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Collaborative relationships in Finnish-Russian offshore software development – selecting the most suitable subcontractor

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1 Introduction

The global business environment around us has changed rapidly. New phenomena have appeared and new trends have arisen. The world is no longer the same as it was in the 1970's. The profound changes in information and communication technologies in the 1980s and 1990s – computers, the internet, and telecom – have been the key drivers for the two recent major trends: globalisation and transnationalism. The world has shrunk as methods for reaching the other side of the globe have become easier and easier. Networking of companies is the third major trend. Companies tend to focus their operations on those competencies that add most value and prefer to let their collaboration companies carry out functions that do not add value. Different types of companies use different cooperation modes, sometimes falling in league even with their competitors (e.g. standardisation consortia). Developing a collaboration strategy has become an important part of a company's business strategy. (Baldauf et al., 2001.) It is generally seen that this trend is the result of ever-increasing competition that forces companies to find new ways to be more productive and competitive (Pralahad & Hamel, 1990; Quinn & Hilmer, 1994). In the software industry in particular, collaboration with other companies has become an extremely important tool in simultaneously both sustaining and managing the growth of the company (Hoch et al., 2000).

Offshore software sourcing has been a growing trend in collaboration since the middle of the 1990s. The U.S. companies have pioneered this development by shifting their application development to countries such as India, China, Russia, Eastern Europe and the Philippines (Carmel & Nicholson, 2005). The initial stimulus for offshore collaboration was the tight domestic labour market in many countries along with the zero-time-to-market demand pressed by Internet economy. Later on the focus has shifted to cost effects because of the pressing economic situation. Other significant factors reported have been skills shortages, flexibility, and a bandwagon effect (Carmel & Nicholson, 2005).

In Finland situation is not very different. The growth of Finnish software industry is constricted by three main factors according to a study commissioned by the Finnish National Fund for Research and Development. Firstly, the internal market for software is small, in terms of both number of customers and aggregate size of the market, which limits the ability of software companies to develop new products jointly with local customers. Secondly, the domestic base of product development human resources is relatively small, which limits firms' ability to build internal research and development activities. Thirdly, there is relatively small amount of risk capital available for young companies as compared to larger markets. As a consequence of these factors, Finnish software companies have to decide on composition of their total resource base (internal development versus external subcontractors) early. As foreign rivals are typically larger in size, competitiveness requires that development resources are optimised in a manner that maximises flexibility and minimises production costs. The most important factor motivating subcontracting decisions is the desire to achieve resource dynamism. The second reason is lower wage rates, which has been typically attributed to be the main cause in the literature. Access to new competencies through external sources was also mentioned as a significant factor. (Kyöstilä & Cardwell, 2005.)

Characteristics of Russian software development companies include subcontracting for foreign customers, a high value-added niche and high educational levels. Offshore subcontracting has been critical to the growth of the sector. Although the importance of domestic market is slowly growing, the existing level of information technology resources in Russia continues pushing the software sector towards subcontracting. (Bardhan & Kroll, 2006.) Technology companies constitute a significant share of offshore customers (Hawk & McHenry, 2005).

Selection of a collaboration company is an unquestionably important step when forming any type of relationship. In this paper the subcontractor selection in software business is discussed based on literature and case studies. As specifically a software subcontractor selection has not attracted interest of many researchers, for the basis of our own research we have needed to draw understanding from more general sources of collaboration. Our aim is to provide preliminary insight on the selection criteria and process in international cooperation in a knowledge-intensive industry. As many software companies are small in size, informality of their decision-making on cooperation poses additional challenge for research and justifies qualitative research approach. In the empirical part of the paper, the customer side is represented by a case of 4 Finnish information and communication technology (ICT) companies. The subcontractor side is illustrated by a case study of 4 Russian companies representing Russian offshore software industry.

2 Selecting the collaborator

2.1 Determining selection criteria

The importance of selecting the right company for the intended relationship has been stressed by many researchers (e.g. Wilson, 1995; Cavusgil & Evirgen, 1997; Buono, 1997; Varis, 2004). Selection criteria are closely tied to the relationship type and the goals set for the relationship; the future collaborator should be able to fulfil the expectations. Selection criteria mentioned include e.g. *strategic fit between companies* (Lasserre, 1984; Ellram, 1990), *technical competences* the collaborator has (Lasserre, 1984; Ellram, 1990; Dacin et al., 1997; Levina & Ross, 2003), *financial capability and reliability* of the collaborator (Lasserre, 1984; Ellram, 1990; Cavusgil et al., 1995; Dacin et al., 1997; Cavusgil & Evirgen, 1997), and other collaborator related criteria such as *motivation*, *commitment*, general *reliability* etc. (Lasserre, 1984; Cavusgil et al., 1995; Cavusgil & Evirgen, 1997). Varis et al. (2004) list evaluation criteria for evaluating the fit of the parties. These include *business potential*, *customer fit*, *product and service fit*, and *marketing and sales fit*. Michell and Fitzgerald (1997) present a model for selecting and evaluating collaborators for different kinds of needs.

