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## Does Competition Eliminate Social Ties?: The Case of the Russian Retail Market<sup>1</sup>

*Abstract:* Conventional economic theories assume that competing firms act independently. This theoretical assumption is applied to economic policies and anti-trust legislation. In contrast, economic sociology describes competition as a special type of social action that is oriented towards others. More specifically, to remain in the market, competing firms monitor one another and cooperate by establishing inter-organisational social ties. This paper demonstrates that increasing market pressures, including higher levels of competition and stronger bargaining power among exchange partners, does not disrupt social ties but promotes them. Data for the analysis were collected in 2007 from 501 managers of retail chains and their suppliers in five Russia's cities (Moscow, Saint Petersburg, Yekaterinburg, Novosibirsk, and Tyumen). The sample includes firms of different sizes that operate in the food and electronics sectors of the consumer market.

*Keywords:* economic sociology, embeddedness, markets, Russia, social networks

*JEL classifications:* A120 relations of economics to other disciplines, P31 socialist enterprises and their transitions, Z13 economic sociology, economic anthropology

### Introduction

Economics and sociology use a variety of concepts to describe competition as a key element of market coordination. Competition is usually treated as a market force that is pitted against social relations. Thus, competition and social relations are presented as opposites that hinder one another. This perspective, shared by many economists and sociologists, is referred to as the “Hostile Worlds” approach (Zelizer 2005: 336). The Hostile Worlds approach associates competition with atomised actions that deny social ties. Increasing competitive pressures are believed to disrupt social ties, and in turn, coordination based on social ties is thought to eliminate competition.

However, competition and social relations are not always in opposition to one another. Competition may be conceived of as a network of relations that govern conflict and cooperation as well as their intersection between independent actors (Zelizer 2005: 336). The objective of this paper is to move beyond the analytical separation of competition and cooperation and develop a sociological concept of competition that

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is infused with social ties. Competition does not necessarily destroy social ties, and it may even stimulate their formation. Competitive pressures increase interdependence among competitors such that they affect each other's strategic choices. Mutual dependence generates uncertainty among competitors that drives them to cooperate to address this uncertainty (Gulati and Gargiulo 1999: 1443).

To develop a sociological concept of competition, I describe how different types of social ties are associated with competitive pressures. First, I investigate a variety of social ties and show which types of social ties lead to coordination. The analysis of social ties is often confined to formal network ties and strategic alliances (e.g., interlocking directorships, joint investments, exchange of technologies, associational networks) (Mizruchi 1996; Stuart 1998; Westney 2001; Trapido 2007), but informal inter-firm relationships are largely neglected (Smith-Doerr and Powell 2005: 385). I address both formal and informal ties to demonstrate that informal inter-organisational ties are also important and more extensive than formal ties.

It is important to understand the impact of competition and other relevant market forces on the formation of social ties, which involve mutual awareness between market sellers and their interaction in inter-organisational networks. This relationship is not thoroughly researched. Research has largely concentrated on the impact of social ties on economic performance (for example, see: Uzzi 1996). Many scholars treat the emergence of social ties as a contingent process (Powell 1990) and only take network formation into account to understand the dissemination of information, the diffusion of innovations, and the inter-firm mobility of workers (Powell, Koput and Smith-Doerr 1996; Powell 2001: 58–61; Trapido 2007). However, relational factors, such as firms' bargaining power and competitive pressures, are left largely unexamined. This paper attempts to fill this gap.

The "social dimensions of economic transactions," which are vertical social ties between exchange partners (e.g., between suppliers and buyers in a commodity chain), has received much attention in the literature (Uzzi 1996; Baker, Faulkner and Fisher 1998; Larson 1992). The objective of this paper is to explore the nature of horizontal social ties between market sellers that operate in the same market segment and do not transact with each other. At the same time we investigated "parallel relationships" among noncompeting firms in the same market segment (Zuckerman and Sgourev 2006). I demonstrate that structurally similar firms simultaneously compete, monitor the actions of other firms and cooperate with one another.

The development of a sociological concept of competition, as an alternative to the conventional economic concept, has important economic policy implications. Conventional economic theories are applied to economic policies and legislation in accordance with the performativity approach (MacKenzie 2006; Callon 2007). Economic theories of competition provide the foundation for Russia's anti-trust legislation, which treat competitors' concerted actions as collusions that disadvantage other market sellers. To comply with legal regulations, a firm must behave independently as a real *homo economicus* because it will otherwise be treated with suspicion and may be prosecuted. Therefore, an alternative sociological conception of competition should provide support for the argument that competition does not necessarily pre-

clude social ties among rival firms, which economists and policy makers believe are independent, anonymous actors.

I use Russia's retail trade as an empirical example to investigate the relationship between competition and cooperation because this market is highly competitive as a result of the introduction of new global and domestic market actors in the early 2000s (Radaev 2005). Furthermore, with exceptions in the specialised marketing literature, scholars have largely neglected the retail sector. Although my empirical evidence is confined to the Russian retail trade, I do not treat the Russian retail trade as a peculiar case. Rather, I assume that the findings from this study are relevant to other competitive industries in other market societies, despite the fact that evidence for this argument goes far beyond the scope of this paper.

### **Towards a Sociological Concept of Competition**

I begin by briefly discussing the economic definition of competition and its uneasy relationship to the concept of social ties. The intention is not to criticise economic conceptions of competition but to provide a meaningful point of departure for the elaboration of an alternative conceptualisation.

#### **Competition in Economic Theory**

Economists do not share a single concept of competition. Broadly speaking, they suggest two alternative concepts that are theorised from structural and behavioural assumptions. The structural definition of competition is specified in mainstream economic theory. It describes the general conditions that define competition from the standpoint of a number of market sellers, the differentiation of commodities, and barriers to market entry. The following conditions for competition are described by the neoclassical *perfect competition* model (Stigler 1968):

1. The number of firms producing a commodity is sufficiently large such that no single firm can make more than a negligible contribution to output.
2. The commodity is homogeneous and consumers do not prefer the commodity produced by one firm against the commodity produced by another firm.
3. Firms are assumed to act independently.
4. Participants possess complete knowledge about what the market offers.

