvilinear trend is that if board members work together for too long, they might make biased decisions, based on the other board members’ decision-making.

### *External social capital*

External social capital is defined as the connections to external environment and potential resources (Kim 2005). Barroso-Castro et al. (2015) defined the role of the external social capital as “bridging, or linking the firm to the external environment”. The sources of external capital vary and include outside directors’ connections to the firms where they are employed, seats on the boards of other firms, personal relationships of directors. Researchers believe that the access

to external resources and larger networks of board members lead to higher financial performance of the firm (Hillman and Daziel, 2003). However some researchers noticed that while board members have seats on too many boards an effect of “overboarding” takes place, which leads to lower attention of the board members to the management decisions (Kor and Sundaramurthy, 2008).

Researchers define several types of external social capital. Burt (1980) first started a research on interlocking directorships, also referred to as multiple directorship. The researcher claim that board interlocks increase access to strategic information for the firm. Pfeffer (1972) noticed that directors who have seats on multiple boards possess more external resources that the firm can deploy. Company benefits from directors’ multiple directorship while choosing corporate strategy, selecting a CEO and other valuable information directors obtain from other boards. Carpenter and Westphal (2001) found in their research that board members with multiple directorships in strategically related firms were more effective in strategic decision making for similar firms than directors without such network ties.

Another benefit for the focal firm from multiple directorships was addressed by Hillman, Cannella, and Paetzold (2000), who claimed that multiple directorships contributes to the director’s reputation. Hence, it indicates higher market value of the director and, respectively, higher market value of the company.

Ties with governmental organizations are seen as a second important source of external capital. Hillman (2005) analytically used resource dependence theory to emphasize the importance of ties with governmental organizations of board members with firm performance, especially in an environment of economic uncertainty. Such ties include: government officials on the boards, past experience in governmental organizations of board members and ex-politicians on the boards. Firms with board members who have experience in governmental organizations tend to have better market-based performance according to the research.

Some recent researches are focused on the interaction of internal and external social capital (Barroso-Castro et al., 2015) and addressed the synergetic affects of internal and external social capital on the firm performance.

### **2.2.3. Measurement approaches to social capital of the board of directors**

Social capital of board of directors is a focus of the current study and in the empirical part the relationship between social capital of board of directors and firm financial performance will be

measured. Before we proceed to the empirical part it is important to analyse existing empirical research on social capital of board of directors and how the researchers have previously measured internal and external social capital of board of directors, as well as the key results and findings of these researches.

In order to research key characteristics of intellectual capital of board of directors with focus on social capital and to explore its relationship with the firm performance, a literature review of main empirical articles has been conducted. Articles from the following journals, published since 1990 have been chosen: *Academy of Management Journal*, *Academy of Management Review*, *Strategic Management Journal*, *Journal of Management Studies*, *Entrepreneurship Theory and Practice*, *Organizational Science*, *Journal of Intellectual capital*, *Journal of Management*. Databases EBSCO, Science Direct and Emerald have been used for the literature review. The articles mentioned above provided understanding of the relationship between various parts of social capital of board of directors and firm financial performance assessed both on the accounting and market measures.

After a thorough analysis of the empirical articles the 42 most fitting current research have been selected. Table 5 represents the amount of articles found per journal. The Academy of Management journal appeared to be the one providing key articles (see Table 5 below).

Table 5. Summary of retrieved articles.

Academy of Management Journal	12
Academy of Management Review	9
Strategic Management Journal	6
Journal of Management Studies	5
Entrepreneurship Theory and Practice	5
Organization Science	4
Journal of Intellectual Capital	3
Journal of Management	3
<b>Total</b>	<b>47</b>

Based on the literature review we have analysed the following trends and topics in the research of social capital of board of directors and its relationship to the financial performance of the company.

### *Multiple directorship*

The research on social capital of board of directors has various angles in the existing research. Some researchers analysed external network ties of board members and how these affect strategic decision-making, which, in turn, leads to financial profitability of the company (Carpenter and Westphal, 2001). In this research the data is collected from a survey, which is followed by the OLS regression model to measure the relationship between the ties among different boards and decision-making. The research revealed that firm performance was enhanced by strategically related boards ties.

Ties of board members with multiple boards were further analysed by Ferris et al. (2003) in terms of their relationship with firm performance. However, in this research the inverse relationship is analysed: whether firm performance has an effect on the number of board seats their directors simultaneously sit at. Researchers found that directors with seats in large firms are more likely to have multiple directorships and that directors who have seats in financially successful firms are more likely to be invited to other boards due to their increased reputation.

Kim analysed boards of directors in Korea for relationship between external social capital and firm performance (2005). Kim used Tobin's Q as a measure of market performance of the firm and an independent variable of board members' network density (2005), which can be seen as a number of interlocks with other boards or past relationships to other external agencies. The results of the research showed an inverted curvilinear relationship between network density and firm value, due to the diminishing profit from an abundance of connections. Later Kim narrowed her research down to the social capital of outside directors, which revealed a significant relationship between outside director social capital and firm performance.

Kor and Sundaramurthy (2008) added industry related work experience and networks as another element of external social capital, which together with multiple directorships revealed to have an effect of company's growth based on the evidence of 72 technological firms.

On the contrary Jackling and Shireenjit (2009) in their research of Indian companies found negative relationship between number of multiple directorships and the firm performance (measured as ROA and Tobin's Q). They argue that the amount of board interlocks does not add value to the firm, which is partially supported by Kim's research of a curvilinear relationship between a number of multiple directorships and firm performance.

Devos et al. (2009) researched board interlocks from a different perspective: their goal was to measure whether interlocking directors were effective at their monitoring task, whereas previous researchers focused on the resource attracting and strategic decision-making tasks of the board. The focus was on the market value of the firm, which was measured by Tobin's Q ratio, and the research goal was to identify whether shareholders have a negative reaction towards the formation of strong ties among different boards. The researchers found that board interlocks are associated with weak corporate governance of the firm and high number of board interlocks is negatively related to the firm performance. This goes along with the findings of Jackling and Shireenjit (2009), who claimed that the number of interlocks is negatively related to firm performance.

Bøhren and Strøm (2010) continued research to test whether multiple directorships of board members create more value for the firm, using Tobin's Q, ROA and ROS as firm performance indicators and multiple directorships as one of the independent variables. The researchers found that firm value increases when directors have strong links to other boards, which supports findings of Kim (2005), but contradicts findings of Jackling and Shireenjit (2009). This contradiction might be caused by the country selection – in developed economies number of multiple directorships per board is lower (Mean=1.8), whereas in case of India the number of board interlocks is significantly higher (Mean=2.94).

Clements et al. (2015) followed research of Carpenter and Westphal to test whether board interlocks in industry related companies enhanced directors' effectiveness in the firm. The results revealed a significant positive relationship between industry relatedness of board interlocks and director effectiveness. Unlike other researchers, Clements et al. focus not on the firm financial performance but look more narrowly into internal corporate control of the firm, which they believe to be representative in terms of assessment of board effectiveness. In other researchers direct relationship with accounting- and market-based financial performance of the firm is measured.

#### *Ties with governmental organizations*

Luo et al. (2004) analysed three types of firm social capital, which included customer relationships, business partner social capital and governing-agencies social capital. Although the first two variables are related to the organization itself, Luo et al. measured the last variable, governing-agencies alliances, as the number of ties with the government of board members. The research of 262 Chinese firms revealed that all three variables are positively related to the firm

performance, which was measured as firm's sales growth in relation to the major competitors and its ROI.

Hillman (2005) continued research in the direction of governing ties of board members as the key source of social capital and its relationship to the firm performance. Her research goal was to analyse whether there was a relationship between a number of politicians on the board and increased market-based performance of firms. Political experience of board members was divided by the size of the board and a sample of 50 randomly chosen firms within particular industries was used for research. What is interesting is that although Hillman's regression models for all four variables (Market capitalization, Tobin's Q, ROS, ROA) remain significant, only in the models with market-based variables the relationship between dependent variables and governing experience of the board members was found to be significant.

Lester et al. (2008) continued research on the value of having formal government officials on boards by measuring depth, breadth and deterioration of board members with prior governmental experience on a sample of 236 individuals. Companies with an ex-government official on the board were set to 1, and 0 otherwise. Independent variables chosen were the breadth of board members' social capital measured as a number of external ties to governmental organizations during their term and depth of their social capital measured as a length of their tenure. The research revealed evidence that firms welcome directors with longer prior experience in governmental organizations, since they are considered to possess more connections and, thus, bring more value to the company. That is an interesting insight for the US companies, which rely highly on board members' ties with governmental organizations. It might also be a case of reputation of the board member that makes impact on the firm decision, and it is likely, that similar attitude might be prevalent in Russian firms.

Kim (2007) measured effect of ties with the government of outside directors and firm's Tobin's Q based on the sample of 473 publicly traded Korean companies in a longitudinal study. The results showed no significant relationship between affiliation with government institutions and firm market value.

In their research of board external networks Gray S. et al. (2014) analysed biographies of 6162 directors of 1561 Australian companies listed on the ASX (Australian Stock Exchange) to find political connections and prior work experience in the governmental institutions. Classification of governmental experience was based upon Goldman et al. (2009) and included positions such as a member of parliament, mayor, etc., which were then classified into high-level and low-level

government positions, from which only members of the board with high-level positions were included as those who have ties with the government. Similarly to Kim (2007) researchers found no evidence of relationship between firm performance and government connections of board members, which might be due to the fact that only 2.1% of listed firm directorships in Australia are held by directors with prior experience in the government.

