

The Russian market of information and communication technologies (ICT) construction is a very competitive one, and St. Petersburg's ICT market is one of Russia's most prominent ICT centers. The presented paper is devoted to social embeddedness of competition in St. Petersburg's market. Different types of competition are embedded in the social and business networks of ICT professionals. Small ICT companies can be described in terms of perfect competition and absence of social networks between competitors. Middle sized companies and most of the large ICT companies have wide social networks that are used to hire staff, to learn competitive advantages, and to advise or assist when needed. These networks are formed this way thank to their long term activities in the market and they are connected with oligopolystic competition. Competition between oligopolystic ICT companies often takes forms of cooperation, which are facilitated through knowledge of each other because of developed networks. Monopolystic ICT companies use networks with competitors in order to build new borders of the market. Business networks between competitors are a source of awareness about each other's actions and of a market's image. But they are not able to control competitive behavior. In this way, extended networks of customers are more influential on the social capital of competitors.

## **Social embeddednes of competition in St. Petersburg's ICT market**

**Tatyana Kozlova**

Department of Political Sciences and Sociology,

European University at St. Petersburg, Russia

[Tate\\_jaded2003@yahoo.com](mailto:Tate_jaded2003@yahoo.com)

Prepared for

16<sup>th</sup> Annual Meeting on Socio Economics

George Washington University,

Washington DC, USA

July 11, 2004

The Russian market of information and communication technologies (ICT) construction is a very competitive one, and St. Petersburg's ICT market is one of Russia's most prominent ICT centers. The presented paper is devoted to social embeddedness of competition in St. Petersburg's market. Different types of competition are embedded in the social and business networks of ICT professionals. Small ICT companies can be described in terms of perfect competition and absence of social networks between competitors. Middle sized companies and most of the large ICT companies have wide social networks that are used to hire staff, to learn competitive advantages, and to advise or assist when needed. These networks are formed this way thank to their long term activities in the market and they are connected with oligopolystic competition. Competition between oligopolystic ICT companies often takes forms of cooperation, which are facilitated through knowledge of each other because of developed networks. Monopolystic ICT companies use networks with competitors in order to build new borders of the market. Business networks between competitors are a source of awareness about each other's actions and of a market's image. But they are not able to control competitive behavior. In this way, extended networks of customers are more influential on the social capital of competitors.

---

## **Introduction**

Changes in modern societies connected with new technologies and global social processes form a bounty of new markets.

Markets are studied different ways, such as through social networks, social institutions or a micro economic perspective. New markets mostly understood through analysis of economic actions, their origins and results.

Modern sociological approaches study economic actions as embedded in social structure. It implies that the way market's actors behave is influenced by social relations and social roles of these actors. It is supposed that norms of economic behavior result from the rules of social interaction. And this is the reason why entrepreneurs act, first of all, more like social agents than economic ones.

The socio-economic studies are devoted to different economic actions. One of the most important actions that should be studied by social economists is competition as it is the main

feature that describes market, its structure and processes. Competition as a socially embedded process differs according to the market, its location, type of culture, or societal situation.

This paper is based on a study of competition's social embeddedness in St. Petersburg's ICT market. The ICT market consists of several segments, including different sectors of production and service for telecommunication, hardware and software. The subject of the research is chosen upon the fact that the ICT market is one of the most significant markets for today's economics and it reflects the role of high technologies in modern economies and interconnection of social relations and economic behavior of the ICT market's actors. Although ICT business is an international and a global one, it varies locally very crucially. It is the youngest business in Russia but at the same time it is the first and eldest "market" following an era controlled by Soviet economics. This market is one of the most civilized and closest to the processes of globalization and new economics in comparison to other markets of Russia. St. Petersburg is the second ICT center of Russia after Moscow, and St. Petersburg's ICT market is even more closely connected with international markets. Also, St. Petersburg's ICT market has a relatively long history, and this is why a stable system of social interrelations and networks influencing the economic actions and competitive behavior has come into being here more than elsewhere in Russia.