This set of assumptions presents an ideal market structure that is in static equilibrium. It precludes rivalry among market sellers because they can do very little to change the market status-quo.

The neoclassical model of perfect competition was revisited by many economists throughout the 20<sup>th</sup> century. First and the second assumption were challenged in the concept of *imperfect competition*, *monopolistic competition* (Robinson 1948; Chamberlin 1956). The new Austrian school took particular issue with the assumption of complete knowledge and rejected the structural model in favour of a *dynamic approach to competition*. They saw competition as a *process* of knowledge discovery in

which firms innovate to get ahead of the others by creating new combinations of existing resources and exploring new markets (Hayek 1948; Miki-Horke 2008). This unorthodox insight gave way to a behavioural definition of competition as a contest between two or more market participants who are vying for the same set of scarce resources. Therefore, competition was conceptualised not as firms' positions *in* the market but as rivalry between firms *for* niches in the market.

It is important to note that, in spite of internal differences between and substantive revisions of structural and behavioural economic theories, both still maintain the neo-classical assumption that firms act independently. Competition is believed to occur when actors make autonomous decisions on the basis of complete or partial information. Neoclassical economic theory simply excludes social interaction in its market model. The new Austrian school takes social relations into account but considers them to be an undesirable coordination mechanism that leads to market equilibrium, wherein market actors have no incentive to unilaterally change their behaviour and, therefore, reduce competition.

Economic *game theory* provides a different approach to social relations. Game theorists show that communication between actors in repeated games, in which defectors are punished, increases rates of cooperation that may lead to the development of social norms (Axelrod 1984; Green and Fox 2007). However, game theorists basically assume that market sellers react to the *results* of behaviours or *expected* behaviours. They ignore the possibility of direct negotiations between actors that can and do take place before strategic action or/and in the process of action. "Prisoners" in their basic model do not face the dilemma of whether to negotiate or to make decisions on their own because they are physically prevented from communicating.

Game participants frequently behave *as if* they have mutual obligations. However, the fundamental fact that pre-existing social norms largely regulate market participant's behaviour (including the prisoners) is neglected. Instead, social norms of cooperation arise as unintended consequences of the repeated games. Cooperative equilibrium is achieved on the basis on independent, individual decision-making. Players pay attention to other players' strategies, but they still pursue their own strategies as self-reliant, atomistic agents. Players are also rather selfish and inclined to defect from cooperation when the endgame is revealed (Jackson and Wolinsky 1996).

Necessity to revise an assumption of independent market actors provides room for the economic sociology to come in.

### Competition in Economic Sociology

Contemporary economic sociology ambitiously claims to provide a specific concept (or a group of concepts) for competition (for a review, see: Swedberg 2005). However, what are the grounds for a distinct sociological concept of competition? Max Weber defined competition as follows:

'A peaceful conflict is "competition" insofar as it consists in a formally peaceful attempt to attain control over opportunities and advantages which are also desired by others' (Weber 1978: 38).

This is a good starting point for a sociological definition of competition, although it only differs from conventional economic definitions in its emphasis on the peaceful nature of competitive action (which is merely assumed by economists). It is still necessary to understand how economic sociologists can contend with economist's recognised concept of competition.

It is not the assumption of rational action that distinguishes economic sociology from economics. In fact, economic sociology accepts this assumption, although rationality is not only treated as bounded but also as context-bound (Nee 1998, 10–11). It is the negation of the assumption of *atomised actions* that is critical to economic sociology. Economic sociology describes competition, not as a set of antagonistic behaviours between independent actors but as social action oriented towards others (Abolafia and Biggart 1991). To this end, Max Weber argues:

The potential partners are guided in their offers by the potential action of an indeterminately large group of real or imaginary competitors rather than their own actions alone. The more this is true, the more does the market constitute social action (Weber 1978: 636).

Because firms take the perceived actions of others into account and competitors monitor the market positions of their peers, competition is regularized by an array of interrelated niches that vary by the price, quality and volume of goods (White 2002). Mutual awareness and orientation are not deviations from the rules of a self-regulated market but important elements that allow the market to exist and function more or less smoothly. The mutual orientation of market participants adheres to the following set of conditions (White 1988: 228):

1. Market actors are not perfect strangers; they are known to one another.
2. Market actors take the perceived actions of others into account when formulating their market strategies.
3. Market actors monitor the actions of their competitors and how they relate to consumers.
4. Market actors share a great deal of information about the social context in which they operate.

Competition is undeniably a contest among market sellers to maintain and expand their niches in a more or less rational fashion. However, as Albert Hirschman rightly noted, rational actions do not lead to confrontation but to mutual interdependence (Hirschman 1977: 51–52). Therefore, market actors are forced to compete and cooperate at the same time. More generally, competitive actions are structurally embedded. The concept of embeddedness is adapted by new economic sociology from Karl Polanyi to clarify competition as a fundamental coordination problem (Beckert 2007). Initially, embeddedness was associated with network structures (Granovetter 1985); however, a full understanding of embeddedness cannot be confined to networks. Networks, including informal ties, formal structures, and relational forms of governance (Smith-Doerr and Powell 2005: 379–380), provide a structural basis for a complex set of institutional arrangements, which reflect an uneven distribution of power and authority in an organisational field in the market (Fligstein 2001).

To sustain competition, competitors cooperate with each other on the fundamental rules of the game. Certainly, their position in this game is not equal. There are leading market sellers (incumbents) who have greater capacities to impose the rules governing the structure of the organisational field and maintain the existing order. These market leaders pursue their own economic interests and, therefore, take action to maintain the existing status hierarchy and protect it from challengers and newcomers. However, at the same time, market leaders must generally heed market prospects. Their ultimate goal is not to suppress less influential market participants but to sustain the market in the long run by eliminating predatory competition and creating favourable conditions for strategic development (Fligstein 1996, 2001).