### *Co-working experience*

Youngest branch of the research of social capital of board of directors is the research of internal social capital of board of directors and its effects on company performance. Stevenson and Radin (2009) were among the first to conduct research on board internal social capital, which is present in the relationships between the board members of one board. Researchers suggested that existence of prior relationships and stronger current relationships between the board members leads to increased influence of a board member with such network on the board decisions and increases this member's influence on other board members. A survey was conducted on board members of US public companies. Based on the survey it was possible to come to the conclusion that board interactions outside the meetings were stronger predictors of influence of board members than their human capital. This means, that ties between the board members have relationship with the board decision-making and that the internal social capital is a stronger predictor of influence of board members on the decision-making than the board's human capital, which stresses the importance of social capital research.

Barroso-Castro et al. (2015) were one of the first researchers to notice that board external and internal social capital are interconnected and must be analysed together rather than separately. They claimed that board external social capital requires internal social capital for the fullness of analysis and correctness of interpretation. Researchers took a sample of 1158 directors from 103 Spanish firms listed on Madrid Stock Exchange and tested relationships between external social capital of board of directors, internal social capital of board of directors and firm performance, measured as ROS. To measure external social capital researchers used multiple directorships similarly to previous research of external ties. Internal social capital was measured in terms of co-working experience of board members, which was calculated based on the pairwise comparison of tenures of each board member, divided by the board size. Researchers found that internal social capital moderates effects of external social capital, which supports ideas of Kim and Cannella (2008).

### **2.3. Research gap**

As a result of our analysis of external and internal social capital of board of directors and a more specific literature review of the articles and empirical research on the relationship between social capital of board of directors and firm financial performance, especially that of multinational enterprises, a gap in the research of social capital of the board of directors was found.

Firstly, social capital of board of directors is an emerging concept that has become important in recent management literature (Adler and Kwon, 2002), which has not been studied thoroughly in comparison to the other component of board intellectual capital, human capital. Therefore, the topic is relatively young and prospective in terms of future opportunities for research. Extensive possibilities for research of internal and external social capital of the board of directors are one of the key reasons for the topic selection.

Secondly, based on the literature review it was noticed that social capital of board of directors has been previously studied either in the developed markets (Hillman, A., 2005; Kor, Y. Y., Chamu Sundaramurthy, 2008; Lester, R. H., et al., 2008; Stevenson, William B., and Robert F. Radin., 2009; Devos E., Prevost A., Puthenpurackal J., 2009) but only a few researchers discussed the relationship between social capital and board performance in the emerging markets (e.g. China in the study of Luo, X., et al., 2004). However, this example might be separated into a different category – research of social capital in Eastern cultures, since business there has been dependent on connections for many centuries (Wee and Lan, 1998). Thus, researchers of social capital of board of directors in China or Korea (Kim Y., 2005; Lee, Ji-Hwan, Chul Choi, and Jae Min Kim., 2012) might have been driven by the cultural aspect rather than the emerging economies. Therefore, Russia, as a BRIC country and an emerging market, is of particular interest in the research of social capital of board of directors.

Last but not least, only a few researchers have applied the concept of MNEs into the research of social capital of board of directors and its potential relationship with firm performance (Goerzen and Beamish, 2005), however, its alliance network is crucial for MNEs as a source of competitive advantage when entering new markets. Thus, it is believed to be a prosperous topic to study.

Therefore, this research is believed to contribute to both academic research and managerial implications. Hence, this research will be focused on the identification of the relationship between both internal and external social capital of the board of directors of Russian multinational companies and the financial performance of these companies, which will be assessed on two levels: market-based and accounting-based.

## **2.4. Chapter 2 summary**

To sum up, in this chapter the theoretical framework of social capital of board of directors is analysed. First of all, the concept of social capital was defined and researched in relation to the other forms of intellectual capital. Due to its relevantly young age, the concept has not been widely studied, however, it has already been applied to the board of directors, one of the key treasuries of the intellectual capital of the company.

Social capital of board of directors is an emerging concept that has become popular in recent research of intellectual capital and corporate governance. Particular area of interest is research on external social capital, defined as board interlocks and ties with governmental organizations, and internal social capital, defined as ties between the directors within one board. Empirical evidence from the literature review provides examples of research on the relationship between external and internal social capital of the board and various financial performance measures of the firm.

A research gap was identified based on the literature review in the field of research of social capital of board of directors and its relationship to financial results of MNEs from emerging markets. As there is evidence that social capital of board of directors is a source of competitive advantage for MNEs that develop in global markets, it is of high importance to test this with an empirical research. Although, there are external factors that might influence the results (culture, financial instability, etc.), it is possible to measure the relationship between social capital of board of Russian MNEs and financial performance of these companies.

### **3. EMPIRICAL RESEARCH**

#### **3.1. Hypotheses formulation**

Based on the literature review analysis and the identified research gap, we proceed with a formulation of research hypotheses, which would help us identify whether a relationship between various elements of external and internal social capital of board of directors and financial performance of Russian companies exist. As noticed in the first part of this research, starting from Adler and Kwon (2002) the concept of social capital has been applied to the board of directors. Existing studies show that both internal and external social capital of board of directors have an impact on the firm's financial performance. Out of the factors influencing social capital of the board of directors, discussed in the previous chapter, two factors of the external social capital and one factor of the internal social capital were chosen to form hypotheses. In this section we explore previous empirical studies on the relation between these factors and firm's financial performance and form the hypotheses for this research.

- ***Internal social capital: board co-working experience***

Companies vary based on the industry; however, even within one industry companies differ. Individuals need time to adapt to the new industry and company. According to Finkelstein and Mooney (2003) boards improve their efficiency and decision-making by working together for a longer period of time. Thus, board members accumulate certain experience after several years of working together. Since majority of board members have full-time positions outside the company, these experience and resources they gather during their tenure provide them with firm-specific knowledge. Moreover, board members accumulate certain social resources within the company, which they use in their governance (Kor & Sundaramurthly, 2009).

Board of directors' internal social capital is embedded in ties that board members establish with other board members, which lead to better understanding, hence, more efficiency in the board collaboration and decision-making. While working several years in the same board, board members accumulate and share knowledge with other board members: their resources, knowledge, experience, etc. and are more willing to share information with their colleagues, since they have higher levels of trust (Kim and Cannella, 2008). According to Fisher and Pollock (2004) these factors lead to a higher efficiency of the board and positively affects financial outcomes.

We should understand the board members do not necessarily work as a team, since the amount and the length of board meetings are limited. Stronger ties between the board members create a positive environment to work productively at. However, some researchers made an assumption that the excess of internal social capital of the board of directors may lead to lower level of efficiency

Combining these arguments we elaborate the following hypothesis on the influence of the internal social capital of the board of directors:

*H1a: There is a positive relationship between board members' co-working experience and company's ROA.*

*H1b: There is a positive relationship between board members' co-working experience and company's market capitalization.*

- ***External social capital: board members' previous experience in governmental organizations***

Social capital related to ties with governmental organizations is defined as all social relationships and connection board members have established and maintain with the government, including political leaders, governing bureaus, etc.

Board members can influence the firm's financial performance through the ties with the governmental organizations that they possess, especially in a country like Russia. Working experience in governmental organizations is often perceived as supreme due to the contacts in the governmental organizations the person could have establish, which are considered to be beneficial both in terms of the inside knowledge and the knowledge of the bureaucratic procedures.

Firms often see benefits from inviting people with work experience in governmental organizations (e.g. government employees, politicians, etc.) to the Board of directors. Pfeffer and Salancik (1978) mentioned that government is one of the key forces that could potentially influence firm's financial performance. An established network with governmental organizations could allow firms to employ relevant information from external sources, which in turn enhances firm's performance.

Following Pfeffer and Salancik, other authors theorized that the leveraging of network with governmental organizations enhances firm strategic and financial performance (Peng and Luo

2000; Luo et al., 2004; Abdul Latif et al., 2013). This element of social capital might also affect firm's market price, since investors believe that connection with governmental organizations lead to knowledge of political processes, which in turn possess vital market information.

In Russia the role of the state in economy is rather large, therefore, presence of directors connected to the governmental organizations on the board might play a significant role in the firm financial performance. However, between 2008 and 2014 there were a number of laws that forbid direct governmental officials to sit on the board of directors. After the economic tensions in the second half of 2014, another law has passed that let governmental officials to become members of boards. These changes might have influenced a share of those ties with the government that are embedded into governmental employees and those ties might have been stronger than the ones that those who have past experience in governmental organizations possess. Hence, for the year 2013 government might not have had such a strong influence on the firm performance.

Still, the benefits of ties with governmental organizations are rather influential in Russia. Relevant information received from the government is a potential source of a) acquisition of support from particular politicians, who are able to affect a legislation that could benefit the firm's performance; b) access to unique public policy information, which could give the firm a decent competitive advantage (Hillman et al., 2005); and c) certain reputation of a board member, which increases the perceived value of the company. All these three benefits from contacts with governmental organizations are thought to improve firm's financial performance. Therefore, it is crucial to test the following hypotheses:

*H2a: There is a positive relationship between working experience in the governmental organizations and company's ROA.*

*H2b: There is a positive relationship between working experience in the governmental organizations and company's market capitalization.*

- ***External social capital: ties with other boards***

Directors at large listed companies and multinational enterprises have a tendency to hold more than one directorship. Resource-based view theorists argue that firms benefit from the resources board members can bring, among others, the connections they create with other board members. These connections with other board of directors might serve as a source of communication and information available to the firm and lead to a broader perspective on external environment of the company, which could influence the firm's strategy. Presence on multiple boards increases

network and information flow among board members, which positively affects decision-making. Thus, links to multiple boards of directors is associated with increase of unique information to the firm. Moreover, presence on several boards increases the reputation of the board member, which is positively perceived by investors (Carpenter and Westphal, 2001) and represents the quality of a particular director in terms of their knowledge, resources, networks, etc. (Fama and Jensen, 1983). One of the reasons could be that a board member with strong reputation would be desired on multiple boards within one industry.