The research question posed by the presented paper is how social relations and business networks of St. Petersburg's ICT market's actors do influence the rules and practices of competition in this business. This question is connected with the phenomena of cooperation and, even more than this, friendship of competitors.

The main hypothesis of the study consists of a suggestion regarding interrelation of economic and social actions. It is supposed that if competitors are involved in personal relationship, then they will behave more upon social values than upon economic ones. Thus, networks of competitors would crucially change the economic character of their actions.

Competition as a socially embedded process consists in rivalry, provided with social contacts, agreed order and tough symbolic-cultural fighting. This definition is based on the social economical approach, in which main idea, as proposed by M. Granovetter, is that economic action is a type of social action and is embedded in social structures. The study of economic action's social embeddedness lies in the analysis of different social networks and relations of the

ICT market's actors. A social network is a set of constantly repeating contacts or similar social relations between individuals or groups (Granovetter, Swedberg, 1992:9). Business networks unite market's actors as they relate to economic reasons. Business networks can be understood as groups of market agents dividing the same social values and informal rules needed not only for economic transactions but also for stable social relationship.

The role of business networks for St.Petersburg's ICT market's competition is studied through analysis of competition norms and acts which are connected with the structure of the market. It is equally important to explain the way the competition norms spread into the market.

In order to explain the social embeddedness of competition in St. Petersburg's ICT market, a qualitative investigation based on the analysis of 30 semi structured in-depth interviews with the representatives of different St. Petersburg's ICT-market's segments was run. This research is conducted in the frame of the Finnish Russian project "Russia, Finland and Globalization in a Micro Perspective"<sup>1</sup>. The informants are ICT-professionals of varied managerial levels. Information gained from these types of informants allow the formation of new conclusions about the features of competition and its social embeddedness in various parts and levels of the ICT market. The questionnaire administered included blocks concerning the role of social networks in personal life and in business for the informants, functions, results and rules of personal relations, and networks with different types of market's actors in St.Petersburg's ICT market. The data from quantitative investigations conducted by big market research companies, i.e. Gartner Co, McKenzie, Visio/EDC, etc., are also taken into account.

### **Concept of competition**

Being the primary economic category, competition describes the structure of the market through reference to the number of its sellers and customers and to scarcity of goods constructing the market. Competition is studied through pure types of market structure: perfect competition and perfect monopoly, imperfect competition. With this meaning, competition influences competitive behavior of market actors, making the rivalry severe. The leading rule of competitors' actions is explained in micro economics through the concept of Nash's balance, according to which firms behave the best way in relation to the given actions of competitors.

Socio-economics adds to economic understanding of competition its social embeddedness. It means that ways of competition are influenced not only by reason of profit, but also by the social structures where competitors act.

Developing M. Weber's definition of competition (Weber, 1978) it is possible to precise competition as actions of several market actors with the goal to reach the same goods which are limited but able to be received through some their efforts (Radaev, 2003). Competition is establishing the borders between different types of market's actors and market's segments. It includes a process of controlling the zones where competitors' interests face each other.

Being studied through business networks competition is defined as actions tied to the coordination of business strategies. Networks where competitors are involved enable them to scan each other's actions, and in this way to get information about the market and about competitors. Involvement in the market for a long time allows competitors to predict the behavior of market's actors. This is why the crucial forms of competitors' struggle are very rare, if competitors manage to learn each other. But different types of competitors' struggle are common when companies attempt to conquer new market's spheres. In this case new actors aren't included in market's networks. Thus, they have no moral obligations and do not follow the social reciprocity's principles. To stabilize the market, leading companies are trying to influence the processes of competition establishing and institutionalizing rules of competitive behavior. Stabilization of the market, ability to prolong the situation and thus the reducing of transaction costs of forming business strategies is the main reason for the interaction and cooperation of competitors. But the social embeddedness of competition varies in different segments of market.