Economic sociologists Mitchell Abolafia and Nicole Biggart argue that, instead of rampant price competition and continuous conflict, smoothly functioning market mechanisms require a negotiated order:

Long-term market participants developed and agreed on means for maintaining the market. There is an apparent paradox here: in order to sustain their rivalry, competitors cooperate on the fundamental rules of the game (Abolafia and Biggart 1991: 221).

### **Concepts and Varieties of Social Ties**

Social ties generally define a set of selective and sustainable relations through which market sellers try to control other market participants' actions. This understanding of social ties contradicts the concept of atomised actions in neoclassical economic theory, in which market participants make independent decisions. In contrast, the existence of social ties means that market actors take the actions of their competitors into account when building their strategies (Abolafia and Biggart 1991).

Social ties take on a variety of forms. Some firms simply monitor signals produced by their competitors, while others are involved in stronger network arrangements through direct personal interactions and information sharing. Firms may also establish implicit agreements and formal strategic alliances aimed at joint problem-solving (Radaev 2009). I distinguish between two types of social ties that include mutual observation and network ties between competing firms.

Mutual observation takes place when competing firms collect systematic data about each other without directly interacting. Mutual observation forms the basis for strategic market decisions about the volume, price, and quality of products and adjustments to market strategies (White 1988, 2002). Firms closely monitor the behaviour of other structurally similar or structurally equivalent firms for two reasons. First, firms must monitor market fluctuations to be up-to-date with major trends. Second, firms must adopt new technologies that are introduced by their rivals to sustain their position and status in the market.

The justification for treating mutual observations as a form of social tie is required. In our opinion, mutual observations are not confined to a technical procedure that aggregates data between anonymous market sellers. The designation of mutual observations as a social tie is a highly selective process in which the status and identity of market actor's plays a critical role. Firms do not just watch other firms but scrutinise

the actions of structurally similar firms that they perceive to be their competitors. When monitoring the actions of their peers, market sellers do not just develop their business strategies; they also construct their identities and define their status (Aspers 2001; Podolny 1993). Moreover, in a process referred to as mimetic isomorphism, firms model themselves after competitors that they perceive to be successful in their organisational field (DiMaggio and Powell 1991). This mutual observations present a form of social tie which is not based on interactions between market sellers.

In contrast to monitoring competitor's actions, *network ties* originate from selective, sustained and direct interactions between competitors. Sustained relations can be defined as *embedded ties* (Granovetter 1985).

Network ties are not homogenous and include personal and institutional ties. *Personal ties* are established on an interpersonal level between the firms' owners or managers of similar rank. Personal ties imply the accumulation of social capital in the form of personal attachments and mutual obligations to share business information and ensure predictable behaviour.

*Institutional ties* are personal relations among competitors that are created by inter-organisational attachments (Baker, Faulkner and Fischer 1998). Institutional ties are not dependent on managers and their personal attributes but are governed by previously negotiated rules that firms are supposed to follow as corporate entities.

Institutional ties are established through informal or formal arrangements between competing firms according to a fundamental division of institutions (North, 1990). *Informal institutional arrangements* are based on informal agreements to follow negotiated rules without designating any formal responsibilities. *Formal institutional arrangements* are based on formal agreements signed by the owners and managers of competing firms.

Using these conceptual distinctions, I define four categories of social ties among competitors that contradict the assumption of atomised actions:

1. Regular monitoring of competitors' actions as an indication of mutual observation between peers.
2. Mutual exchange of business information between competitors reflecting personal network ties.
3. Informal agreements to coordinate actions among competitors as informal institutional ties.
4. Signed agreements to cooperate with competitors as formal institutional ties.

In practice, the monitoring of competitors' actions could be conducted through desk and field market research. The exchange of business information is made through phone calls or in personal meetings at business conferences or night clubs. Special organisational efforts are presumably required to arrange meetings, discuss rules and take personal obligations into account so that firms comply with informal agreements. Formal agreements may include interlocking directorships (Mizruchi 1996), co-investment partnerships (Trapido 2007), the exchange of technologies (Stuart 1998) and associational networks (Westney 2001: 130–133). I use purchasing pools (“zakupochnye soiuzy”) as another illustrative example of formal institutional arrangements that are important in Russian business. These strategic alliances are established by retailers

to regulate pricing policy with regard to the supplied goods (Radaev 2007). Firms can develop each category of social tie independently, and different types of social ties easily co-exist to form a firm's social portfolio (Powell, Koput and Smith-Dorerr 1996).

### Hypotheses

My first hypothesis reflects on the basic tenet of economic sociology that social coordination takes place through weak and strong, formal and informal associations. Economic sociologists also assume that competitive relationships are based on a juxtaposition of atomised and embedded actions. Thus, the first hypothesis defines the embeddedness of competitive actions as a variable (DiMaggio and Louch 1998: 619–620; Uzzi 1999: 488):

Hypothesis 1. Social ties among competitors are common but not universal. Some firms are inclined towards atomised actions, while others demonstrate a variety of social ties with their competitors.

The remaining hypotheses concentrate on the factors that affect different forms of social coordination. I refute the Hostile Worlds argument by contending that increasing market pressures do not impede social ties but rather stimulate them. This means that firms that are more resource dependent and have less bargaining power in asymmetrical exchange relationships will rely more on external support and, therefore, are more likely to establish inter-firm social ties. At the same time, firms with more market power should be more inclined to engage in mere transactional relationships rather than establish strong relational ties (Baker 1990).

First, I consider the impact of the level of competition on social ties, assuming that increasing competition persuades market actors to make additional efforts to coordinate their actions to sustain their market niches. In general, this argument resembles the insight made by game theory that competition creates additional incentives to reach a cooperative equilibrium (Axelrod 1984; Green and Fox 2007). This argument is also supported by studies demonstrating that inter-firm influence is greater between structurally equivalent firms that face more intense competition (Bothner 2003). Therefore, I propose the following:

Hypothesis 2. The existence of social ties is positively related to the strength of market competition.