Another interesting notion is that directors who have seats on multiple boards not only have knowledge and resources, they also use these multiple boards to control uncertainty (Gilson, 1990). An assumption is made that this is applicable to the periods of economic instability and crisis, thus, it applies to the situation in Russia starting from 2014. To test whether multiple directorship is beneficial in the periods of crisis, the following hypotheses are proposed:

*H3a: There is a positive relationship between board members' external directorship ties and company's ROA.*

*H3b: There is a positive relationship between board members' external directorship ties and company's market capitalization.*

Thus, altogether we can form the following graphic description of the research hypotheses:

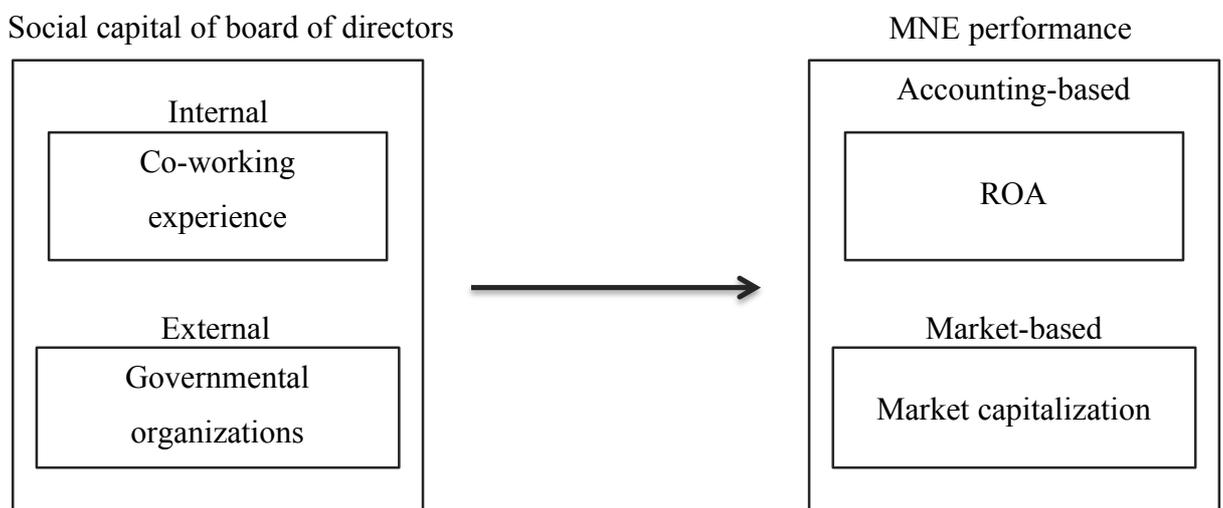


Figure 2. A model of influences of board social capital on firm performance

### 3.2. Methodology

The aim of this research is to identify a possible relationship between external and internal social capital of board of directors and financial results of Russian MNEs, based on the accounting- and market-based performance measures. The results obtained from the empirical research will show relationship between social capital of board members and firm performance.

The framework of the empirical study (Figure 3) depicts the key stages of the empirical research, which helps us to move towards the results.

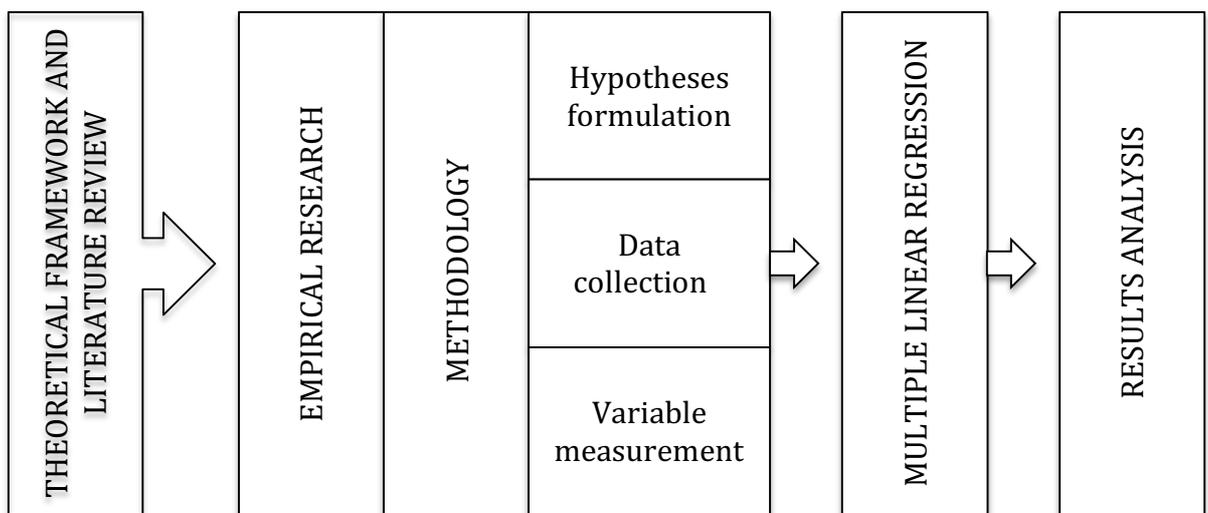


Figure 3. Framework of empirical study

Research methodology is based upon quantitative methods, which were chosen based on the analysis of previous empirical studies, as well as the nature of the research question. Since the goal of the research is to identify a relationship between variables, a representative sample and quantitative analysis are required.

### 3.3. Data collection and sample selection

#### 3.3.1. Russian MNEs' specifics for data collection

Stopford and Wells (1972) define MNE as a company that had operations in more than six countries. Later Caves (1996) claimed that “MNE is defined as an enterprise that controls and manages production located in at least two countries”.

To understand what Russian companies can be addressed as multinational, it is important to understand why companies go international, especially, why Russian companies seek benefits from becoming multinational. Based on the results of the study conducted by Luo and Tung

(2007), there are several reasons of why companies from emerging markets such as Russia decide to become multinational:

- Lack of competitive advantages compared to the main rivals from abroad;
- Need to overcome the latecomer disadvantage;
- Need to overcome existing trading legal barriers and extent their presence;
- Getting the opportunity to be less dependent on domestic market in terms of demand and legal restrictions;
- Need to get rid of preferential treatment offered by state of emerging markets.

According to modern research (Panibratov, 2012) there are several reasons why Russian companies choose a path of a multinational enterprise and outlined the industries for which it is more common for companies to become multinationals (see Table 6 below).

Table 6. Ways of establishment for Russian MNEs

Type of internationalization	Industry	Example
Exporting	Oil and gas	Internationalization process started in 1990-s through exporting products to Germany, Ukrain, Belarus and other countries that are close to Russian boards
Establishing partnership	High-tech	Internationalization started in 2001 by establishing a strategic collaboration with distribution centers in countries with high demand for a product.
Opening subsidiaries	Banking	Internationalization started in the middle of 1990-s through launching branches and subsidiaries in CIS countries
Foreign direct investments (FDI)	Metals	Internalization started in 2003 through investing in production facilities based in countries where steel-making industry was attractive and developing
Mergers and acquisitions (M&A)	Telecom	Internationalization started in 2002 through acquisition of local market leaders in CIS countries
International by nature	Internet	Company was initially created as an

		international organization, but officially got a foreign subsidiary only in 2009. Company goes abroad through opening domains in neighbouring countries
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Thus, in further research we will focus on these industries to discover relationship between social capital of board of directors and financial performance of Russian MNEs. To identify the companies which are thought to be MNEs we used the methods, created by Emerging markets global Players (EmgP) group, coordinated by Vale Columbia Center for sustainable international investment (VCC) and based upon standards accepted by the United Nations Conference on Trade and Development (UNCTAD).

**3.3.2. Sample selection**

The initial sample included 2303 board members across 250 Russian companies ever listed on stock exchanges. The list was compared to the lists of Russian companies listed on the LSE, NASDAQ, NYSE and Moscow stock exchanges. As the focus of the research is on Russian MNEs, it was necessary to identify which Russian companies listed on the stock exchange are considered as MNEs.

A sample of Russian MNEs was chosen for the research, due to several reasons. Firstly, it is crucial to define Russian MNEs. Thus, the sample of Russian MNEs would allow us to collect data from various industries and receive a more objective sample.

Secondly, currently companies from emerging markets, such as Russia, have additional incentives to become multinational due to a higher competitive advantage and increasing independence from the sales in the domestic markets, especially in the periods of crisis, etc. (Luo and Tung, 2007)

Last but not the least, the sample of Russian MNEs allows us to test empirically how internal social capital moderates the relationship between external social capital and firm performance. For the representative sample of Russian MNEs all Russian companies ever listed on the stock exchanges in the world were included. Only listed companies were chosen because of their legal requirements to publish financial performance reports, which would allow us gain access to the necessary data. The sample excluded financial service firms, due to the specific regulations of the industry and the differences in the structure of their balance sheet. Preliminary number of companies collected consists of 250 companies.

The following criteria of inclusion into the final sample was created:

- Company is an open joint stock company
- Company has foreign sales
- Company has board of directors
- The data for the years 2013-2014 is available in the databases

After the sample was created, the financial services companies were excluded from the list due to the limitation of assessment of its financial performance. The decision to include the firms was based on the comparison against other firms on total assets, total sales and employment size. Our final sample consisted of 524 board members across 61 companies across nine industries. The majority (23%) of the companies belong to the Metals sector, followed narrowly (20%) by Oil & gas. The share of pharmaceutical industry is low (2%) and is represented by one company only. Automotive industry included consumer cars, as well as automotive parts manufacturing and machinery for production needs (trucks, etc.). The detailed distribution is shown in Figure 4.

