

Key Stakeholders Interaction as a Factor of Innovativeness in Transitional Economies: the case of Russia

Maria M. Smirnova, senior lecturer

Marketing Department,
Graduate School of Management,
Saint Petersburg State University
Russia, Saint Petersburg, 199004, Volkhovsky per, 3
email: smirnova@gsom.pu.ru

Sergey P. Kouchtch, professor

Marketing Department,
Graduate School of Management,
Saint Petersburg State University
Russia, Saint Petersburg, 199004, Volkhovsky per, 3
email: kouchtch@gsom.pu.ru

Daria Podmetina, researcher,

Faculty of Technology Management
Department of Industrial Management
Lappeenranta University of Technology
e-mail: daria.podmetina@lut.fi
P.O. Box 20, 53851 Lappeenranta, Finland
Tel. +358 5 621 2905, fax +358 5 621 2644

Juha Väättänen, professor

Faculty of Technology Management
Department of Industrial Management
Lappeenranta University of Technology
e-mail: juha.vaatanen@lut.fi
P.O. Box 20, 53851 Lappeenranta, Finland
Tel. +358 5 621 2694, fax +358 5 621 2644

Vera A. Rebyazina, PhD student

Marketing Department,
Graduate School of Management,
Saint Petersburg State University
Russia, Saint Petersburg, 199004, Volkhovsky per, 3
email: verok2004@mail.ru

Abstract

The paper aims to investigate the nature of innovativeness through the lenses of the firm's interaction with key internal and external stakeholders. Selection of key stakeholders and measurement of their involvement in development of innovations contributes to identification of main innovativeness profiles, whereas interaction with partners and effective interfunctional collaboration are seen as central differentiation criteria for the firm. The research context is presented by transitional economy on example of Russia, providing additional historical, social and economic perspectives. The research assumptions are tested on a sample of large companies from 34 regions of Russia.

Keywords: *innovation; internal stakeholders; external stakeholders; Russia*

Biographical notes

Maria M. Smirnova is Senior Lecturer (Marketing) at the Graduate School of Management, Saint Petersburg State University. Research interests include industrial marketing, relationship marketing, innovations and international marketing. Teaching is mainly devoted to field of international marketing, methodology of marketing research, including quantitative methods, SPSS-based research and structural equation modeling.

Sergey P. Kouchtch is Professor (Marketing) at the Graduate School of Management, Saint Petersburg State University. Research interests include industrial marketing, network approaches in marketing, marketing strategy. Teaching is mainly presented by courses in industrial marketing field, business-to-business marketing strategies, relationship marketing and supplier relationships.

Daria Podmetina is Researcher at the Department of Industrial Management, Lappeenranta University of Technology. Research interests include different aspects of companies from emerging economies like internationalization (inward and outward FDIs, mergers & acquisitions, exporting, importing), strategies, R&D, innovations and technology transfer, and high tech industries development.

Juha Vaatanen is Professor (International Business and transitional economies) at the Department of Industrial Management at the Lappeenranta University of Technology. Research interests include international business, internationalization of the firms from emerging markets, competitiveness issues and innovation management. Main teaching spheres are concentrated in international business field, including teaching special courses on doing business in Russia.

Vera A. Rebyazina is a PhD student (Marketing) at the Graduate School of Management, Saint Petersburg State University. Research interests include industrial marketing and relationship marketing.

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1. Introduction

Analysis of the role of interaction with stakeholders is a factor potentially enhancing innovativeness and contributing to successful new products or services brought to the market. The term innovation is understood as “the successful introduction of a new thing or method . . . Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services” (Luecke and Katz, 2003).

Later integration into the global marketplace creates a specific technological environment for Russian firms. On the one hand, significant spill-over effects from the MNCs streaming to the growing Russian market; and, on the other hand, joint effect of lower competences, lack of market knowledge and strategic delay in technological and infrastructure development makes it more difficult to keep the pace with the level of innovativeness demonstrated by global market players.

Most of the firms may decide either to enter global market and than consequently improve their innovativeness; or stay on the domestic market place and compete locally, serving existing market segments and niches. The more ambitious growth the firm aims, the more important it becomes to integrate into a wider network with significant learning and know how effects,. Motivation and identification of joint aims with external stakeholders thus becomes crucial and vital point in firm’s strategy development.

The research question is whether Russian companies trend and need to involve stakeholders in innovative processes and strategic planning. The question is widely influenced by selected research background and represents a significant research gap in the field of innovations studies.

The paper is structured as follows: firstly, the marketing perspective of stakeholder framework is presented, followed by the discussion on classification of stakeholders as internal and external, secondly, the research propositions and methodological model of the study are formulated, and finally the key findings are discussed and main managerial implications proposed.

2. Literature review

2.1. Marketing perspective of stakeholder framework

Stakeholders approach is a tool to analyze, to manage marketing environment, to manage firm’s marketing relationships and to enhance marketing strategy (Polonsky, Schuppisser, and Beldona, 2002, Menon and Menon, 1997). Being focused on market-oriented and market-driven behavior of the firm, marketing researchers address stakeholder approach when analyzing the role of the firm’s external environment. The impact of market orientation on firm’s performance can be significantly moderated by the external environment (Gray, Greenley, and Matheson, 1999) and the role of stakeholders in managing this moderation effect can be substantial.

The research field is significantly overlapping with the network approach in marketing, specifying market relationships (Polonsky, Suchard and Scott, 1999; Gummesson, 1994; Achrol, 1997; Slater; 1997). Analyzing stakeholderism framework, Murphy et al (1997) are directing researchers at assessing the satisfaction of all the stakeholders within an exchange network. The developments of this research flow have coincided in time with the major developments in relationship and networks marketing literature (Achrol, 1997; Gummesson, 1994). But the conceptualization of stakeholders can also be seen quite different from the network concept, thus Freeman (1984) defines stakeholder

model as “a map in which the firm is the hub of a wheel and stakeholders are at the ends of spokes around the wheel... In this hub-spoke conceptualization, relationships are dyadic, independent of one another, viewed largely from the firm’s vantage point and defined in terms of actor attributes”. The dyadic nature of relationships and omitted potential interlinks between the stakeholders are rather contradicting with advances of the network approaches in marketing and limit the analysis of potential stakeholders’ contribution to firm’s development.