I then evaluate if the emergence of social ties is affected by power asymmetry in market relationships. More specifically, the higher the competitive pressures are in a given firm's market with regard to market entry and bargaining procedures, the more incentive firms have to coordinate actions with their competitors. Contrary to the Hostile Worlds argument, market pressures should encourage the formation of social ties. Therefore, I could propose the following:



Hypothesis 3. The existence of social ties is positively associated with market barriers and negatively associated with a firm's bargaining power vis-à-vis its exchange partners.

My next hypothesis pertains to firm size and the density of the market niche in which a firm is located. I start from the assumption that small and medium-sized firms should rely more on inter-firm social ties than large firms. This proposition is consistent with previous findings from the computer industry (Bothner 2003). Prominent examples of highly developed, horizontal network ties in clusters of independent small firms were found in industrial districts (Brusco 1982), some of which were later transformed into collaborative inter-firm networks (Courault and Doeringer 2008). These examples show that strong competition among numerous, small firms in a resource space may coexist with an intensive mutual exchange of knowledge, innovation and a skilled workforce (Powell, Koput and Smith-Doerr 1996). However, it is easier for larger firms to negotiate due to their small numbers. Large firms have additional incentives to negotiate because potential losses from disorganised actions may be more painful for them. To clarify the relationship between firm size and social ties I suggest the following hypothesis:

Hypothesis 4. The existence of social ties is negatively related to firm size and positively related to the density of a firm's market niche.

To test these hypotheses, I collected quantitative data and designed special measurement instruments.

## **Data and Measurement**

### **Retail Trade as an Object for Investigation**

My empirical data come from the retail trade in Russia. The basic features of the Russian retail industry justify its use as a research site. Retail trade is a large sector, which makes up 18 per cent of Russian GDP (together with wholesale trade). Retail trade has also been one of the most dynamic sectors of the Russian economy since the beginning of 21<sup>st</sup> century, with growth rates that are two times higher than average GDP growth rates. Since the onset of economic reforms in 1992, retail trade is mostly privatised: private firms make up 96 per cent of all market sellers. Retail trade is also one of the most unregulated sectors of the Russian economy (the Federal trade law came into effect in December 2009 after our survey was administered).

The survey encompasses firms that sell food and electronic goods to consumers. The sale of food and electronics equalled nearly 50 per cent of all Russian retail sales in 2007. Grocery trade made up 45 per cent of all retail sales and presents an example of a buyer-driven commodity chain. The sale of home electronic appliances made 5 per cent of all retail sales and is an example of a producer-driven commodity chain.

For the purpose of this paper, it is important to note that retailing is a highly competitive industry with a low level of concentration. This is especially true for

grocery retailers; the top-5 grocery retailers only managed to capture approximately 8 per cent of the total market in 2007. Concentration levels are higher among sellers of home electronic appliances; the top-5 companies controlled more than 60 per cent of the market in 2007. However, no single firm dominated the markets for either the sale of groceries or home electronic appliances.

### Sample

Face-to-face standardised interviews were conducted with managers of retail chains and their suppliers between November and December of 2007. In total, we received 501 questionnaires filled up by 252 managers of retail chains dealing with suppliers and 249 suppliers dealing with retail chains. The survey was conducted in five large Russian cities, in which modern store formats are well developed and similar availability of shopping space for customers were observed, including Moscow (Central region), Saint-Petersburg (Central-Western region), Yekaterinburg (Ural region), Novosibirsk, and Tyumen (Western Siberia region). Equal fractions of retailers and suppliers were surveyed in each territorial cluster.

Three quarters of filled questionnaires were collected from managers in the grocery sector, given the fact that it is the largest retail sector attracting most of attention of policy makers. One quarter of filled questionnaires were filled by managers in the home electronic appliances sector which was used as a different type of supply chain for cross-sector comparisons.

Sampling procedures were different with regard to two main groups of firms. On retailers' side we used a complete list of multiple store companies given their total number is limited and they are more homogeneous. On suppliers' side, first, we divide firms into two groups including distributors/wholesalers and manufacturers arranging direct supplies to retail outlets. We use equal sampling fractions of these heterogeneous groups because it is proportional to that of the total population of manufacturers and distributors at the time the survey was conducted. Second, firms were randomly selected from these groups. Given the number of suppliers is large, business directories of the trading firms "RosFirm," InfoRos," and "TorgRus" were used for these purposes.

In the achieved sample, 48 per cent of managers identified their firms as large companies, whereas 52 per cent of managers said they worked for small and medium-sized firms. The sample includes international and Russian retail chains (16 and 84 per cent, respectively). The average firm age for retailers and suppliers is eleven years.

### Dependent and Independent Variables

The dependent variables reflect firms' *scope of social ties*, which is measured separately for each of the four categories of social ties distinguished above. (There are four dichotomous dependent variables that equal 1 if ties are present and 0 if ties are absent).

The dependent variables are defined in opposition to the principal of *atomised action*. A firm's actions are atomised if the manager reports that its firm was not involved

in any of the four categories of social ties. Thus, the dependent variables measure the existence or non-existence of social ties, but they do not reflect a firm's capacity to abuse inter-firm relationships or a firm's involvement in corrupt relationships.

I do not explore if social ties generate surplus value for firms but focus on explaining the scope and underlying factors that lead to social ties. Even if the impact of social networks is strong, their affects are highly contingent upon context (Smith-Dorrr and Powell 2005: 393). It is important to reveal the factors that shape this context and influence coordination. In this study, I examine independent variables that exert market pressures on firms. These market pressures are

- Competition level.
- Power relationships in the market.
- Character of the organisational population.

*Competition level* may affect the scope of inter-firm ties. It reflects the state of relationships among non-transacting retailers or among suppliers of the same commodity. Competition level is measured by two variables:

- The general level of competition in a given market segment (high, medium or low).
- Changes in the level of competition over the last two or three years (competition level could increase, decrease or remain unchanged).