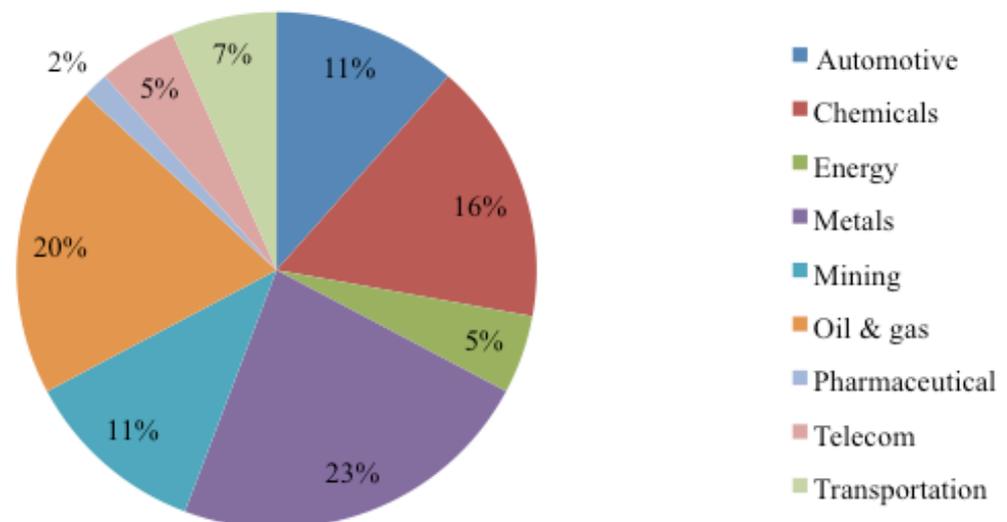


Figure 4. Distribution of sample across industries

The data on the board members was collected for the year 2013 from databases SKRIN and SPARK, followed by a more detailed analysis of the financial statements and quarterly reports of the company, as well as some deeper research of possible connections to the government conducted on the Internet. Initially it was planned to collect data for the years 2014 and 2015 to address a two-year lag and measure the diminishing effect of the board social capital, however,

there are several limitations: firstly, a fair amount of data from the year 2015 has not been published yet, thus, only 2013 and 2014 were possible to analyse; secondly, the financial crisis of 2014 affected firm performance dramatically and the measurement of dependence between board social capital and firm financial performance would require a significant research into mediation and moderation effects of financial crisis.

Data on variables for the empirical research of the firm's financial performance and social capital of the board of directors were collected from the following databases: SKRIN, SPARK and DATASTREAM. Data included annual reports from the focal year 2013 for key financial data and quarterly reports for further information, e.g. number of board members, their previous employment, positions on multiple boards, etc.

Main challenges for data collection included manual one-by-one collection of available data and missing information in some companies' reports. Little information on the board members is available online, and for further research biographies of the board of directors members are required to be analysed. For the reasons stated above, the number of companies was reduced after detailed screening of the information.

#### **3.4. Measurement of variables**

In this research the task is to analyse the relationship between internal and external social capital of the board and firm performance, therefore, it is crucial to select metrics that measure external and internal social capital in the form of board members' ties with governmental organizations, other boards and board members within the board of the focal company. Then, key performance indicator metrics for Russian MNEs have to be established. Based on the selected variables it is planned to identify whether there is an existing significant relationship between the social capital of the board and financial performance of the company.

The methodology chosen for the study of the relationship between market capitalization and social capital of the board of directors and ROA and social capital of the board of directors is regression analysis.

#### ***Dependent variable***

The goal of the current research is to measure the relationship between the social capital of board of directors on firm's financial performance. A broad number of measures were adopted in previous studies to measure firm performance. The measures that characterize company's

financial performance can be divided into accounting value and market value measures: the former is an indicator of the financial results of the company, whereas market value is accountable for the investor perspective of the company.

#### *Return on assets*

Return on assets (ROA) is a widely used indicator to measure the relationship between different parts of intellectual capital and the financial performance of the company (Dalton et al., 1999; Bhagat and Bolton, 2008; Hillman, 2010). Sometimes Return on assets (ROS) is also included (Barroso-Castro et al., 2015) as it measures firm's operational efficiency, regardless the investment level. It is also possible to take a two-year lag of ROA or ROS to measure the long-lasting effect of the part of intellectual capital. Another variation of the dependent variable was offered by Penman (2010) and included an average of the ROS, ROE and ROA as an indicator of firm performance. In this research ROA will be used as the first dependent variable.

In this research ROA is used as a control variable, and it has been calculated for every firm in the sample based on the formula below:

$$ROA = \frac{\textit{Operating Income}}{\textit{Total Assets}}$$

#### *Market capitalization*

Market capitalization is an indicator of the market value of the company, thus, it embeds how investors see the company's size and potential for development. This indicator was not widely used until 2000s, however, currently there is still more research on the relationship between the market and the book value (Bukhvalov, Volkov, 2005). Hence, market value of the company is a representative indicator of firm's performance and is widely used in the research of various components of intellectual capital (Hillman, 2005). Market capitalization for Russian MNEs was gathered for the fourth quarter of the focal year from the Moscow Stock Exchange website.

#### *Independent variables*

The following independent variables will be used for the assessment of impact of intellectual capital components and their influence on the firm's performance:

#### *Board interlocks*

In line with existing research, external social capital is calculated in terms of total number of external directorship ties of directors with other companies (Ferris et al., 2003; Kiel and Nicholson, 2006). Due to the fact that larger boards are more likely to develop a broader network of ties with other boards, the total number of directorships with other companies is divided by the size of the board of the focal firm. The higher this percentage is, the greater the connection of the network of the board to other companies is, hence, the greater is the external social capital. The average number of external ties with other board in my sample is 3.6 per board.

#### *Ties with governmental organizations*

Another type of external social capital is the connection to the governmental organizations. There are several ways to measure ties with governmental organizations. Some researchers measure these as a percentage of state ownership in the company (Ang and Ding, 2004; Rubi Ahmad et al., 2008). Another way to measure this type of external social capital is to evaluate past work experience of every board member in governmental organizations and then divide this by the board size (Rohaida Abdul Latif et al., 2013). Such connections are seen as strategic resources that a firm can employ to achieve a competitive advantage in the market (Park and Luo, 2001), hence, we will use share of past government representatives in the board of directors as a measure of ties with governmental organizations. The average ratio of ties with governmental organizations in my sample is 25% out of board.

#### *Co-working experience*

Internal social capital reflects the strength of the networks between the board members within one board and their ability to work efficiently together. Intra-board connectedness is defined in terms of board's *co-working experience* (Kor, 2003; Barketma and Shvyrkov, 2007). Board *co-working experience* reflects the knowledge of specific board members and their habits, which develops with time and serves to improve board efficiency, due to the mutual knowledge. Hence, the amount of time directors work together has a positive effect on their decisions' efficiency. Co-working experience was measured for the first time by Carroll and Harrison (1998) in terms of common experience the board members have. In other words the variable captures the tenure overlap or other shared experience of board members. The formula commonly used to measure the overlap is defined as pairwise comparison:

$$\text{Board co - working experience} = \text{tenure overlap} = \frac{1}{n} \sum_{i \neq j} \min(u_i, u_j),$$

where  $N$  is the total number of pairwise comparisons (number of years directors worked together from their initial appointment and the focal year 2013),  $u_i$  is the tenure of director  $i$  and  $u_j$  is a tenure of a director  $j$ . All pairs are measured in terms of the length of the minimal overlap in tenure of each board pair  $\min(u_i, u_j)$ . This formula measures all pairwise overlaps in tenure for all pairs of board directors.

Although tenure overlap is accumulated throughout the board's history, the analysis in our research is cross-sectional at a particular point in time (2013), thus we only take the variables in this year to estimate its influence on the firm performance. The average length of tenure overlap is 2,67 years. All data for the measures was acquired from publicly available data via SKRIN, SPARK and DATASTREAM databases.

### ***Control variables***

Three control variables are going to be used in this research: it is common to use multiple-level control variables, thus, in this research these variables include board size (board level variable), firm size (firm level variable) and prior performance as a predictor of future performance.

#### *Board size*

Pfeffer and Salancik (1978), Dalton et al. (1999) and other researchers investigated influence of board size on firm performance. The key finding is that of a positive relationship between the board size and the firm performance, however, it is arguable that after a certain board size the board size's positive effect diminishes due to difficulties in coordination of a large group of people. Thus, the relationship between the board size and the firm performance could be indicated as an inverted U-shaped.

#### *Firm size*

Firm size is suggested as a control factor by many researchers (De Andres et al., 2005; Kiel and Nicholson, 2005; Barroso-Castro, 2015) and is measured either as a number of employees or the firm's sales or the firm's assets. Total number of assets for the end of the focal year 2013 is measured as the indicator of firm's size, and the logarithm of the total assets is used as a control variable.

#### *Past performance*

Past performance is used to predict the future performance (Kim, 2005), thus, we use it as a control variable in our model to mitigate the factors that impact future performance. Past firm performance is measured as ROS for the year prior to the focal year (t-1).

The variables adopted for this research are presented in Table 7 below.

Table 7. Summary of adopted variables

<b>Dependent variables</b>	
$ROA_{t,i}$	Return on investment for the company i in year t
$\ln\text{marketcap}_{t,i}$	Market capitalization for the company i in year t, calculated as natural logarithm of market capitalization for the focal year
<b>Independent variables</b>	
tenure	Co-working experience measured as pairwise comparison of the length of the tenure overlap of board members
gov	Share of government representatives in the board of directors
interlocks	Number of multiple directorships or board interlocks of the board members for the focal year divided by the size of the board
<b>Control variables</b>	
board size	Size of the board of directors measured as a number of board members
firm size	Size of the company calculated as natural logarithm of assets for the focal year
$ROA_{(t-1)}$	Past performance calculated as a ROA in the year t-1

### 3.5. Descriptive statistics

Before conducting the regression analysis, the sample of Russian MNEs has been analysed for errors and described. Table 8 below presents descriptive statistics of the selected variables. For the research the following dependent variables were selected based on the prior research of social capital of board of directors: 1) ROA, as a measure of accounting-based performance of the company; 2) Market capitalization, as a measure of market-based value of the company.