Strategic issues of involving stakeholders were assumed to help marketers to broaden their view (Reidenbach and McClung, 1999). The relationship frameworks developed during the 1990-s just confirm this perspective (Kotler, 1992; Morgan and Hunt, 1994; Gummesson, 1994, Christopher et al, 1991). This wide focus on market relationships included not only customer relationship, but also a number of key relationships/partners/markets, crucial for business survival and integration within the value chain. This development of interactive approach up to formulation of relationship strategy lead to creation of value constellation concept (going away from the linear value chain approach) (Normann and Ramirez, 1994).

One of potential directions to apply these theoretical advances would be to improve theoretical and empirical evidence on understanding the role of stakeholders in enhancing competitiveness of partners involved, as for example, contributing to technological innovation and new product development.

2.2. Stakeholder involvement in R&D activities

The role of firm’s partners and stakeholders as a source of knowledge for enhancing innovativeness has been stated in the research literature (Elias, Cavana and Jackson, 2002; Sheng and Rui, 2006; Hart and Sharma, 2004).

Addressing marketing perspective of stakeholder involvement and the technological innovation as one of the main outcomes of this involvement, it is required to mention the dichotomy conceptualized by Berthon, Hulbert and Pitt (1999) as “to serve or to create”. This dichotomy leads to assumption that market-driven and market-oriented behavior (“to serve”) is often contradicting with proposing radical innovations (“to create”). The role of stakeholders in the first case can be seen as the role of passive recipients of services and sources of information on improvements of existing goods/services and their assessment, while the latter case implies active involvement of stakeholders in R&D activities and firm’s readiness to take risks to develop radically new products, sometimes not expected by the market and thus being risky to promote and distribute.

Other researchers do not accept this dichotomous perspective and see the innovativeness as a “missing link” between market orientation and performance (Han, Kim, Srivastava, 1998).

The potential solution to this theoretical contradiction can be commented on example of the following concept. Hart and Sharma (2004) state that mostly there are just know and powerful actors attracting managerial attention to sustain business competitiveness, while the knowledge need to stimulate innovative development increasingly can be found outside the organization in the stakeholder networks. They divide stakeholders in “core” and “fringe” and develop a concept of radical transactiveness as a dynamic capability “that seeks to systematically identify, explore and integrate the views of stakeholders on the “fringe” – the poor, weak and isolated, non-legitimate, and even non-human – for the express purpose of managing disruptive change and building imagination about the future competitive business models” (Hart and Sharma, 2004).

2.3. Classifying stakeholders

Most of the studies, conceptualizing potential categories of stakeholders on their ability to contribute to the firm's development, state that the role of stakeholders can be two-fold: the primary, mostly involved stakeholders can support current firm development and not contribute to radical innovative developments; and the secondary, considering a broader approach to stakeholders involvement that can significantly help verifying new ideas and proposing basis for innovative development.

A number of approaches to classification of existing and potential stakeholders are based on relational features of stakeholders interaction. Thus Mitchell et al (1997) develop a typology of stakeholders based on the number of attributes, including power (the extent a party has means to impose its will in a relationship), legitimacy (socially accepted and expected structures or behaviors), and urgency (time sensitivity or criticality of the stakeholder's claims). Friedman and Miles (2002) explore the implications of relationships between stakeholders and organizations by analyzing compatibility of interests and connections as additional attributes of examining the configuration of these relationships. Savage et al. (1991) classify stakeholders according to potential for threat and potential for cooperation. These approaches focus on long-term potential of interaction and necessity not only to assess, but also build and maintain configuration of stakeholder relationships in order to fulfill firm's strategic potential.

The research question thus is not only in intensity of stakeholder involvement, but also the structure of involved stakeholder groups and their potential to contribute to the firm's development. Potential of stakeholders to enhance radical innovations can vary significantly and depend on multiple criteria. It can be implied that innovative potential of interaction with certain stakeholder groups can be governed by the same relational principles identified in the above mentioned classifications.

Most of classifications are focused on the external stakeholders only, while for the purposes of the study we are including a number of potential stakeholder groups – both within or outside the focal firm of analysis. This approach is similar to some existing papers on R&D contribution from the side of stakeholders. Thus Sheng and Rui (2006) analyze a case study from China and model stakeholder involvement in R&D activities by considering the role of shareholders, senior management, staff (sales), user (customer), government, competitor, supplier and universities. Involvement of both internal and external stakeholders corresponds with the relationship marketing and network approach in marketing.

Analysis of internal stakeholders is essential part of a complex network effects and interactions. Innovations can not be created by R&D department only, more than this – they require active participation and information exchange between such departments as marketing and purchasing since they have direct contact with firm's counterparts – customers, suppliers and competitors. The signals and information from direct contacts with these partners is representing the information field for the firm to operate in, and the more active is interaction and firm's approach to manage these information flows, the better can be the outcome for the innovativeness level and new products success. Coordination of interaction with external stakeholders is affected by a number of factors related to selected research context of a transitional economy, and in particular by higher instability of relationships in the market, lack of information about potential partners due to a short-term history of market economy, low information disclosure readiness, higher readiness for opportunistic behavior and higher time pressure (Ford et al, 2006, Johanson 2007, Halinen, Salmi, 1996).

From another perspective though, internal stakeholders are to be convinced as well. Being a country from the efficiency-driven countries group, Russia is still largely motivated by driving economy's and firms' efficiency. Cutting costs and optimization of production processes can be achieved by

improving the processes, but may have no strategic effect for firm's further development and sustainable advantage creation. Being truly innovative means both enhancing efficiency and searching for effectiveness. The latter can only be achieved by integrating market knowledge and market sensing with long-term planning. Both external and internal stakeholders thus have to be involved in identification of strategic priorities and creation of market-driven innovativeness. Integration of internal firm's capabilities being centre of the discussion on the strength of market-oriented and market-driven firms, provide as well internal advantages for the firm, among which are creation of market orientation in firm-stakeholders interaction, providing internal marketing mechanisms and interfunctional coordination, evaluation of techniques and feedback from customers, NPD process coordination with involvement of all the stakeholders and various network effects. Finally, value chain advantage and modification of business model can be one of the outcomes of the collaborative innovations and matched partnerships.