*Power relationships* are measured by two variables. The first variable represents the capacity of a given firm to overcome economic barriers and enter the market. It indicates the extent to which it is difficult to get into a supply chain and sign a contract with a large exchange partner. This parameter varies between 1 and 7, where 1 equals "very easy" and 7 equals "very difficult."

The second variable represents a firm's *bargaining power* in contrast to exchange partners in its supply chain (i.e., relations between transacting suppliers and retailers). Bargaining power is defined as the capacity of large exchange partners to impose contract conditions on a given firm. This variable measures the pressure experienced by a given firm within the last year and varies between 0 and 3. A value of 3 means that contract conditions were imposed in more than half of all bargaining situations, whereas a value of 0 means contract conditions were never imposed on a given firm.

These measures of market power are used as proxies for the level of market pressure from large exchange partners experienced by a given firm. I concentrate on relationships with *large* exchange partners because dealing with large firms is more desirable for a given firm from the standpoint of economic performance and status in the market.

The *properties of the organisational population* are measured with two variables: firm size and the density of a firm's market niche.

*Firm size* is often treated as an indicator of a firm's market power (Uzzi 1996; Baker, Faulkner and Fischer 1998). Firms in the sample are divided into two groups: large firms and small or medium firms. The *density of a market niche* is measured by firms' number of direct competitors. Both measures are evaluated by the respondents.

Several control variables that indicate major *properties of the firms* are also used. They include

- Position of a given firm in a supply chain (retailer vs. supplier)
- Trading sector (grocery sector vs. home electronic appliances sector)
- Firm age (started business before or after the 1998 financial crisis)
- Region (location in one of the five surveyed cities)

## **Findings**

### **The Scope of Social Ties**

The results demonstrate that social ties among competitors are common. When asked if their firms had different forms of social ties with competitors, more than 80 per cent of managers indicated that their firms either had or did not have at least one type of social tie, whereas only 20 per cent of managers said it was “hard to say.”

Four hundred and two respondents positively answered questions about social ties. A vast majority of managers (83 per cent) are involved in at least one form of social relationship with competitors. Only 17 per cent of managers could be qualified as participants in atomised actions. These findings are consistent with the first part of *Hypothesis 1* that claims social ties among competitors exist and are common. However, social ties are not universal. Nearly one third of interviewed managers in the sample (33 per cent), including those who refuse to give a definite answer to questions about social ties, did not indicate the existence of any social ties with their competitors.

With regard to findings about different categories of social ties: 73 per cent of managers reported that they monitored their competitors’ actions on a regular basis; 31 per cent said they exchanged business information; 18 per cent coordinated their actions with competitors through informal agreements; and 12 per cent had some sort of formal agreement to cooperate with their competitors (see Table 1).

I now turn to the analysis of the major explanatory variables to reveal their effects on the presence or absence of social ties.

### **Market Competition Stimulates Mutual Observations**

According to the *Hypothesis 2*, the development of social ties should be positively related to competition. I assume that increasing competition forces market actors to coordinate their actions to better protect their own market positions. Competition is measured by two variables: the general level of competition in a given market segment and the direction of change in the level of competition over the last two or three years.

The results show that the *level of competition* is positively related to the probability of mutually monitoring competitors’ actions ( $p < .01$ ). This is true for both grocery and electronics firms ( $p < .05$ ) and for both retailers and suppliers.

Changes in the level of competition do not significantly affect social ties. A majority of our respondents indicated that competition had increased over the last 2–3 years. Therefore, the level of competition is an important factor, but its effects are confined to mutual observations.

Table 1  
**Percentage of Managers Having Social Ties with Direct Competitors by Groups of Companies**  
 (row %, n = 402)

Groups of companies	Categories of social ties			
	Monitoring of competitors	Information exchange	Informal agreements	Formal agreements
<i>Location in supply chain</i>				
Retailers	68*	20**	9**	9
Suppliers	77*	41**	27**	14
<i>Trading sector</i>				
Grocery	71	33	17	12
Home electronic appliances	76	29	23	12
<i>Size of the firm</i>				
Large	79*	26*	16	11
Small and medium	67*	35*	20	13
<i>Firm age</i>				
Started before 1998	71	28	15	14
Started in 1998 or after	73	32	21	10
Total	73	31	18	12

\* Significant at 95 percent.

\*\* Significant at 99 percent.

### Market Power is the Most Influential Factor

The next two explanatory variables measure firms' capacities to enter the market and demonstrate strong bargaining power in contractual relationships. According to Hypothesis 3, the existence of social ties is negatively associated with a firm's bargaining power during market exchange. I assume that the higher the pressures are from dominant exchange partners, the greater the incentives are for competitors to cooperate. However, in the case of vertical network ties, the impact of power (measured by the degree of resource dependence) on duration of ties was ambivalent (Baker, Faulkner and Fischer 1998).

The first indicator of market power, *barriers to market entry*, is measured by the relative difficulty of establishing contracts with large-scale exchange partners. This measure demonstrates the asymmetry of power between firms in the market. This variable is positively and significantly related to almost all of the dependent variables, with the exception of the presence of formal agreements with the competitors. This means that higher barriers to market entry (and therefore, lower access to the market) are associated with a greater probability that competitors will engage in various forms of social coordination. It should be noted that this finding holds for the relationships of both international and large Russian companies. Mutual monitoring is positively related to barriers to market entry for retailers but not for suppliers.

The second indicator of market power is firms' *bargaining power*, which is measured by the capacity of exchange partners to unilaterally define the terms and conditions of business contracts. Similar to market barriers and consistent with Hypothesis 4, this

variable (bargaining power of a given firm vis-à-vis its exchange partners) is negatively and significantly related to all measures of social ties. Firms with weaker bargaining power have a greater incentive to coordinate actions with their competitors than firms with stronger bargaining power. There are significant relationships between bargaining power and all four categories of social ties ( $p < .05$ ). In contrast to the findings for market barriers for retailers, the bargaining power of a firm is more important for suppliers. Weak bargaining power stimulates more active monitoring between competing firms.