Table 8. Descriptive statistics

Variable	Measure	Mean	Standard deviation	Min	Max
$ROA_{t,i}$	-	.07	.09	-.16	.26
$marketcap_{t,i}$	RUB	295458304079,93	662377995800	200000000	3286120325649
tenure	years	3.26	1.95	1.01	8.14
gov	%	.25	.18	0	.82
interlocks	№ of interlocks	3.32	2.11	1	6.78
board size	№ of directors	9.37	2.18	5	15
firm size1	RUB (total assets)	554345988400	1655469957000	523657000	10848419140000
firm size2	№ of employees	13203,5	25 454	55	157903
$ROA_{(t-1)}$	-	.11	.08	-.05	.29

Average ROA for the research period equals 7%. Minimum value equals -16%, which means that the firm had a loss, whereas the maximum equals 26%. Distribution of average ROA by industries is presented in Figure 5 below.

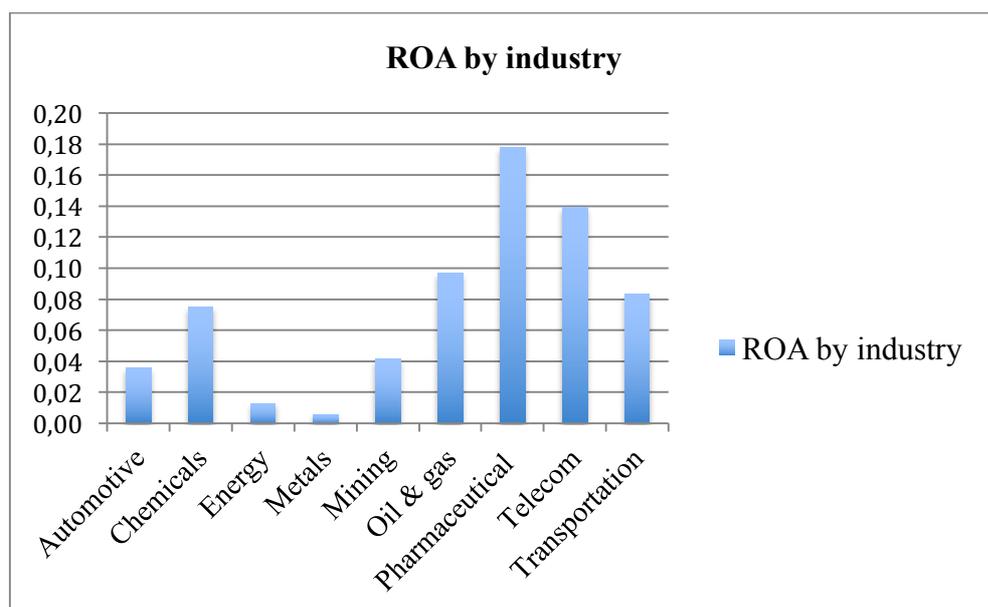


Figure 5. Distribution of ROA by industries

Average Market capitalization for the period is RUB 346150726700. Minimum value equals RUB 200000000 and is achieved by KZMS and the maximum reaches RUB 3286120325649 (Gazprom). Distribution of average Market capitalization by industries is presented in Figure 6 below. For further analysis the natural logarithm of market capitalization is used based on the prior research to improve the standard deviation parameters.

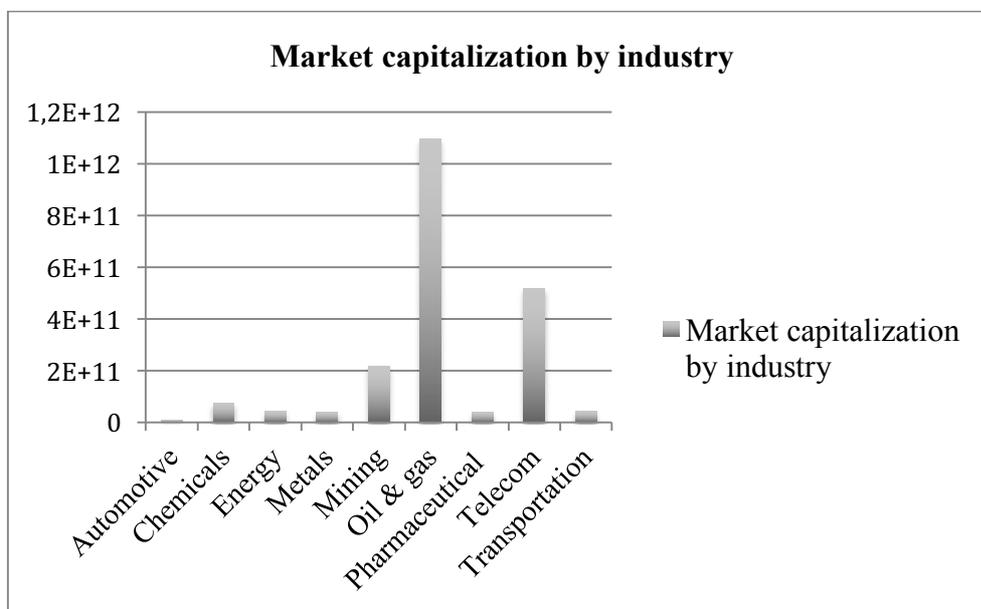


Figure 6. Distribution of Market capitalization by industries

Co-working experience of board members across boards has an average value of 2.67 years. It must be noted that tenure overlap was calculated on the basis of pairwise comparison of years directors have worked in the focal firm until the focal year 2013, which means, we have not calculated the previous overlapping board positions of the board members. However, during the research it was noticed that quite some board members “migrated” to a different board together, continuing to form a stronger alliance.

The pie chart below represents the number of ties proportionally across boards, measured by pairwise comparison as a tenure overlap by the focal year.

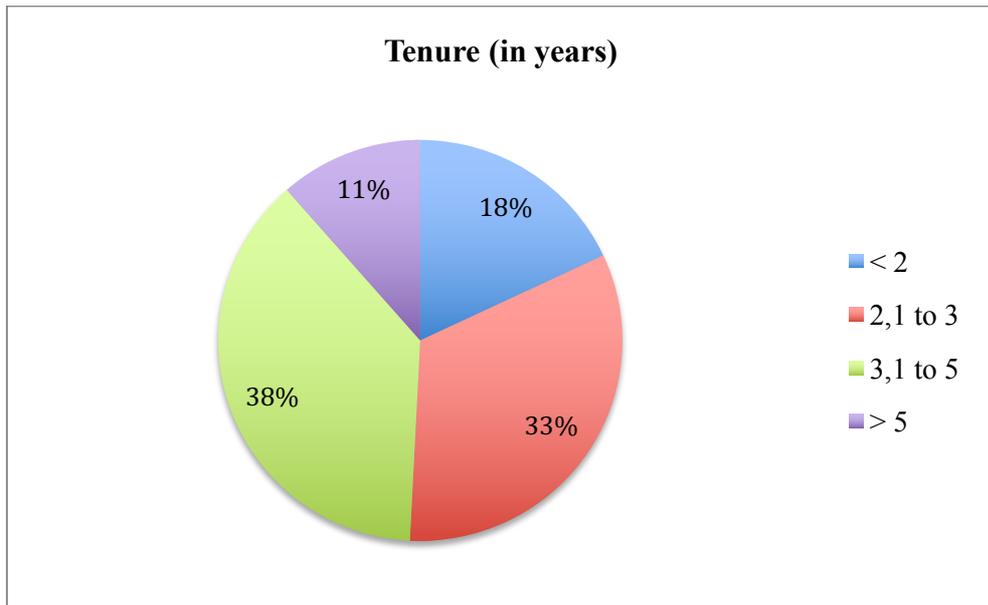


Figure 7. Distribution of co-working experience of board members

Distribution of ties with government agencies reveals that board members of 41 firms have ties with government. Although we started measuring ties with government as a percentage of employees who have ties with government in the form of prior work experience and divided by the size of the board, it was then decided to use governmental experience as a binary variable. All boards, where at least two board members had prior work experience in governmental organizations were counted as 1, otherwise – 0. For further research the binary variable gov is used to measure the relationship between ties with government and financial performance of the MNEs.

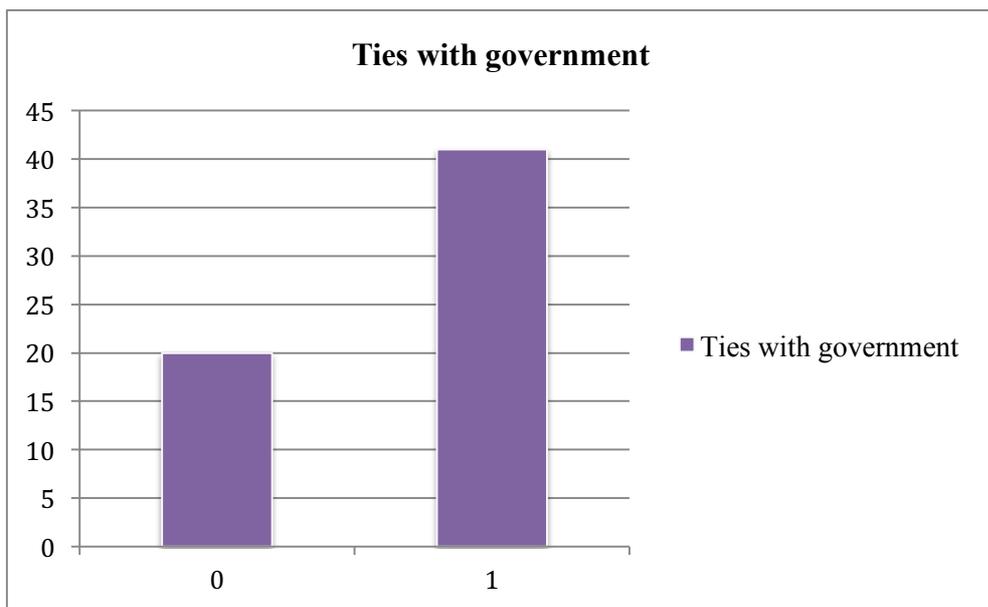


Figure 8. Distribution of board by existence of ties with governmental organizations

Multiple directorships parameter was selected as the third independent variable for this research. Board interlocks were measured as a sum of number of directorships of each board member for the focal year 2013 divided by the number of board members (board size). We noticed previously in the descriptive statistics that the mean of board multiple directorship is 3.32, which is significantly higher than in the previous research research (Jackling and Shireenjit, 2009; Kim, 2005). This gives an important insight on the situation on the boards of Russian MNEs in general, especially in comparison to other countries. Board members are likely to sit on multiple boards in Russia, arguably through their connections. As seen in the Figure 8 below, the largest proportion of boards have between 3,1 to 5 ties to other boards.