2.4. Intensity of stakeholder involvement in R&D activities

Intensive relational ties are created as an outcome of interaction between parties that occurs on different levels and in different functional spheres of organization. Intensity of interaction is one of the constructs used to describe and analyze the interaction process between the firms and potential stakeholders.

Chacko and Johnston (2005) refer to interaction intensity as "people doing things together or with respect to one another with accompanying action, communication, and thought process" Interaction intensity can be seen as a sequence of social episodes which can become relationships over time, or can stay discrete transaction. In general definition intensity of interaction can be seen as "the frequency of both parties in communicating together either for personal or business purposes" (Crosby et al, 1990) – that can be limited to necessary contacts to maintain the interaction or can be extended to more personal interaction with higher level of social bonding.

Interaction intensity can depend on internal and external factors. Internal factors require close integration between parties due to value creation potential, desire to decrease opportunistic behavior intentions by other party, etc. External factors can be related to competitive pressure, uncertainty level, market turbulence, etc. All the same reasons influence actor bonds formation assuming certain level of contact intensity among actors. This interaction leads to trust creation, necessary for further relationship development and creation of a single social system among the companies involved; these bonds are "a central part of identity of a company and affect the way that it works with other companies" (Ford et al, 2006).

Factors, influencing interaction intensity can also be grouped according to the level of analysis. On the dyadic relationship analysis of focal firm's interaction with specific partner we may consider relationship-specific factors, as closeness of relationship, interpersonal character of relationship, impact of specific investments and adaptations. Intensity of interaction with a specific partner proposes conclusion about high level of integration with given partner and can be seen as a measure of integration. A number of factors at the market level have influence on interaction intensity - market structure, dynamism, internationalism, position in the manufacturing channel, social system (IMP Group, 1982).

Intensity of interaction with external stakeholders in within the R&D activities can represent vital social, organizational and technological bonds, essential for success of innovative process. The intensity of involvement means enhancement of information exchange, knowledge sharing and finally contribution to the success of innovations. Intensity of stakeholders involvement can be measured by closeness and content quality of the working relationship between the firm and

representatives of stakeholders. Leung, Wong, and Chow (2003) consider intensity of interaction as a factor, affecting cooperation and adaptation in relationship, together with other factors – openness, information sharing, and uncertainty.

2.5. Number of the stakeholder groups involved in interaction

The number of stakeholders involved in R&D activities can be a sign of openness of the firm, but also can be a sign of the lack of selectivity of the right partners with the highest potential for joint innovation activities. There is no quantitative research evidence on the role of the number of internal and external stakeholders involved. On another hand, when applying marketing literature, the studies on market orientation and interfunctional coordination are discussing the role of the integration between the departments for better alignment with the market needs (Narver and Slater, 1990).

External stakeholders are essential component of discussion on the open innovations framework, being currently discussed by researchers. Thus Kock and Torkkeli (2008) draw researchers' attention to role of the number of external stakeholders involved. They state that the firm following the open innovation principles can be seen as “working with a multitude of partners, always searching for new linkages that could enhance their innovative potential, or for the highest bidders for knowledge that they may wish as sell – in short, this is a “swingers club” for firms engaged in innovation”. While in fact, mostly there is a limited number of partners (Kock, Torkeli, 2008).

Discussion on the number of groups involved is mostly replaced by discussion on the role of stakeholders and their ability to influence firm's development. Notwithstanding it is possible to consider the variable of the number of groups involved as a control variable for analysis of its potential influence.

3. Choice of research context and specifics of transitional economies

There is a number of features in transition economies, determining potential differences in orientation stakeholder relationship strategies, among them higher instability of relationships in the market, lack of information about potential partners due to short-term history of market economy, low information disclosure readiness, higher readiness for opportunistic behavior and higher time pressure (Ford et al, 2006, Johanson 2007, Halinen, Salmi, 1996).

In case of short-term relationship history in transition markets more market actors may have ineffective relationship structure due to factors on the market, industry or firm level. Analysis of reasons of interaction low or high performance may lay on the market level (market development, institutional factors, etc), industry level (available alternative partners, competitiveness, intensity of competition), or firm level (resources and capabilities base, strategic orientations, separate histories, work cultures, firm size, etc). Due to these factors firms may be less capable to identify, select and cooperate with most appropriate partners. This should lead to lower performance outcomes and lower perceived relationship performance.

Russia as an economy in transition provides a unique opportunity to investigate changing and adapting network structures, stakeholder interaction and relationship constellations. The characteristics of business relationships in the Russian economy have been investigated since the early 1990s, i.e. since the collapse of the planned economy and the dissolution of existing economic ties between companies and whole value-creating systems. The development of newly formed business relationships was the subject of cultural analyses and attempts to find a “specific Russian way” to relationship building (e.g. Davis, Patterson, and Grazin, 1994). Some studies exist which analyze the nature of these new relationships, building on frameworks within a market economy

(e.g. Johanson, 2007; Tretyak and Sheresheva, 2005). As Johanson (2007) points out, such new relationship building required significant time and resource investments and was based on the development of decentralized and mutual planning capabilities by individual firms.

The time pressure (Ford et al, 2006) and competitive dynamics leads to a more discrete perception of direct relationship value functions and more integrated perception of indirect value drivers (Smirnova, Kouchtch, 2007). Joint innovation development as one of indirect relationship outcomes (Walter et al, 2001) is thus often missed by firms due to low trust and low ability to make joint investments. Interaction among partners in innovation-related processes in emerging markets thus can provide an interesting object for investigation.