### **ICT market of Saint Petersburg**

Current research counts about 200-300 ICT companies in St. Petersburg (Information Agency Rosbalt, 26.04.2002, Delovoy Peterburg, 06.05.2002). According to Market-Visio/EDC in 2002 the share of St. Petersburg's ICT companies with a turnover of at least 3 million dollars per year was 14%, and turnover up to 150, 000 dollars made up 41% of St. Petersburg's ICT companies (Cnews.ru, 15.03.2002). The average number of workers in a St. Petersburg's ICT company is about 30 individuals (Russia's Major, 2001). St. Petersburg Foundation for SME Development claims that ICT companies mostly employ 11-50 ICT-professionals – 43%. The size of the

---

<sup>1</sup> [Http://www.valt.helsinki.fi/lonkila/rfg.htm](http://www.valt.helsinki.fi/lonkila/rfg.htm)

companies reflects the duration of its involvement into the market. 83% of ICT companies employing less than 10 individuals were established after 2000 and the other 17% of companies during 1997-1999. At the same time, half of the extremely young (up to 3 years) St. Petersburg ICT companies employ less than 10 professionals, while all of the companies employing more than 51 individuals were established 7 years ago (IT sector in St. Petersburg, 2003:5-6).

The younger the ICT company, the more specialized it tends to be. Companies established 7 years ago mostly deal in several ICT areas. It is resulted from the opportunities connected with the size of companies and its interrelation with the age of the company. More young companies have to be very specialized in order to satisfy market's needs (IT sector in St. Petersburg, 2003: 7-9).

According to the St. Petersburg Foundation for SME, 90% of St. Petersburg's ICT companies produce and launch software, 60% of ICT companies create their own software, and 40% of companies deal with IT-consulting and system integration. Activities of most St. Petersburg's ICT companies (73%) are concerned to object oriented analysis, design and development.

The ICT market of St.Petersburg is very closely connected with Western markets because of its image as a Russian offshore programming center. In comparison, Moscow is more oriented towards local markets. 67% of St. Petersburg's ICT companies work with foreign clients continuously. The key customers are the USA and Scandinavian countries. And 60% of St. Petersburg's ICT companies have some work experience relating to foreign markets (IT Market in St. Petersburg, 2003:9-10).

Thus, every segment of the ICT market differs from others, influencing a specific role of networks and thereby norming acts of competition in these segments.

The primary feature of modern Russian ICT market is a rise of integration and diversification of the market. ICT companies begin work in new areas with new products that leads to destruction of borders between ICT segments (Biznes Tezaurus, 2003:7-11).

Producers of different ICT goods and services take into account actions of other ICT market's actors who adopt their products to others' ones. It is a result coming from ICT's development in one arena, and this is why cooperation and interrelation form the important base for success.

The history of ICT business influenced the market very crucially too. Before the 1990s in Russia there were no special companies working in sphere of ICT's production. There were only departments in state plants and universities somehow connected with software. After the rapid

growth of small enterprises in the sphere of software where there was a lack of government regulation in early 90s began the consolidation of ICT companies. The actors leading ICT market created a new market structure, a base for its rules and norms (Krasnov, 2003). St.Petersburg's ICT market is stabilized. There are no crucial changes and new serious competitors. The market has been developing steadily. This market's history refers to the networks of the ICT market's actors. Established networks influence norms and values that become social institutions embedded in the culture, the social structure of the market (Abolafia, 1996, Abolafia, 2003).

### **Competition in the business networks of St. Petersburg's ICT market**

Business networks and their roles are very different for each aspect St.Petersburg's ICT market's segment. Thus, competition as a socially embedded process differs within them. Networks of every ICT market's segment are connected with structure of these segments that influences competition activities and the role of networks in competition.

Although St. Petersburg's ICT market is fairly stable, a primary feature of it is disconnection between actors and an abundance of customers. As they say, *the market is very wide and still there is enough place for everybody* (Interview 11). Nevertheless, it is possible to define the segments of St. Petersburg' ICT market with various types of competition.