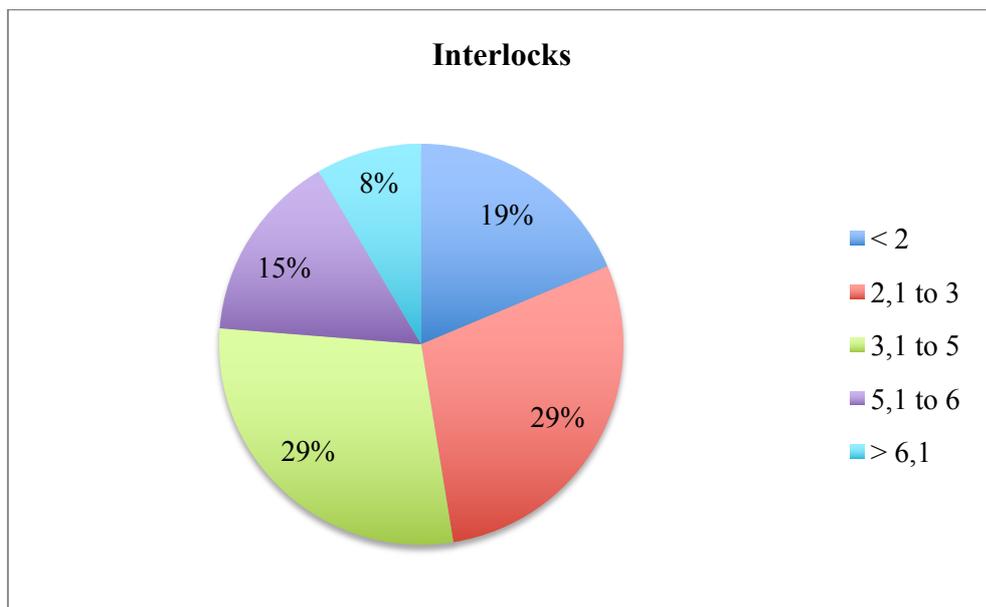


Figure 9. Distribution of board by average number of seats each director holds divided by the board size

Although Russian directors have a high mean of the board interlocks, from the 524 directors analysed in this research, the majority, however, sits on one board, followed by decreasing number of directors as the number of interlocks increasing (see Table 9 below). The maximum number of board interlocks were 27 and 28, which can be counted rather as exceptions than a normal situation, since in this case board members are way too busy to govern.

Table 9. Directorships distribution per director

<b>Directorships held</b>	<b>Number of directors</b>
1	229
2	98
3	49
4	29
5	30
6	16
7	15
8	15
9	10
10	6
11	6
12	4
13	6
14	1
15	3
16	3
17	2
27	1
28	1
<b>Total</b>	<b>524</b>

For control variables board size was selected as the board level measurement. Board size is an important control factor while measuring independent variables related to the board. Prior researchers discovered positive relationship between the board size and company performance (Pfeffer and Salancik, 1978; Dalton et al., 1999), thus, it was chosen as a proven control variable.

It is interesting to notice the distribution of the board size in the sample, which is presented in Figure 10. Boards of MNEs are either medium or large, with only one company that has five directors in the board.

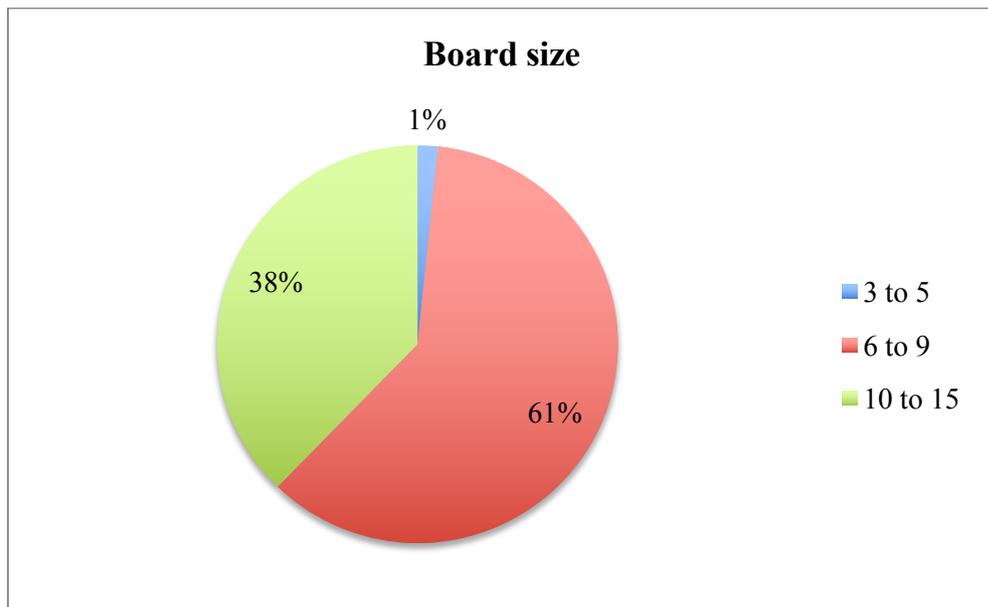


Figure 10. Board size distribution

Apart from the board size, one firm-based variable is chosen as control – firm size, measured as natural logarithm of firm’s assets. Moreover, prior firm performance is often selected as a control variable since it predicts future performance, thus, ROA for the year prior to the focal was chosen.

To choose control variables for each dependent variable, find possible multicollinearity and possibly eliminate some variables, the correlations analysis is applied.

Table 10. Correlation analysis

	1	2	3	4	5	6	7	8
1 ROA <sub>t,i</sub>	1							
2 marketcap <sub>t,i</sub>	,307*	1						
3 tenure	0,052	0,249	1					
4 gov	-0,03	,462**	0,076	1				
5 interlocks	,292*	,770**	,271*	,322*	1			
6 boardsize	0,187	,458**	0,159	,392**	,431**	1		
7 (ln)assets	0,097	,928**	,258*	,545**	,713**	,476**	1	
8 ROA <sub>(t-1)</sub>	,703**	,333**	0,012	0,072	0,23	0,075	0,161	1

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 10 presents correlation matrix for the variables. The variables did not correlate strongly with each other or any of the control variables, which eliminated concerns about multicollinearity. For the dependent variables ROA and Market capitalization we chose one board level variable (board size), one firm level variable (firm's total assets for the focal year, taken as a natural logarithm) and prior firm performance, measured as ROA (t-1) as control variables.

### 3.6. Data analysis and results

Regression analysis was performed using SPSS package. Pooled ordinary least squares (OLS) regression appeared to be the best model for both dependent variables as it is the methodology most commonly used in similar research (Yermack, D., 1996; Carpenter, Mason A., and James D. Westphal., 2001; Kor, Y. Y., Chamu Sundaramurthy, 2008; Jackling, Beverley, and Shireenjit Johl., 2009). The regression equation for both models is presented below:

Formula 1. Regression equation for Market capitalization and ROA models

$$Y = b_0 + b_1\text{gov} + b_2\text{interlock} + b_3\text{tenure} + b_4\text{boardsize} + b_5(\ln)\text{assets} + b_6\text{ROA}_{(t-1)} + \varepsilon,$$

where:

gov = binary variable of existing ties with governmental organizations

interlock = number of ties with other boards (multiple directorships)

tenure = co-working experienced measured as pairwise comparison of board members

boardsize = number of directors in the board of directors

(ln)assets = logarithm of number of total assets of the firm

ROA<sub>(t-1)</sub> = Return on Assets ratio for the year prior to the focal year 2013

The estimated coefficients for both models are presented in the Table 11 below.

Table 11. Summary of regression analysis results

Variable	Beta coefficients for variables in Market capitalization model	Beta coefficients for variables in ROA model
gov	-.026	-.206**
interlock	.153**	.219*
tenure	.003	.017
boardsize	.235**	.174*
(ln)assets	.806***	.257*
ROA <sub>(t-1)</sub>	.173***	.655***
Significance	.000	.003
R <sup>2</sup>	.916	.595

\* significant at 0.1 level

\*\* significant at 0.05 level

\*\*\* significant at 0.01 level

Table 11 presents the results of regression analysis. Model 1 is the model for the market capitalization in the year 2013, Model 2 is the model for ROA in the year 2013. Both models are statistically significant at 1% significance level, which is a good indicator. The R<sup>2</sup> for Market capitalization model is high (0.916) and R<sup>2</sup> for ROA model is fairly high (0.595).