4. Research design

Empirical data for the study was collected in the late 2007 and resulted in a sample of 160 large industrial Russian firms (more than 500 employees). The study was designed on a basis of face-to-face structured interviews with key respondents representing marketing department or top management of the firm. The sample was stratified with regard to the following criteria – region, industry, and annual revenue of the company, plus the availability of the key respondent in each firm. The respondents were selected to be qualified to specify better the firm's interaction with key stakeholders both inside and outside the firm, and first of all customers and suppliers interaction in relation to innovative processes inside the firm. The data was collected in personal interviews with key respondents with an average duration of an interview of 1 hour.

4.1. Sample description

All the firms in the sample are large firms with more than 500 employees. The sample is cross-sectional and includes a number of key industries: light industry – 14,6%, production of construction materials – 9,5%, metallurgy – 5,7%, machinery and metal working industry – 40,5%, chemical and petrochemical industry – 8,2%, food industry – 13,3%, telecommunication – 4,4%, other – 3,8%. The age of the company is varying from 1 to 142 years with an average of 44 years. 73% firms in the sample – public companies, 20% - limited companies.

Annual sales of the firms in the sample is varying: more than 1 bln rubles (27 mln euro) - 24,4%, from 500 mln to 1 bln rubles (from 13 to 27 mln euro) – 21,9%, from 100 to 500 mln rubles (2,7 to 13 mln euro) – 29%, and less than 100 mln rubles (2,7 mln euro) – by 17,2%.

The relationship between products and services in firms' portfolio is varying from 0% to 100% with an average of 85% products and 15% services. The relationship between serving industrial and consumer markets is also varying from 0% to 100% and an average of 67% firms serving industrial markets and 33% consumer markets.

Out of 160 firms in the sample, 4% assess their economic situation as “bad”, 29,3% - as “satisfactory”, 52,7% as “good” and only 14% as “excellent”.

4.2. Measurement

Describing existing patterns of stakeholder interaction of Russian companies a number of variables has been used. The key respondents had to identify involvement of certain internal or external stakeholder group in R&D and innovations related processes and assess the level of intensity of their involvement.

Involvement of internal/external stakeholders. A dichotomous question was used to measure whether internal/external stakeholders are involved in R&D process. The questions on internal stakeholders include top-management, production, R&D department, marketing and sales. External involvement is measured on ten stakeholder groups: suppliers in Russia; suppliers abroad; customers in Russia; customers abroad; intermediaries; shareholders; competitors; consultants; research organizations; partners in joint ventures. The results of analysis of this dummy variable were used to control for involvement of stakeholder groups and for calculation of a number of internal and external stakeholder groups involved (which varied from 0 to 5 for internal stakeholders, and from 0 to 10 for external stakeholders).

Intensity of interaction with internal/external stakeholder within R&D activities. The same internal/external stakeholder groups were tested on intensity of involvement in respondent firm's R&D activities. A 5-point Likert scale was used to measure the intensity of interaction with internal/external stakeholders in relation to R&D activities. The Cronbach's alpha on both internal and external stakeholders scales was quite acceptable (0,725 and 0,824 correspondingly).

Performance. The firm performance was assessed on the base of a single item (ordinal scale), where the key respondent could allocate the firm economic position on a continuum from "near bankruptcy" to "excellent".

5. Key findings

Our key research question thus is whether Russian firms trend and need to involve stakeholders in innovative processes and strategic planning. The first results of empirical study provide a picture of current approach to stakeholder involvement in R&D processes in large Russian companies (see Table 1).

Two key variables of analysis are stakeholders' participation in R&D processes and intensity of their involvement. Separation of internal and external stakeholders has been confirmed by empirical results, whereas the degree of internal stakeholders is substantially higher than the one of external. As expected, the leading department involved inside the firms is R&D department (92% of firms), that is also corresponding with the level of involvement's intensity (mean 4,24). The least involved is sales department (71,3% of firms). Marketing department is the third in terms of the number of firms, but the second when measuring the intensity of involvement.

Among the external stakeholders the highest levels of involvement have external research organizations, consultants and customers inside Russia. The same stakeholders are among the most intensively involved. The least involved external stakeholders include customers abroad, intermediaries and suppliers abroad.

Table 1

Descriptive statistics: internal and external stakeholders involvement

| Involvement of... | Involvement of stakeholders, % | | Intensity of involvement, (1; 5) | | 1 - very low involvement; 5 - very high involvement | | | | | Not involved | |
|------------------------------|--------------------------------|----------|----------------------------------|----------|---|------------|------------|-------------|-------------|--------------|-------------|
| | Rank | % firms | Rank | Mean | 1 | 2 | 3 | 4 | 5 | | |
| <i>Internal stakeholders</i> | | | | | | | | | | | |
| 1 | R&D | 1 | 92,5 | 1 | 4,24 | 3,8 | 5,0 | 8,1 | 23,8 | 51,9 | 7,5 |
| 2 | Production | 2 | 85,6 | 4 | 3,95 | 3,1 | 8,8 | 16,9 | 17,5 | 39,4 | 14,4 |
| 3 | Marketing | 3 | 85,6 | 2 | 4,18 | 1,3 | 4,4 | 13,1 | 26,3 | 40,6 | 14,4 |
| 4 | Top management | 4 | 83,8 | 3 | 4,12 | 3,1 | 3,8 | 12,5 | 25,0 | 39,4 | 16,3 |
| 5 | Sales | 5 | 71,3 | 5 | 3,83 | 2,5 | 8,8 | 11,9 | 23,1 | 25,0 | 28,8 |
| <i>External stakeholders</i> | | | | | | | | | | | |
| 6 | External research | 6 | 52,5 | 7 | 3,26 | 6,3 | 8,1 | 15,6 | 10,6 | 11,9 | 47,5 |

Involvement of external stakeholders follows a different mode. 15,6% of firms in the sample do not involve external stakeholders in R&D and innovation related activities. Among those who involve just 1 stakeholder groups the leading are suppliers and customers in Russia, suppliers abroad, shareholders, consultants and research organizations. 17,5% of all the firms in the sample argue to involve *all* the mentioned stakeholder groups in the R&D and innovation activities.