All in all, with some minor exceptions, the results reveal that the most influential predictor of social ties in a market is the asymmetry of relationships between exchange partners.

### The Company Size Almost Does not Matter

In Hypothesis 4, I introduced a scale-based competition argument. The development of social ties were expected to be negatively related to a firm's *size* and positively related to the density of a market niche because many small firms in a confined resource space are expected to rely more on external support from similar firms.

The results do not support this prediction. There are very few significant relationships between these measures of market position and the scope of social ties. An important exception, which contradicts Hypothesis 4, is the finding that larger firms monitor and exchange information with their competitors more frequently ( $p < .05$ ). This finding pertains to the group of suppliers ( $p < .01$ ) but not to retailers, whose size does not provide any significant impact.

The *number of direct competitors* in the organisational population is inversely related to firm size, but it does not influence the scope of social ties.

Hypothesis 4 is rejected because smaller firms' participation in social coordination does not differ much from that of larger firms.

Correlations between dependent and independent variables are presented in Table 2.

Table 2

**Correlations Coefficients Between Major Dependent and Independent Variables Used in the Analysis**  
(Spearman,  $n = 402$ )

Independent variables	Presence of social ties among competitors			
	Monitoring of competitors	Information exchange	Informal agreements	Formal agreements
Competition level	.21**	.03	.06	-.01
Changes of competition	.13**	-.07	.01	-.03
Market barriers	.11*	.11*	.12*	-.01
Pressures from the large partners	.19**	.12*	.12*	.12*
Size of the firm	.11*	-.08	-.05	-.02
Number of competitors	.04	.06	.04	.00

\* Significant at 95 percent.

\*\* Significant at 99 percent.

### Integral Effects of the Market Pressures on Social Ties

It is important to understand how market pressures affect the formation of social ties. According to the Hostile Worlds approach, increasing market pressures should impede social coordination and dismantle social ties. On the contrary, *Hypotheses 2–4* propose that these pressures stimulate the emergence of social ties.

To evaluate how increasing market pressures affect social coordination, I estimate a binary logistic regression model with a dichotomous dependent variable that equals 1 if a firm has social ties and 0 otherwise. First, I use monitoring of competitors as a dependent variable. Then, I estimate models for the other three categories of social ties.

To find relevant preliminary predictors I first did a principal component analysis for all the independent variables. The following three factors explained 67.7 per cent of the variance:

1. An increase/decrease in market competition, indicated by pressures on the firm from direct competitors.
2. An increase/decrease in bargaining power, indicated by pressures on the firm from large-scale exchange partners.
3. An increase/decrease in market niche density, indicated by pressures on the firm from their organisational population (see Table 3).

Table 3

**Factors of the Market Pressure on the Firm**  
(principal component analysis, after rotation, n = 347)

Indicators of market pressures	Factors		
	I	II	III
Competition level	<b>.807</b>	.099	.062
Change of competition over time	<b>.776</b>	.012	-.070
Difficulties of concluding contracts with the large exchange partners	-.042	<b>.783</b>	.268
Large exchange partners dictate contract conditions	.149	<b>.835</b>	-.134
Size of the firm	.263	-.086	<b>-.792</b>
Number of competitors	.410	.015	<b>.704</b>
Explained variance, %	27,6	22,2	17,9

I used these three factors as independent variables in the regression models and added a number of control variables. As a result, the logistic regression equation is defined by the following variables:

$Y$  = Monitoring of competitors (1 = monitor the competitors; 0 = otherwise);

$X_1$  = Competition level (Factor 1);

$X_2$  = Pressures from large exchange partners (Factor 2);

$X_3$  = Density of the market niche (Factor 3);

$X_4$  = Location of the firm in the supply chain (1 = retailer; 0 = supplier);

$X_5$  = Operating in the grocery sector (1 = yes; 0 = no);

$X_6$  = Firm age (1 = started business before 1998; 0 = started business after 1998 financial crisis in Russia);

$X_7$ – $X_{10}$  — Regional location of the firm (dummy variables) (Moscow as the reference category;  $X_7$  = Saint Petersburg;  $X_8$  = Yekaterinburg;  $X_9$  = Novosibirsk;  $X_{10}$  = Tyumen).

The independent variables predicted the observed values of the dependent variable relatively well (overall, the model correctly predicted 68.5 per cent of the observations and the existence of monitoring is correctly predicted for 84.5 per cent of the observations). The regression coefficients are presented in Table 4.

Table 4  
Coefficients From Binary Logistic Regression of Monitoring Competitors' Actions  
(n = 337)

Independent variables	Coef.	Std. Err.	Sig.	Exp(B)
Competition level	.528	.128	.000	1.687
Pressures from the large exchange partners	.378	.150	.012	1.459
Density of the market niche	-.254	.129	.049	.776
Retailer/supplier	-.220	.287	.443	.802
Grocery sector	-.753	.316	.017	.471
At the market before 1998	-.134	.262	.609	.875
Regional affiliation				
S.-Petersburg	.165	.395	.676	1.179
Yekaterinburg	-.456	.398	.251	.634
Novosibirsk	-.534	.394	.176	.586
Tyumen	-.006	.399	.988	.994
Constant	1.519	.428	.000	4.567

Regression coefficients for the measures of all market pressures are statistically significant ( $p < .001$  for the first factor, and  $p < .05$  for the second and third factors). Operating in the grocery sector decreases the probability of monitoring competitors (the odds ratio is less than 0.5). All the other regression coefficients, including location in the supply chain, time in the market, and regional affiliations, are not statistically significant.

I tested the robustness of this model by calculating separate estimates for the subsamples of food retailers and suppliers. The estimates are similar in these models and the overall percentage of correctly predicted observations remains high. However, there are some important exceptions. For example, in the *grocery sector*, the impact of the density of the market niche is not significant. At the same time, I obtain a significant coefficient for the city of Novosibirsk. Siberian managers are less likely to monitor their competitors than managers in the capital city of Moscow.