Within segments of the market for specialized software, unique ICT products are described in terms of monopolistic competition. It is very difficult to describe competition within these segments as rivalry in these segments of ICT market. It is supposed that this market is still empty and this is why *there is no need in fighting for customers* (Interview 8). Companies have been yet establishing the market's borders. Competition's goal here is to develop the market generally, thus competition has to be very accurate. Unfair, price competition is very negative for the entire market because it can blocken the image of their own product as well as others. Competition consists mostly of rivalry in quality and service, as well as for the best employees. Since segments of monopolistic competition are mostly constructed with young companies, these markets are rather new. This is why networks in these markets have a sporadic character. Monopolistic competitors can be either big or small companies. Actors meet each other at different conferences, schools and other activities. They have numerous contacts, which are

supposed to provide personal meaning to competitors' actions, and also are a source of awareness about news of the ICT market. The key of all these networks is to form a positive image of their ICT business at whole. But they are not able to regulate competitors' behavior.

Most segments of St.Petersburg's ICT market are characterized by oligopolystic competition, frequently this type of competition is a feature of those companies that deal with corporative and big sized customers. Oligopolystic competition describes interaction between market's leaders and middle ICT companies, too. Although the segment of middle sized ICT companies is more likely to perfect competition because actors, including even the market's key players, are too numerous.

Oligopolystic competition is a feature of segments dealing with IT education, telecommunication devices, hardware, system integration. For example *there is just no actors within segment of big information system' creation in St. Petersburg, only a couple of big companies* (Interview 25). These are long term projects that require significant financial investment and post sale service. In these oligopolystic segments hard structures of networks are already created. *This market is stable. There are several actors. All of them are well known* (Interview 25). The networks are stable, too. And the market is divided. It is very difficult for new companies to influence this market crucially. To reach it they need to destroy established networks, and to compete for "divided customers' pie" (Interview 27). Popular competition's strategies in this case hinge on price competition and the search of useful contacts with customers.

Competition in oligopolystic segments includes support of market's limits and the search of competitive advantages. Competitors scan each other's activities according to those changing their own strategies. Usually oligopolystic competitors know the areas where they are competing and the spheres where their interests don't measure up. The main competition tool is nonprice competition that is connected with the importance of post sale service resulting from long term projects when personal contacts are established. Positive image of a company is very important, but *it takes a long time to create a "good name"* (Interview 27). Personal contacts play a crucial role in the process of creating a company's reputation. This is why *it is not profitable to develop a special brand name in St. Petersburg* (Interview 26).

Generally oligopolic segments of St. Petersburg's ICT market are described through the absence of actors' interdependence and low level of ability to lobby interests that are connected with

stable structure of the market, long history of activities and definite borders of a market's segments.

Most oligopolistic competitors act in the ICT market for a long time, and this is why they tend to be middle or big sized companies and have a rather stable share of clients. Competitors know each other personally. It helps them to hold onto their borders and to support peaceful competition because they are able to predict each others' behavior, and they rely on moral background of their economic actions. Oligopolystic competitors cooperate with each other if it is needed. Cooperation allows them to support frames of competition and to develop their profits. Cooperation of competitors is common for the ICT market because it is important for creation of new products and also for the improvement of established goods.

Business networks of oligopolystic competitors are influenced by the importance of cooperation and by the rule of economic reciprocity. These are the reasons why oligopolistic competitors try to be friendly and very accurate when dealing with each other. This is also a result of long personal interaction and of the market's structure.

Although business networks of oligopolystic competitors play a significant role in their economic behavior the role of personal contacts with customers is very important, too. These relations with clients define market's borders and they provide competitive advantages of ICT companies.

Small enterprises dealing with delivery, sales and service of ICT devices, with web-projects, support of software such as 1C work in segments of perfect competition. *The entrance in this market is very easy* (Interview 26). These companies produce relatively simple goods, concern to short term projects. Segments of perfect competition are over filled with offers. Many actors are "grey", nonregistered. Number of companies in these segments is counted in hundreds of actors. These segments have been being changed very rapidly. A lot of new companies is established and the same number is gone away. Most of companies are very specialized. They compete with similar companies, with producers of other but similar goods and with leading large companies. All the ways of competition are important, especially, commercials, spreading the information about company's activities. But most popular tool is price competition that enables to attract attention but may destroy market, because *when somebody begin reducing price crucially everybody have to do the same* (Interview 14). The main goal of actions in perfect competition is

an establishment of first contacts with customers and further support of market's borders. This goal is difficult to be reached because these companies are young and they have to overcome barriers which are built by oligopolystic companies.