Table 4 shows the relationship between the involvement of internal and external stakeholders, providing an evidence to statistically significant link (chi square = 0,000) between the level of involvement. These results show that 17,5% of all the firms in the sample involve all the internal and external stakeholders in the R&D processes, while only 1,9% do not involve any stakeholders.

Table 4

Relationship between involvement of internal and external stakeholders

| Internal stakeholders, % of firms | External stakeholders, % of firms | | | | | | | | | | | Total | |
|-----------------------------------|-----------------------------------|-------------|-------------|-------------|-------------|------------|------------|------------|-----------|------------|-------------|-------|---------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 0 | 1,9 | | | | | | | | | | | | ,00 |
| 1 | 1,3 | ,6 | 1,3 | | | | | | | | | | 1,9 |
| 2 | ,6 | ,6 | | ,6 | | | | | | | | | 3,1 |
| 3 | 5,6 | 2,5 | 2,5 | 1,3 | ,6 | | ,6 | | | | | | 1,9 |
| 4 | 3,8 | 5,0 | 5,6 | 3,8 | 3,1 | 1,3 | 3,8 | 1,3 | | | | | 13,1 |
| 5 | 2,5 | 3,8 | 1,9 | 8,8 | 6,3 | 2,5 | 3,8 | 3,1 | ,6 | 1,9 | 17,5 | | 27,5 |
| Total | 15,6 | 12,5 | 11,3 | 14,4 | 10,0 | 3,8 | 8,1 | 4,4 | ,6 | 1,9 | 17,5 | | 100,0% |

Assuming existence of a positive link between the involvement of internal and external stakeholders and firm’s performance, we have tested this using the self-classification of the firms in our sample by current economic situation (varying from “near bankruptcy” to “excellent”). No firms in the sample have classified themselves as being “near bankruptcy”, but the other four options were used to compare the data on the intensity of internal functions and external stakeholder groups involvement in firms’ R&D activities and the number of firms in each of performance groups, involving specific stakeholders.

The differences in intensity of interaction with particular groups of stakeholders were tested by applying ANOVA to identify statistically significant differences. A number of internal and external stakeholders have proved to differ strongly in intensity of interaction, depending on the economic situation of the firm (see Table 5). There is strong increase in involvement of all the internal functions of the firm in the R&D activities when moving from “bad” to “excellent” performing firms, but at the same time the share of firms, involving internal functions, in each performance groups is decreasing, except involvement of top management.

Table 5

Firm performance and stakeholder involvement: testing statistical differences

| Subjective performance perception | SHARE OF FIRMS, INVOLVING THIS GROUP OF STAKEHOLDERS, % | | | | INTENSITY OF INVOLVEMENT, MEAN | | | | | |
|-----------------------------------|---|---------------------|-------------|------------------|--------------------------------|---------------------|-------------|------------------|-------|-------|
| | Bad (n=6) | Satisfactory (n=44) | Good (n=79) | Excellent (n=21) | Bad (n=6) | Satisfactory (n=44) | Good (n=79) | Excellent (n=21) | F | Sig. |
| | | | | | | | | | | |
| Top Management | 83,3 | 84,1 | 86,1 | 81,0 | 2,60 | 4,08 | 4,15 | 4,29 | 3,681 | 0,014 |
| Production | 100 | 81,8 | 91,1 | 66,7 | 3,83 | 3,78 | 4,06 | 4,21 | 0,687 | 0,562 |
| Sales | 66,7 | 81,8 | 65,8 | 66,7 | 2,00 | 3,64 | 4,04 | 4,07 | 4,910 | 0,003 |

| | | | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|-------|-------|
| Marketing | 100 | 81,8 | 87,3 | 76,2 | 3,17 | 4,17 | 4,22 | 4,50 | 2,800 | 0,043 |
| R&D | 100 | 97,7 | 92,4 | 85,7 | 3,17 | 3,86 | 4,49 | 4,56 | 6,129 | 0,001 |
| Suppliers in Russia | 66,7 | 52,3 | 36,7 | 33,3 | 3,75 | 3,39 | 3,28 | 3,43 | 0,214 | 0,886 |
| Suppliers abroad | 66,7 | 38,6 | 25,3 | 19,0 | 1,75 | 2,76 | 3,20 | 3,75 | 1,881 | 0,148 |
| Customers in Russia | 83,3 | 54,5 | 46,8 | 33,3 | 4,60 | 3,42 | 3,30 | 3,71 | 2,178 | 0,098 |
| Customers abroad | 50,0 | 45,5 | 25,3 | 23,8 | 1,67 | 2,70 | 3,10 | 3,00 | 1,179 | 0,329 |
| Intermediaries | 50,0 | 38,6 | 29,1 | 19,0 | 5,00 | 2,94 | 3,35 | 2,50 | 3,109 | 0,036 |
| Shareholders | 50,0 | 36,4 | 30,4 | 42,9 | 2,00 | 2,75 | 3,33 | 2,67 | 1,044 | 0,382 |
| Competitors | 66,7 | 36,4 | 36,7 | 19,0 | 3,75 | 2,81 | 3,21 | 4,00 | 0,884 | 0,456 |
| Consultants | 50,0 | 52,3 | 50,6 | 42,9 | 1,00 | 2,91 | 3,55 | 3,44 | 4,764 | 0,004 |
| External research organizations | 50,0 | 47,7 | 57,0 | 47,6 | 3,67 | 2,71 | 3,53 | 3,10 | 2,177 | 0,098 |
| Partners in JV | 50,0 | 50,0 | 41,8 | 38,1 | 2,33 | 3,32 | 3,13 | 3,50 | 0,548 | 0,652 |

6. Discussion

Relationship between the intensity of involvement of external stakeholders and firm performance does not seem to be linear. “Bad” performing firms have higher involvement of suppliers, customers, and intermediaries, while “good” and “excellent” performing firms have higher involvement of external stakeholder groups as suppliers abroad, customers abroad, consultants and partners in joint ventures/projects. This is a logical result, since involvement of the latter stakeholder groups requires more sophisticated organizational capabilities and higher potential for mutually beneficial interaction with such partners, as well as ability to successfully implement the plans and strategies proposed by consultants.