Similar results are found for *retailers*. The regression coefficient for market niche density is not significantly different from the other two variables for market pressure. Operation in the grocery sector diminishes the probability of monitoring competitors' behaviour. Unexpectedly, the coefficient for firms located in Saint Petersburg is highly significant, indicating that market sellers there monitor their competitors more often. All the other coefficients are not significant.



Among *suppliers*, the second factor that indicates pressure from large exchange partners is not significant, while the first and the third factors have significant coefficients. Regional affiliations are more important for suppliers. In all cities (except for Tyumen), managers monitor the behaviour of their competitors less frequently than in the capital of Moscow. Trading sector and firm age are not important here.

Separate analyses of retailers and suppliers reveal why location in the supply chain is not significant in our basic model that includes all market sellers. Location in the supply chain correlates significantly with the second and third factors of market pressure. This means that location mediates the effects of these factors on the dependent variable. This is especially true for the association with pressure from large exchange partners, given that suppliers find themselves dominated to a much greater extent if compared to retailers. If the variable for pressure from exchange partners is dropped from the model, the coefficient for location in the supply chain becomes significant.

What *general conclusions* should be made with regard to the hypotheses? First, *competition level* shows a robust positive effect on social ties. Consistent with Hypothesis 2, the variable that indicates the general level of competition and changes in competition over the last two or three years is positively related to the probability of monitoring competitors' actions. This result corresponds to findings from research on the diffusion of new technologies, emphasising that the mutual impact of structurally equivalent firms becomes greater when firms face stronger competition (Bothner 2003).

Second, increasing *pressure from large exchange partners* in contract relationships also affects the probability of coordinated actions among competitors. According to Hypothesis 3, this relationship is positive: as pressure increases, market sellers with less bargaining power are encouraged to coordinate their actions with competitors. Although the impact of this variable is mediated by suppliers' weaker market power vis-à-vis retailers.

Third, *density of the market niche* also has a positive effect on the probability of monitoring competitors, although this association is less significant and robust. However, in contrast to Hypothesis 4, larger firms are involved in this type of social coordination more often than small and medium-sized firms. This finding also contradicts the results obtained by M. Bothner in his research on the high-tech industry. Larger firms in our sample have a smaller number of direct competitors, tend to watch their competitors more actively and imitate competitor's behaviour more often than smaller firms.

*Suppliers* are more active in establishing social ties. However, this is true only if we eliminate the impact of pressures from large exchange partners, which is highly correlated with location in the supply chain.

Firms in the *grocery sector* are less involved in monitoring activities than firms in the electronic sector. However, this finding does not hold for suppliers that watch their competitors attentively in both trading sectors.

*Firm age* does not affect a firm's involvement in social coordination. Social ties should not be defined merely as a product of time; they require some elective affinity between market sellers.

Finally, *regional affiliation* is important in some cases. Firms in Moscow have a tendency to monitor their competitors more often than firms in other cities.

These conclusions are related to the dependent variable that measures competitors' mutual observations. When this dependent variable is replaced by other dichotomous variables for network structures (i.e., the exchange of business information, informal agreements, and formal agreements with competitors) the regression coefficients are smaller and demonstrate a lower level of significance. However, we find no evidence to support the idea that competition derails social ties. Rather, the existence of network ties is not affected by the level of competition.

More generally, increasing market pressures (i.e., increases in the level of competition, the bargaining power of exchange partners and the presence of many competitors) do not impede social ties, as predicted by the Hostile Worlds approach. In the case of network ties, the effects of market pressures are insignificant. At the same time, in case of mutual observation, competition and other market pressures stimulate the formation and reproduction of social ties.

### **Social Contacts as Illegal Actions (Political Implications)**

Most economists neglect inter-firm social contacts and when they do consider them, they treat them with some suspicion. There is a strong assumption that personal relations among economic agents bring competition to an end (Stigler 1946: 226). Most economists tend to treat any attempt at inter-firm coordination among leading market sellers as *cartel agreements* that threaten competition. However, even if explicit coordination is absent and competing firms do not interact with one another (i.e., they neither agree to coordinate their mutual actions nor exchange business information), their relations may still be interpreted as *tacit collusion* if the results of their actions are similar to that of a cartel agreement (e.g., prices are fixed at the same level) (Avdasheva, Shastitko and Kalmychkova 2007: 235). Remarkably, tacit collusion may result from information exchange through open, public channels without any explicit collusion (Avdasheva, Shastitko and Kalmychkova 2007: 249). In retail trade, this sort of public exchange occurs automatically because retail prices are open to observation. This means that prices that become fixed at the same level as a result of continuous mutual adjustments by competitors may be interpreted as tacit collusion that is detrimental to self-regulating market mechanisms.

Economic perspectives that reduce social relations to explicit and tacit collusion have visible policy implications; they form the basis of anti-trust regulations that demand market actors act independently to preserve competition. According to the federal law "On Protection of Competition" approved by the Russian Parliament (State Duma) in 2006, social ties among the competitors are defined as either agreements (*soglasheniya*) or coordinated actions (*soglasovannye deistviya*). *Agreements* are defined as outcomes of written or oral negotiations that could, in fact, be interpreted as cartel collusions. *Coordinated actions* are not treated as the implementation of inter-firm agreements, but as "parallel actions," in which competing firms pursue

their interests by acting similarly, not merely as a result of similar conditions, but because they have advanced knowledge about the actions of others. The law defines coordinated actions as a form of tacit collusion.

Agreements and coordinated actions are not defined as illegal actions per se, but they are classified as suspicious actions that are subject to special control. Agreements and coordinated actions are prohibited by law if they are executed to reduce competition by dominant sellers who control a large share of the market. However, legal evidence of competition curtailment (including offering or maintaining the same prices and discount rates, non-justified rejection of contractual relations with certain sellers, imposing requirements that do not benefit exchange partners) can be based on indirect evidence, including complaints by exchange partners and conformity with competitors, rather than rigorous economic calculations of market share and the effects on public welfare. Decisions about whether firms have violated the law are also heavily dependent on the interpretation of legal statements, which may be vague; leading to a larger risk that collaborative action will be interpreted as non-compliance. If a court finds that a firm is violating the law, the firm will be subject to considerable fines up to 15 per cent of the turnover of a certain commodity produced or sold using coordinated action and up to 2 per cent of total company turnover.