After regression analysis was conducted, each variable was checked for significance accordingly with the hypotheses formulated in the beginning. In Model 1 the estimated coefficient of board co-working experience (tenure) was not significant, thus, we can neither accept nor reject hypothesis H1b regarding the relationship between internal social capital and firm financial performance. Dummy variable ties with governmental organizations was not significant, thus, the hypothesis H2b is rejected, since it is a dummy variable. The estimated coefficient of board interlocks was statistically significant at a 0.05 significance level ( $b=0.153$ ); thus, the hypothesis H3b is accepted. All three control variables of firm size, board size and prior firm performance are statistically significant in the Market capitalization model. This result supports resource-based view theory of corporate governance, which states that external resources of the board members benefit firm's performance. It also proves the existing thought that board members possess value to the board. Internal social capital showed no significant relationship to the market capitalization, which can be seen as a variable that requires primary data on the board

meetings. Moreover, as mentioned above, only tenure overlap in the focal firms was counted to estimate the co-working experience. It is highly possible that the results could have been different in case all co-working experience of the board members would have been taken into account.

In Model 2, where relationship between independent variables and firm's ROA was measured, the estimated coefficient of board co-working experience was not significant either, thus, we can neither accept nor reject hypothesis H1a. This supports our suggestion regarding extra information required for the analysis of such a variable. Ties with governmental organizations showed significance with a negative sign ( $b=-0.206$ ), which was an unexpected effect. Although there is no significant relationship to the market capitalization model, it is interesting that dummy variable revealed negative relationship to the ROA. This means that the hypothesis should be reformulated into the following statement: There is a negative relationship between ties with governmental agencies and firm ROA. There has been research proving a negative relationship (Yu and Main, 2010), thus it is an unexpected, but a possible outcome. In the discussion part of this research that outcome will be discussed in more detail. A significant relationship between board interlocks and firm's ROA was detected in the regression analysis ( $b=0.219$ ), thus, for Model 2 we can accept hypothesis H3a. This means that board interlocks have significant positive relationship with the firm's ROA. Three control variables that have been chosen in this research remained significant in the ROA model.

### **3.7. Chapter 3 summary**

Chapter 3 was focused on the methodology, data collection, sample and variables selection. The final sample selected for analysis consisted of 61 Russian MNE. Two variables were selected as dependent variables (Market capitalization and ROA). Board interlocks, ties with governmental organizations and board co-working experience were selected as independent variables. Then three control variables were selected: board size, which according to the research has a positive effect on the firm performance based on the recourse dependency theory (Jackling and Shireenjit, 2009); firm size as a natural logarithm of total assets, another commonly used control variable; ROA with one year lag as past performance, which serves as a predictor of future performance. (Yermack, 1996; Eisenberg et al., 1998; Hillman, 2005). The sample and variables were collected for the purpose of quantitative analysis of the sample based on the variables of interest. The sample statistics were presented in the chapter for deeper understanding of the sample.

The analysis was conducted with SPSS software and the results for Market capitalization and ROA models were discussed. Multiple linear regression model was selected for the test of relationship between dependent and independent variables, due to the prior studies that used this method of analysis (Carpenter and Westphal, 2001; Ferris et al., 2003; Kim, 2007). Thereafter, the results of the regression have been analysed for both Market capitalization and ROA models. Both models were statistically significant with valid  $R^2$ . Confirming prior empirical studies, three selected control variables were significant. Results for the independent variables varied depending on the model. Board interlocks was significant in both models, which confirmed the hypothesis that there is a positive relationship between board interlocks and firm performance. Board co-working experience was insignificant in both models, which meant that we could neither accept nor reject the hypothesis that there is a relationship between board tenure overlap and firm performance. Lastly, ties with government organizations had no significant relationship on market capitalization model, thus, the hypothesis was rejected. What is interesting, is that in the ROA model the governmental ties had negative relationship, however, a positive one was predicted.

## 4. DISCUSSION AND CONCLUSIONS

### 4.1. Discussion

Goal of this study was to investigate a possibility of an existing relationship between social capital of board of directors and financial performance of Russian multinational companies. The relationship was tested with both external and internal social capital of board of directors and both accounting-based and market-based performance measures were used in the analysis as indicators of firm financial performance. The following research question was raised in the research: is there a relationship between social capital of board of directors and financial performance of Russian MNEs?

Based on the previous researches in the field of social capital of the board of directors, that used similar methods to the ones chosen in this research, it was predicted that social capital of board of directors affects financial performance of the company positively. Nevertheless, the macroeconomic factors are currently affecting Russian MNEs, thus, the conclusions based on the international companies' samples may not be confirmed on the sample of the Russian companies. It was expected that the quantitative research would define the key factors of the social capital that impact the firm's financial performance.

Since there are two main types of social capital of board of directors – external and internal – the hypotheses were formulated as sub-questions to the main research question. A clear distinction between relationship between internal social capital and firm financial results and external social capital and firm financial results was made. Moreover, there was a distinction between market based and accounting based valuation of firm financial results.

*Hypothesis 1a: there is a positive relationship between board co-working experience and firm ROA.*

*Hypothesis 1b: there is a positive relationship between board co-working experience and firm market capitalization.*

These two hypotheses can be discussed together, since no significant relationship between board co-working experience and either ROA or market capitalization was found. Although Barroso-Castro et al. (2015) found a significant positive relationship between co-working experience of board members and firm's ROS, another researcher who did an extended analysis of board structure and its relationship with firm performance did not manage to find a significant

relationship between board meetings or co-working experience, as indicators of internal social capital, and firm financial performance. There could be two main reasons for such results: firstly, it is possible that a research on 103 Spanish companies (Barroso-Castro et al., 2015) was significant due to the selected dependent variable, ROS. ROS is a more short-term indicator, which is also highly dependent on the industry. It is possible that board co-working experience might influence the short-term monitoring better, however, it does not add to the long-term strategic decision-making. Secondly, a more likely explanation of no significant relationship is based on the scarcity of data on the board of directors. It was possible to measure the tenure overlap from the appointment on the board until the focal year, however, this analysis did not include co-working experience outside the tenure selected by the focal year or even outside particular board. Personal relationships are highly difficult to capture, therefore, primary data is required to measure the relationship between internal social capital of the board of directors and firm financial performance.

*H2a: There is a positive relationship between working experience in the governmental organizations and company's ROA.*

This hypothesis turned out to be the most unexpectedly confronted one. Based on the regression analysis there is a significant negative relationship between board members' experience in governmental organizations and firm's ROA. This can be explained by a different type of resource that ties with government provide for the company. In case of external networks to other firms we talk about the resource dependency – networks available for board members help attract resources for the firm. In case of networks with government, no direct resources can be attracted to the company. It is reputation of board members who have prior work experience in the government that can offer benefits for the company, and it was proven that reputation is highly important for directors (Ferris et al., 2003). However, Melkumov and Khoreva (2015) found a negative relationship between resource-provision tasks and ties with the government. Thus, it can be argued that governmental employees who start to work on the board do not possess enough market or industry specific knowledge, which has no direct effect on the market capitalization, but it does on the internal accounting based measures of financial performance.

All in all, it is not possible to accept this hypothesis.

*H2b: There is a positive relationship between working experience in the governmental organizations and company's market capitalization.*

No significant relationship was found between prior working experience in government and company's market capitalization. It was expected to see a positive relationship due to the fact that researchers found a positive relationship between ex-politicians on the board with market-based performance, especially in heavily regulated industries (Hillman et al., 1999; Hillman, 2005).

The absence of a significant relationship can be explained by several factors. Firstly, Russian governmental structure is fairly hierarchical and complicated, which leads to many levels of power. Some of the titles of board members can indicate governmental experience, however, in fact the person had no real access to the powerful politicians. Therefore, for a certainty a more thorough research must be conducted, including the length of the governmental employment and possible strength of connections the person possessed after leaving governmental position.

It is interesting to notice, that some researchers found that firms are more willing to invite a director with past experience in government, especially if they had longer term of service (Lester et al., 2008). This, however, would not have any effect on the market perception of the company and might influence other financial performance indicators negatively.

*H3a: There is a positive relationship between board members' external directorship ties and company's ROA.*

*H3b: There is a positive relationship between board members' external directorship ties and company's market capitalization.*

Multiple directorship or board interlocks were proved to have a significant relationship with firm's market capitalization and ROA. This confirms a theory proposed by Ferris et al. (2003) that directors with seats on multiple boards increase their reputation, which can influence firm's market capitalization due to a better perception from investors. Board members who seat on large boards in large firms are more likely to be asked to take a tenure in more boards, they are more likely to develop more interlocks. Moreover, there is a reversed relationship: if the firm is performing well, the director is more likely to be asked to take more directorships, which is followed by the reputation of a director on a board of financially profitable company.

Another similar research was conducted by Bøhren and Strøm (2010) and resulted in findings that supported a positive relationship between directors' strong links to multiple boards and firm's Tobin's Q and ROA.

There has been research conducted that proved that board interlocks are negatively related to the market capitalization (Devos et al., 2009), since shareholders do not trust such directors. It is indeed a controversial issue, which is supported by the agency theory. Moreover, other researchers found negative relationship between board interlocks and firm market value based on a sample of Indian firms (Jackling and Shireenjit, 2009). It might not have been the case in our sample for two reasons: either board members in Russia have fewer ties in general; or the data on board interlocks is not open for public, which can also include the fact that some directors might be present on boards of smaller companies, which were not included in this research.

#### **4.2. Theoretical contribution**

Current research is focused on a relatively new branch of research of intellectual capital of board of directors – social capital. Additionally, little research has been conducted for specifically multinational enterprises, however, social capital of board of directors is argued to be important for the development of companies when going abroad and serves as a source of competitive advantage for multinationals.

The main theoretical contribution of current research is the addition of analysed information regarding the social capital of board of directors on the example of Russian MNEs, which include companies from various industries. Both internal and external social capital indicators of the board were analysed and theories of social capital and corporate governance were applied to the research. Moreover, a vast amount of prior studies on board social capital was analysed in the frame of the literature review and a table of definitions of social capital of board of directors was presented in this research for the first time. Furthermore, links with existing researches were emphasized. Last but not the least, the presented analysis can be further applied for other samples of Russian companies.