The role of shareholders, external research organizations and competitors cannot be explained on the base of existing data and potentially requires further factors for explanation. In general, there is the same trend that the number of firms involving each of stakeholder groups is decreasing when moving from “bad” to “good” and “excellent” performing firms. Some exception can be mentioned concerning external research organizations, shareholders, consultants and partners in joint ventures, which seems to stay relatively stable as a share of firms involving these stakeholders in each of performance groups.

The overall trend thus signifies that the better the performance of respondent firm, the more selective is the firm in structuring relationships with both internal and external stakeholders, while the intensity of R&D related interaction with these stakeholders is mostly increasing, when moving from “bad” to “excellent” performing firms. The exceptions are presented by some groups of stakeholders, like intermediaries, for example. The role of intermediaries is diminishing by “excellent” performing firms that is reflected by a lower share of firms, involving intermediaries in R&D processes, and also lower intensity of R&D related interaction. Surprisingly, by the same pattern can be seen in case of customer involvement. Customers should be regarded as one of the key stakeholder groups, involved in R&D activities. This is also supported by the market orientation literature and follows the principle “to serve the market”. But in the case of our sample this trend is not supported – the share of “good” and “excellent” performing firms, involving customers in R&D activities is lower than in case of “bad” and “satisfactorily” performing firms, but the intensity of interaction is also relatively lower, while still staying rather high when comparing with other stakeholders.

When ranking the stakeholder groups in terms of higher share of involvement (% of firms) and higher intensity of interaction, different interaction patterns can be defined in each of the performance groups. These results show dynamics of relative position of each stakeholder group in relation to focal firm performance. By analyzing the patterns defined (see Table 5), it can be noticed

that both internal and stakeholder groups are varying in terms of the share of firms in the sample, involving particular group in R&D related interaction (high - more than 50%/low - less than 50% of firms in the sample), intensity of this interaction (high – mean higher than 2,5/low – mean lower than 2,5). This solution can be presented in a two by two matrix (see Figure 1). The matrix fields describe potential situation of both internal and external stakeholder groups involvement in R&D activities of the focal firm.

According to Table 5, involvement of the internal stakeholders in all the performance groups corresponds with the field *intensive interaction*, comprising high share of companies and high degree of interaction intensity. The only exception is Sales function that in “bad” performing firms is located in the field *opportunistic interaction*. This field includes stakeholders, involved in R&D by a large number of firms, but whose participation in R&D process is not active enough. This situation can help the firm to use opportunities of involvement of each stakeholder function, balancing the whole stakeholder portfolio but without risks of too intense interaction.

Analysis of interaction with external stakeholders proposes a higher variety of options according to the matrix. Most cases correspond to the field *intensive*, *opportunistic* or *selective interaction*, while the latter indicates cases of stakeholder groups involved just by some cluster of firms, but interaction with them is higher than average. These stakeholder groups might provide particular value potential for R&D activities, which though are not available or not interesting to the majority of the firms in the market. The type of stakeholders in this field differs strongly, depending on the economic situation of the firm (see Table 5) and can be presented by suppliers abroad and competitors by the “excellent” performing firms.

The final field of the matrix – *limited interaction* – is presented in some performance groups by such stakeholders as customers abroad, intermediaries, shareholders. These stakeholders are located at the border of the matrix field, but this location is already remarkably for our analysis. There might be a range of reasons for such “limited interaction” – either just formal involvement of stakeholders in the R&D process as it might be assumed in the case of shareholders; or forced due to channel relationships – as in the case of intermediaries.

Figure 1

Characteristics of stakeholders involvement: share of firms and intensity of interaction

| | | | |
|---|------|------------------------------|--------------------------|
| Share of firms, involving this shareholder group in R&D activities | High | Opportunistic interaction | Intensive interaction |
| | Low | Limited interaction | Selective interaction |
| | | Low | High |
| | | Intensity of interaction | |

Thus despite lack of existing research, analysis of the number of stakeholder groups involved has provided some interesting evidence. In particular, these results have confirmed the role of internal stakeholder integration as a necessary step for integration and more active involvement of external stakeholders.

7. Managerial implications

R&D processes are the key fields for the firm success and competitiveness, making this sphere also essential for effective integration with relevant stakeholders. By discussing theoretical foundations of current study, it was implied that the role of stakeholders differs significantly, depending on their role and potential to influence firm development in future, or having legitimacy/power to control and determine certain decision making steps.

The key research question has been formulated with the idea to measure, define and describe the patterns of Russian firms in developing links with internal and external stakeholders within R&D related activities. The findings of the study provide an evidence of existence of certain interaction patterns when involving internal and external stakeholders in R&D related processes.

Confirming the suggestions of Hart and Sharma (2004) on dividing the core and the fringe stakeholders on criteria of different patterns of involving them into innovation processes and differences in their potential contribution, we can define the four key patterns presented in the Figure 1. Differentiation between the stakeholders here occurs on the base of two criteria – intensity of interaction and frequency of involving particular groups of stakeholders by other firms in R&D activities. As shows the analysis of the data on the base of these two criteria, there are quite different patterns chosen by the firms in the sample. When moving from “bad” to “good” and “excellent” performing firms (according to their subjective assessment), the approach to stakeholder interaction starts to represent a certain strategy of classifying stakeholders according with selective, intensive or limited interaction. The case of opportunistic interaction is not presented within the “excellent” performing group of firms. These results provide an evidence to the statement made by Kock and Torkkeli (2008), defining approach to stakeholder interaction within the open innovation framework - a thoughtful and selective planning of involvement the most potential stakeholders.