Because the number of companies is very big, there is no sense and it is just impossible to know all actors in segments of perfect competition. To gather information about competitors would take about 70-80% of activities (Interview 28). This is why companies are independ creating an average image of competitors. Actors have their potential customers, they know in generally advantages and disadvantages of their products and of market's offers. Competitors meet each other at different conferences, with clients. When actors are able to define their main competitors they prefer to arrange personal contacts. But business networks of competitors don't create and don't spread any values or norms of competition behavior. There is no sanctions for behavior destructing the market. Competitors don't esteem their image among competitors. The biggest value has reputation among clients. This is connected with the complicated character of ICT, with the problems in estimating effects of ICT. Alltogether this reduces role of business networks among competitors and highs up the importance of business networks with customers. Networks with clients may be understood as a social capital of market's actors (R.Burt, J.Coleman). Personal contacts with customers are very important not only because the product is very sophisticated but also because development of market's economics orientates clients towards to established personal networks (Lonkila, 1999). This social capital of ICT companies provides competitive advantages and influences strategies of competitors' behavior.

## **Conclusion**

In socioeconomics markets are studied as a set of rules regulating interaction of sellers, buyers, suppliers. The external limits of behavior are given by the government. And social structures of market form norms and rules, which considered to be preferred to follow. Business networks are structures and tools of intercoordination of actions. This approach to the market explains importance of studies modern markets, including those, which are located in Russia, where informal behavior's norms, established during companies' interaction, are said to be very significant, they also simplicate transactions and reduce riscues (Razumnaya, 2004). Socioeconomists suppose that competitors' networks are able to regulate competitive activities through these infomal norms because they are embedded in social relations of market's actors.

Presented study of competition's social embeddedness shows that business networks of competitors don't have all functions that they should have according to socio economics approach. Networks with competitors are useful to build borders of market, aware about the market situation, generally. But the norms of competitive behavior are influenced mostly by economic rules of profitable actions. Most important are networks with clients. These networks form social capital of market's actors being their competitive advantage. This is why networks with customers are more influential for competitive behavior.

Thus, it is important to define factors of business networks' role for competition in St. Petersburg's ICT market. Obviously, social embeddedness of competition in given market is very different to other markets even in Russia and to the same in other countries. Norms of St. Petersburg's ICT market's competitors' interaction tend to be more formal, reducing role of personal networks with competitors but marking importance of relationship with other actors of market.

Thus, presented study of social embeddedness in St. Petersburg's ICT market's leads to other investigation of given situation's causality. Factors of networks' role are necessary to be studied in order to explain the interrelation between social and economic actions.

### **Reference:**

Abolafia, M. (1996). *Making markets: Opportunism and restraints on Wall Street*. Cambridge, Mass.: Harvard University Press.

Abolafia, M. (2003). *Rynki kak kultury: Etnografichesky podhod*. *Economicheskaya soziologia*. 4(2):63-72. (Markets as culture: Ethnographic approach).

*Biznes Tezaurus* (2003). *Analiz tendentsiy razvitiya IKT i ih primeneniye v sotsialno-ekonomicheskoy sfere*. (Analysis of ICT development and its use in socio economic sphere).

Granovetter, M., Swedberg, R. (eds.) (1992). *The sociology of economic life*. Boulder, Colo.: Westview Press.

*IT sector in St. Petersburg* (2003). St. Petersburg: St. Petersburg Foundation for SME Development.

Krasnov, M. (2003). Iz teni – v svet. Infobiznes. 6:20. (From darkness towards the light).

Radaev, V. (2003). Soziologia rynkov: k formirovaniu novogo napravlenia. M.: GU VshE (State University of Economics). (Sociology of markets: To forming a new approach).

Razumnaya, A. (2004). Faktory, okazyvayushie vliyanie na podderjanie setey vzadimodeystvuyushih firm. [Http://www.ecsocman.edu.ru/db/msg/153906/](http://www.ecsocman.edu.ru/db/msg/153906/) (Factors influencing networks of interacting firms).