#### **4.3. Managerial implication**

The topic of social capital of board of directors is a new field, which has not been explored much and lacks practical evidence. Results of this research possess not only theoretical contribution in the existing line of research, but also some useful managerial implications for managers and other stakeholders of the firms. Topic of this research is supposed to attract attention of firm's stakeholders to the consideration of social capital when forming board of directors of a multinational company and a careful analysis of potential candidates when selecting new board members. This research shows that external social capital is highly important, especially connections to other boards, if the firm is interested in raising its market value. Shareholders and

other stakeholders must be aware of this in order to be able to manage the board, as well as influence the company's performance.

Moreover, the sample of Russian multinationals analysed in the empirical part of this research includes companies from various industries, which leads to a conclusion that similar model and indicators are appropriate for testing on a larger sample of companies. That means that there is a large number of firms that can benefit from a similar analysis of board social capital and managers may base the directors' selection upon it. For example, if the company is looking for investment or increase in its market value for IPO or stock issue, managers may decide to revise the composition of the board to invite directors with strong social capital, which will affect the firm's market value. Thus, the results of current research are useful for multinational enterprises; however, other firms can conduct similar research and gain from such analysis.

#### **4.4. Limitations and direction for further research**

The key objective of this research was to understand the relationship between social capital of board of directors and financial performance of Russian multinational corporations. Despite the reached objectives and both theoretical and managerial contributions of the work, this research has some limitations, which suggest directions for further research and define the interpretation of the results of the empirical findings

The first limitation is the variables chosen for the research. In the literature review of analyses of board social capital and its relationship with the firm financial performance, we revealed a large number of variables used for the research. Since the goal of the research was to measure the extent of boards' both internal and external social capital, the variables most commonly used in prior researched were chosen as most representative indicators (Kor and Sundaramurthy, 2009; Stevenson and Radin, 2009; Haynes and Hillman, 2010). However, it would also be appropriate to consider other variables for further research, which could extend the scope of the study and develop a deeper understanding of relationship between board social capital and firm performance. To give one example, some measures of directors' reputation could be analysed to gather in-depth insights into both internal and external social capital; however, such indicator would require studies of detailed biographies of each member of the board. Furthermore, additional firm performance indicators can also be added in further research to analyse relationships between board social capital and other measures of firm financial profitability, e.g. ROS would show up-to-date results of the company, whereas Tobin's Q could show relationship between social capital of the board and the ratio of company's market to book value.

The second limitation is related to the sample size chosen for current research. This could be addressed from two perspectives. Firstly, the sample represents a whole population of Russian multinational companies, which planned to be analysed from the very beginning of the research. Therefore, the sample is homogenous and complete, therefore, objective conclusions can be achieved regarding the influence of social capital of board of directors on financial performance of Russian multinational corporations. Secondly, the literature does not provide a consistent answer to the question of a sample selection for a representative result. Harris (1975) recommended that the sample size be at least  $50+k$ , where  $k$  is the number of predictor variables in a multiple regression analysis. Alternatively, Tabachnick and Fidell (1989) suggested that the sample size should be at least  $5k$ , while Nunnally (1978) recommended a sample size of at least 100 for  $k=3$  and a sample size of 300–400 for  $k$  as large as 9 or 10. Finally, Combs (2010) noted that there is no simple rule of thumb (e.g. although it is widely assumed that 100 observations is a representative sample, it does not take into account  $k$ ). However, none of these rule-of-thumb recommendations are completely satisfactory and the eventual sample size depends not only on the number of variables but also on the research question. All in all, this research is focused on the multinational enterprises. However, as models presented in the research revealed significant relationship between the analysed variables, in further research there is no requirement to limit the sample, thus, similar models and variables can be used to further investigate relationship between social capital of board of directors and firm financial performance on a random sample of Russian companies.

The third limitation is related to the source of data. In some researches on social capital of board of directors primary data from the board members is obtained through questionnaires. Although primary data is often viewed as more reliable, key works on social capital of board of directors and its effect on firm performance use the secondary data from annual reports and databases, which does not decrease the reliability of the results. These, as well as conclusions of the research, can be used by various stakeholders of the company, who need to be aware of the effect social capital of board of directors potentially has on the firm market value and how an effectively acting board composition of a multinational corporation in Russia should look like based on the findings on internal and external board social capital. Moreover, questionnaire is applicable to more in-depth studies of individual board members, which was not the goal of this research.

Although there are clear limitations, these do not diminish the reliability of results in conducted research. These, as well as conclusions of the research, can be used by various stakeholders of the company, who need to be aware of the effect social capital of board of directors potentially

has on the firm market value and how an effectively acting board composition of a multinational corporation in Russia should look like based on the findings on internal and external board social capital.

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### APPENDIX 1. Empirical articles on social capital of board of directors

APPENDIX 1. Social capital of board of directors and its relationship with firm's performance				
Year, journal	Author, title	Research question	Methodology	Main findings
2001	(Carpenter, Mason A., and James D. Westphal., 2001) The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making	How external network ties determine a board's ability to contribute to the strategic decision-making?	Survey, followed by a multiple regression analysis. Sample: 600 large and medium-sized companies (U.S.)	Strategically related board ties enhance board involvement of firms in stable environments.
2003	(Ferris S. P., Jagannathan M., Pritchard A. C., 2003) Too busy to mind the business? Monitoring by directors with multiple board appointments	Is there a relationship between multiple directorships and firm performance?	Multiple regression. Sample: firms on COMPUSTAT with minimum \$100 million in total assets.	Firm performance has a positive effect on the number of board seats held by a director => reputation is important for directors
2004	(Luo, Xueming, et al., 2004) The effects of customer relationships and social capital on firm performance: A Chinese business illustration	Is there a relationship between customer relationships, business-partner social capital and governing-agency social capital on firm performance (strategic and financial)?	Interview, survey, regression. Sample: 262 randomly selected firms from China Basic Statistical Units Yearbook	All three types of external social capital positively affect firm performance performance.
2005	(Goerzen, Anthony, and Paul W. Beamish., 2005) The effect of alliance	Is there a relationship between alliance network diversity and multinational	Latent variable structural equation modeling (SEM).	MNEs with more diverse alliance networks experience lower economic performance on

	network diversity on multinational enterprise performance	enterprise's (MNE) economic performance?	Sample: 580 MNEs (Japan).	average than those with less diverse alliance networks.
2005	(Hillman, A., 2005) Politicians on Board of directors	Is there a relationship between a number of politicians on the board and better market-based performance of firms from heavily regulated industries and firms from less regulated industries?	Regression. Sample: 300 firms from heavily and low regulated industries.	Only for models with market-based measures as dependent variables of firm performance is the number of politicians on the board significant ( $p < .01$ for both).
2006	(Fich E. M., Shivdasani A., 2006) Are busy boards effective monitors?	Is there a relationship between a number of board interlocks and firm performance? (negative)	Regression.  Sample: longitudinal (7 years) of firms from Forbes 500.	Firm performance is inversely related to the presence of directors that serve on three or more boards.
2007	(Kim, Y., 2007) The proportion and social capital of outside directors and their impacts on firm value: Evidence from Korea	What are the effects of outside directors' proportion and their social capital on firm value?	Regression.  Sample: 473 publicly traded Korean companies from 1998 through 2003.	Relationship between outside director social capital and firm value.
2008	(Kor, Y. Y., Chamu Sundaramurthy, 2008) Experience-based human capital and social capital of outside directors	What are the effects of outside directors' human and social capital on firm growth?	Regression.  Sample: longitudinal sample of 72 high technology firms.	Outside directors' membership on multiple boards has positive effects on firm growth.
2009	(Stevenson, William B., and Robert F. Radin.,	Does existence of prior relationships with other	Survey of board members of US firms.	Ties to others in a network of strong ties among those who

	2009) Social capital and social influence on the board of directors	board members or having more current ties to other board members increase a board member's influence on decisions? Does existence of relationships with board members in other companies increase a board member's influence on decisions?		meet outside of board meetings were more important predictors of social influence than human capital or ties across boards.
2009	(Devos E., Prevost A., Puthenpurackal J., 2009) Are interlocked directors effective monitors?	Is presence of interlocked directors on a board is associated with weak corporate governance? Is there an association between the presence of interlocked directors and firm performance?	Two-step instrumental variables (IV) methodology. The coefficient estimates are generated using the two-stage probit least squares (2SPLS) approach Sample: 3,566 firms.	Shareholders react negatively to board interlocks, which affects negatively firm performance.
2009	(Jackling, Beverley, and Shireenjit Johl., 2009) Board structure and firm performance: Evidence from India's top companies	Is there a relationship between internal governance structures and financial performance of Indian companies?	OLS regression. Sample: top Indian companies listed on the Bombay Stock Exchange (BSE) by market capitalization in the year ended March 21, 2006.	No support of resource dependency theory: no significant relationship between frequency of board meetings and performance. Outside directors with multiple directorships have a negative effect on performance.
2010	(Bøhren Ø., Strøm R. Ø., 2010) Governance and politics: Regulating independence and	Is there a relationship between directors with multiple seats and firm	Regression.	Positive relationship between directors with strong ties to other boards and firm performance.

	diversity in the board room	performance?		
2012	(Lee, Ji-Hwan, Chul Choi, and Jae Min Kim., 2012) Outside directors' social capital and firm performance: a complex network approach	Whether or not the social capital of outside directors has an impact on firm financial performance and value?	Sample: 480 directors from 125 large companies (Korea).	A negative impact of outside directors' social capital on firm performance and value.
2015	(Barroso-Castro, Carmen, Ma del Mar Villegas-Periñan, and José C. Casillas-Bueno., 2015) How boards' internal and external social capital interact to affect firm performance	How relationship between internal and external social capital influence firm's financial performance?	OLS regression. Sample: 1158 directors of 103 firms listed on The Madrid Stock Exchange .	Positive relationship between the board's external social capital and firm performance