The number of stakeholder groups involved in R&D and innovation related processes has not been studied on a quantitative basis, but the empirical evidence of current study proposes a conclusion that increase in number internal stakeholders involved is a condition for further involvement of external stakeholders. There is a clear pattern by the firms in the sample to involve more external stakeholders when all the internal functions are already actively participating in the R&D and innovation processes. Market orientation literature extensively discusses the role of interfunctional coordination (Narver and Slater, 1990), and our results show that firms indeed tend to firstly integrate internal functions around the R&D processes and just then increase the involvement of external stakeholders. There is thus a certain requirement for the level of internal integration to enable effective involvement of external stakeholders in innovation related processes.

Finally, one of the main implications on stakeholder involvement in R&D activities can be derived from the link with the firm performance. Current study provides just a first insight in the potential relationship between the level of firm economic performance and the pattern of internal/external stakeholder involvement. Notwithstanding these first results indicate significant differences between the firms which perceived their economic situation differently. Better performing firms have much more intense involvement of all the internal functions considered in this study. The same is true for some of external stakeholder groups, including suppliers abroad, customers abroad, consultants and partners in joint ventures. The degree of involvement of other external stakeholder groups varies in a different way, for example, decreasing for customers in Russia and intermediaries in case of better performing firms. Of course, we have to consider that firms were self-assessing the performance in the current moment, and more objective or longitudinal information could provide evidence on dynamics of firm performance and patterns of stakeholder interaction.

From managerial perspective, the question is not only how selected structure of stakeholder network and the intensity of their involvement is linked to the performance of the firm, but also whether this process provides mutually beneficial, strategic and potentially long-term incentives to maintain selected structure and intensity of interaction.

8. Conclusion

Studying of stakeholder involvement in innovation related process can discover vital sources of long-term competitive advantage and radically change firm's business model. Nevertheless, existing studies are not providing a comprehensive picture on potential patterns of interaction with internal and external stakeholders when implementing R&D activities.

This study presents the results of an empirical survey on 160 large Russian firms and analyzes existing patterns of firm interaction with internal stakeholders (functions) and external stakeholder groups. The key criteria used to describe the stakeholder interaction are the fact of involvement of particular stakeholders and the intensity of interaction with these stakeholders in frames of R&D and innovation related processes.

Descriptive analysis has provided empirical evidence on the share of firms involving internal and external stakeholders in R&D activities and the level of intensity of interaction. Discovered link between the number of internal and external stakeholders involved provides a basis for discussion on an integrated model of stakeholder interaction, where interfunctional coordination within the firm can have a mediating role, determining success in involving of external stakeholders.

Another result is evidence on existing differences between the groups of firms with various levels of performance, whereas performance is linked not only to intensity of stakeholder involvement, but also to the number of stakeholder groups involved both inside and outside the firm. This fact confirms a more selective approach to involving stakeholders and planning interaction with them by better performing firms.

The results of data analysis provide some research questions for further investigation. Is there a link between firm interaction with internal/external stakeholders and various performance outcomes? Has the number of stakeholder groups an impact on success of their involvement in firm R&D processes? Does decrease in the number of stakeholders and change of interaction intensity by better performing firms mean more strategic and more effective approach or is it a matter of coincidence? The casual analysis can support or reject these propositions and shed more light on the role of the interaction patterns discovered in data analysis. In the end, one of future directions of research could be more closely linked to the features of Russian economy discussed above, to prove whether opportunistic and dynamic nature of relationships in the economy is affecting selected patterns of stakeholder interaction in long-term perspective.

Further development of the stakeholder interaction matrix proposed in the paper can be reached by qualitative study methods, such as in-depth interviews with the firms, identifying their motivation when selecting the stakeholders, defining the intensity of their involvement and coordinating these activities.

Certain limitations of the study should be mentioned. First of all, the study is based on analysis of a cross-sectional sample. Secondly, only large firms with the number of employees of more than 500 employees have been included in the analysis. Thus the size factor has not been considered by defining and describing the stakeholder involvement patterns. Finally, the study creates a basis for further casual analysis, but presents just descriptive results at this stage. Nevertheless, these first

results provide an outlook in the current distribution of firms' attention to internal and stakeholders selection, involvement and interaction.

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References

- Achrol, R.S. (1997) 'Changes in the theory of interorganizational relations in marketing: toward a network paradigm', *Journal of the Academy of Marketing Science*, Vol. 25, No.1, pp. 56-71.
- Bennett, R.J.T.J. and Robson, P.J.A. (1999), 'The use of external business advice by SMEs in Britain', *Entrepreneurship & Regional Development*, Vol. 11(2), pp. 155-180.
- Berthon, P., Hulbert, J.M., Pitt, L.F. (1999) 'To serve or to create', *California Management Review*, Vol. 42, pp. 37-58.
- Chacko, M., Johnston, W.J. (2005) 'Product customization, product complexity and Interaction Intensity in Industrial Markets', in the 2nd IMP Group in Asia Proceedings, *Building Social Capital in Networks*, Phuket, Thailand, (December 11-14, 2005): 19, abstract and entire paper on CD and website.
- Christopher, M., Payen, A., and Ballantyne, D. (1991). *Relationship Marketing: Bringing Quality, Customer Service and Marketing Together*. Oxford: Betterworth-Heineman.
- Crosby, L. A., Evans, K. R., and Cowles, Deborah L. (1990) 'Relationship Quality in Services Selling: an Interpersonal Influence Perspective', *Journal of Marketing*, 54 (3), pp. 68-81.
- Davis, J. H., Patterson, J. D. and Grazin, I. (1996) 'The Collapse and Remergence of Networks within and between Republics of the Former Soviet Union', *International Business Review*, Vol 5, No 1, pp. 1-21.
- Elias, A.A., Cavana, Jackson, R.Y., and Jackson, L.S. (2002), 'Stakeholders analysis for R&D project management', *R&D Management*, Vol.3, no 4, pp. 301-310.
- Fitchett, J.A. (2004) 'Buyer be Wary: Marketing Stakeholder Values and the Consumer', *ICCSR Research Paper*, ICCSR Research paper series, No 19-2004.
- Ford, D., Gadde, L.-E., Håkansson, H., Snehota, I. (2006) *The Business Marketing Course: Managing in Complex Networks*, 2nd ed., John Wiley & Sons, Chichester, 2006.
- Freeman, R.E. (1984) *Strategic management: a stakeholder approach*, Massachusetts, USA, Pitman Publishing company.
- Friedman, Andrew L.; Miles, Samantha (2002). 'Developing Stakeholder Theory', *Journal of Management Studies*, Vol. 39 (1), pp. 1-21
- Gray, B.J., Greenley, G.E., Matheson, S.M. and Mathson, P.K. (1999) 'Thriving on Turbulence', *Journal of Market Focused Management*, Vol. 4, pp. 231-257.
- Gummesson, E. (1994), 'Service Management: An Evaluation and the Future', *International Journal of Service Industry Management*, Vol.5, No. 1.
- Halinen, A. and Salmi, A. (2001) 'Managing the informal side of business interaction: Personal contacts in the critical phases of business relationships', Competitive paper presented at the 17th Annual IMP Conference, *Interactions, Relationships and Networks: Strategic Dimensions*, hosted by Norwegian School of Management BI, 9th -11th September 2001, Oslo, Norway. CD-rom proceedings.