As a result, large-scale companies that monitor the actions of their peers and are involved in networks could be accused of abusing their market power. This means that social relations between firms (including collective agreements and simultaneous coordinated actions) are considered to be illegal, or at least suspicious from a legal perspective, and may be subject to investigation by state regulatory bodies.

To comply with legal regulations, firms' behaviours must adhere to the model of *homo economicus* and firms that deviate from this model may be punished. This legal interpretation corresponds to the logic of *performativity* in economic sociology. Economic theory does not merely analyse existing markets, it actively shapes them by legitimising certain regulatory practices and rejecting others, which, in our case, are more socially informed (MacKenzie 2006; Callon 2007).

The unintended outcomes of these legal regulations are rather painful for large companies. In 2008, the Head of the Federal Antimonopoly Service, Igor Artemiev, claimed that cartels presented the most serious threat to the Russian economy (Artemiev 2008). In 2009, managers became criminally liable for involvement in cartel agreements, including entrance into agreements and also participation in coordinated (parallel) actions.

A new trade law was adopted in December 2009. It imposed specific restrictions for the sector and intervened into the retailer-supplier contractual relations previously regulated by Civic Code. In the other paper we demonstrated that new regulations did not bring any substantive changes in actual contractual practice but led to increasing control over activity of trading companies. And it is Federal Antimonopoly Service that became a major enforcement agency that could initiate a legal case against a group of competitors if finding similar prices in their stores or similar contractual terms for their suppliers (Radaev 2011). As it was argued by the experts on anti-trust

policy, this kind of intervention tends to reduce competition rather than stimulate it (Avdasheva and Shastitko 2011).

It comes as no surprise that as pressures from the state authorities increased from 2009–2011, retail trade firms were reluctant to report their social ties to anyone. When we conducted a similar standardised survey at the end of 2010, managers' positive responses to the same questions regarding the existence of social ties decreased two to two-and-a-half times. It does not mean that the firms changed their behaviour and stopped monitoring the prices and contractual terms of their main competitors. They just pretended being blind with regard to their competitors' actions because this issue became sensitive. It also implies that our data collected in 2007 is much more reliable. Public officials admit that it is difficult to prove affiliations between firms if participants do not voluntarily comply and disclose the existence of "cartel agreements." Public officials expect competing firms to acquiesce and report one another. As a reward, opportunists that break their social ties and report their competitors will avoid prosecution pursuant to a programme approved in 2007. The Federal Antimonopoly Service also insists on granting police the legitimate right to monitor the phone calls of suspected firms (Artemiev 2008). If this idea is implemented, social relations between firms could become subject to special police operations.

The introduction of these rules will produce at least two outcomes in the near future. First, formal alliances will be carefully avoided by direct competitors, who will confine their contacts to informal and indirect coordination. Alliances between small and medium companies will be an exception. Second, this law creates new opportunities for predatory competition with the use of non-economic instruments against rivals.

In contrast, economic sociology considers social relations and institutional arrangements to be elements that are built into markets. Social relations do not necessarily undermine the market and competition; however, under certain conditions this does happen because cartel agreements between leading sellers are possible (Baker and Faulkner 1993). Therefore, I do not insist that all network ties should automatically stimulate competition and contribute to public welfare, but instead I argue that a more complex, substantive analysis of the nature and consequences of these ties is required that does not treat social contacts as non-existent or unconditionally detrimental. The conditions under which social coordination facilitates or derails competition should be properly defined, but this is not possible without further research.

### **Conclusions**

Mainstream economics largely neglects coordinated action among competitors or considers it to be detrimental to competition and the optimal allocation of scarce resources. Any concerted actions or formal agreements between leading market sellers are treated as barriers to the self-regulated mechanisms of the market. Economic sociology suggests a different view of competition that is not defined by the antagonistic

behaviours of independent actors, but by social action that is oriented toward others and infused with social ties.

Data from a survey of 501 managers in five Russian cities showed that social ties between competitors are important. However, the distribution of social ties is uneven and the forms of social coordination are very diverse. Positional factors, including firm size and market share, are not very influential, whereas relational factors, including the level of competition and firms' bargaining power in relation to their exchange partners, have a significant effect on firms' social ties.

These positive effects are confined mostly to the monitoring of competitors' behaviours. Analyses of the effect of competition and other market pressures on the formation of other types of social ties (the exchange of business information, informal agreements, and formal agreements with competitors) result in regression coefficients that are smaller and demonstrate a lower level of significance. However, there is no evidence that competition derails social ties. Rather, the existence of network ties is not affected by the competition.

Increasing market pressures (increases in competition, the bargaining power of exchange partners, and the number of competitors) do not impede social ties, as predicted by the Hostile Worlds approach; their effects are mostly insignificant. However, competition and other market pressures stimulate the formation and reproduction of social ties based on mutual observation.

Academic debates about the nature and fundamental conditions of economic competition should have explicit policy implications, which are evident in the Russia's present political context. Conventional economic insights, which treat concerted actions as a precondition for the abuse of resources, are the foundation for anti-trust legislation and regulatory policies. Existing Russian legislation and proposed laws prohibit social relations between firms by unilaterally defining them as illegal (or at least suspicious) collusions. Therefore, practical economic policies and legislation are formulated using an economic perspective. The task of the economic sociology is to intervene and argue that, while higher competition does not necessarily derail social ties, the reverse is also true; social ties can be collaborative, instead of collusive, and can facilitate competition in the long run.

This study has obvious limitations because it is confined to a single industry in Russia. However, I do not treat the Russian retail industry as a peculiar case. Rather, I assume that the findings are relevant to other competitive industries in other market societies; although this argument goes far beyond the scope of this paper.

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