- Han, J.K., Kim, N. and Srivastava, R.K. (1998) 'Market Orientation and Organizational Performance: Is Innovation a Missing Link?' *Journal of Marketing*, Vol. 62 (October 1998), pp. 30-45.
- Hart, S.L. and Sharma, S. (2004) 'Engaging fringe stakeholders for competitive imagination', *Academy of Management Executive*, Vol. 18 (1), pp. 7-18.
- IMP Group (1982) 'An Interaction Approach', in: *International Marketing and Purchasing of Industrial Goods*, Wiley, Chichester, pp. 10-27, 1982.
- Johanson, M. (2007) 'Networks in Transition', *Proceedings of the 23th IMP Conference*, Manchester Business School, UK.
- Kock, C. and Torkkeli, M. (2008). 'Open innovation: a 'swingers' club' or 'going steady'?', *Working paper series of IE Business School*.
- Kotler, P. (1992) 'Total Marketing', *Business Week Executive Brief*, p. 2.
- Leek, S., Naudé P., Turnbull, P.W., (2003). 'Special Issue: IMP 2000 "Interactions, Relationships and Networks in a Changing World', *Industrial Marketing Management*, Vol. 32, No. 2, pp87-90.
- Leung, Th.K.P., Wong, Y.H, Chow, S.W.K. (2003). 'How Does Knowledge-Based Interaction Affect Relationship Strategy Formation? An Empirical Study of Financial Services in China', in 2003 ABAS *Proceedings*.
- Luecke, Richard; Ralph Katz (2003). *Managing Creativity and Innovation*. Boston, MA: Harvard Business School Press.
- Menon, A. and Menon, A. (1997), 'Enviropreneurial marketing strategy: the emergence of corporate environmentalism as marketing strategy', *Journal of Marketing*, Vol. 61, No.1, pp. 51-67.
- Mitchell, R.K., Agle, B.R., and Wood, D.J. (1997), 'Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts', *Academy of Management Review*, Vol. 22, No.4, pp. 853 – 886.
- Morgan R., Hunt S. (1994) 'The commitment-trust theory of relationship marketing', *Journal of Marketing*, 58 (3): pp. 20–38.
- Narver, J.C. and Slater, S.F., (1990), 'The Effect of a Market Orientation on Business Profitability', *Journal of Marketing*, October, pp. 20 – 35.
- Norman, R., Ramirez, R. (1994), *Designing Interactive Strategy: From Value Chain to Value Constellation*, John Wiley & Sons, New York, NY.
- Polonsky, M.J, Schuppisser, D.S.W. and Beldona, S. (2002) 'A Stakeholder Perspective for Analyzing Marketing Relationships', *Journal of Market-Focused Management*, 5, pp. 109-126.
- Polonsky, M.J., Suchard, H.T. and Scott, D.R. (1999) 'The Incorporation of an Interactive External Environment: A Stakeholder Approach', *Journal of Strategic Marketing*, Vol. 7, No 1, pp. 41-55.
- Reidenbach, R.E. and McClung, G.W. (1999) 'Managing Stakeholder Loyalty', *Marketing Health Services*, Vol. 19, No.1, pp. 20-29.
- Savage, G.T., Nix, T.W., Whitehead, C.J. and Blair, J.D. (1991) 'Strategies for Assessing and Managing Organizational Stakeholders', *Academy of Management Executive*, Vol. 5, No.2, pp. 61-75.

- Sheng and Rui (2006) 'The influence of stakeholders on technology innovation: a case study from China', *Proceedings of international conference Management of Innovation and Technology, 2006 IEEE*.
- Slater, S.F. (1997) 'Developing a Customer Value-Based Theory of the Firm', *Journal of the Academy of Marketing Science*, Vol. 25, No.2, pp. 162-167.
- Smirnova, M. and Kouchtch, S. (2007) 'Relationship Value Creation in Key Supplier Relationships: Empirical Evidence from Russian Markets', *Proceedings Academy of Marketing Conference, Kingston, 2007*.
- Strauss, A. and Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage.
- Tretyak, O. and Sheresheva, M. (2005) 'Russian Retail Chains vs. Foreign Retailers: Changes within the Industry and Supplier-Retailer Relationships', *20th IMP Conference proceedings, Copenhagen*.
- Turner, J. R., V. Kristoffer, et al., Eds. (2002) *The Project Manager as Change Agent*. London, McGraw-Hill Publishing Co.
- Walter, A., Ritter, T., and Gemünden, H-G. (2001) 'Value Creation in Buyer-Seller Relationships', *Industrial Marketing Management*, 30(4), pp. 365-377.
- Zhang A., Melcher, A., and Li, L. (2003) 'Mapping the relationships among product complexity, information technology, and transaction governance structure', *Journal of Academy of Business and Economics*, 2(1), pp. 162-174.