Das and He (2006) have made a combination of partner selection criteria that is commonly seen to be important in partner selection literature. They have divided the criteria in task-related criteria and partner-related criteria (Table 2) which is a widely used categorization in empirical research.

Table 1. Common partner selection criteria (Das and He, 2006 p. 126)

Task-related criteria	Partner-related criteria
• Complementary products or skills • Financial resources • Technology capabilities and uniqueness • Location • Marketing or distribution systems, or established customer base • Reputation and image • Managerial capabilities • Government relationship, including regulatory requirements and government sales • Help in faster entry into the target market • Industry attractiveness	• Strategic fit or interdependence, or compatible goals • Compatible or cooperative culture and ethics • Prior ties and successful prior association • Trust between top managers • Strong commitment • Similar status, including size and structure • Reciprocal relationship • Commensurate risk • Ease of communication

Some researchers have found evidence that contextual factors such as industry type or reasons for entering the relationship affect the selection criteria (Das & He, 2006). However, there are also contradictory results where purpose of the relationship, partner nationality, industry or the relative partner size do not affect the selection criteria (Glaister & Buckley, 1997).

2.2 Selection process

The process for finding the most suitable company for collaboration has been described in literature from different viewpoints. Kinnula (2006) divides collaborator selection process in three phases: screening the potential collaborators, evaluating the collaborator candidates, and negotiating the agreement with the collaborators.

Screening the potential collaborators

There are different methods for screening the potential collaborators. Domberger (1998) mentions three ways: An open tender, a selective tender, and negotiated contracts. In an *open competitive tender*, an invitation for the tender is widely advertised and the tender is open to all. The *selective tender* is conducted in two stages. First, an invitation to submit 'expressions of interest' is announced. Second, the companies that meet the qualification criteria are invited to submit their bids. (Domberger, 1998.)

In *negotiated contracts*, potential collaborators are contacted based on the selection criteria created in the earlier phase. First a request for information is conducted. Circulating a request for information gives some idea of how interested the potential collaborators are, what their capabilities are, what kind of corporate culture they have, etc. After that, requests for proposals from the suitable collaborator candidates can be solicited. A request

for proposal describes in detail the collaboration requirements and the scope and objectives for collaboration. Solicitations can be made by a detailed letter, along with a personal contact. The advantages of this method are the limited number of negotiations and greater flexibility. (Ellram & Edis, 1996; Lacity & Hirschheim, 1996; Domberger, 1998; Embleton & Wright, 1998.)

For the subcontracting company the customer screening process is just as important. For the basis of that process the subcontractor has to understand the nature of desirable customers as well as to plan carefully the core competencies it has to offer for its customers. It is necessary to analyse the potential customer company from both the strategic point of view – to find out if the potential customer fits the subcontracting company's strategy – and the functional point of view – to find out if the customer candidate is otherwise suitable for the intended relationship in terms of business benefit to be gained from the relationship, reference value of the customer for the subcontracting company, matching technology needs and offerings, trustworthiness, overall commitment, and so on. Only after considering these issues carefully should the subcontracting company start negotiations with the customer company. (Warsta et al., 2001; Storbacka et al., 1999.)

Evaluating the candidates

In this phase the goal of both parties – the customer and the subcontractor candidate – is to get to know the other party and to find out if each other's needs match. If it is found out that the other party is somehow not suitable, the process is ended in this phase and possibly started with another company. Multiple evaluations may also be going on concurrently.

The potential subcontractors and their collaboration proposals need to be evaluated by the customer company based on the business plan. The proposals from the candidates could include a written document and a lengthy presentation, including discussion. (Ellram & Edis, 1996) There are different ways to assess both the candidate and the proposal. However, the most important question for the customer company is: is the subcontractor's proposal a desirable one in terms of costs, resources, and finances? (Lacity & Hirschheim, 1996)

The focus in this activity is on the formal bargaining processes and on the behaviour of both parties during the meetings. This includes persuading, arguing and haggling over the terms of the potential relationship. (Ring & Van de Ven, 1994.) The suitability of the future relationship can be found out through discussion of the following things, for example: the expectations of both parties of the relationship, whether these expectations match, the possible investments required and the candidate's readiness to invest, the perceived uncertainties of the business deal, and whether the company cultures match. During this phase, it is also important to assess the nature of each other's role and the other's trustworthiness. (Tuten & Urban, 2001; Ring & Van de Ven, 1994; Embleton & Wright, 1998.)

For the subcontractor candidate to succeed in this evaluation process – both by getting a new customer and by ensuring that the intended relationship matches the strategy of the subcontractor – understanding the customer company's overall value creation process is extremely important, as well as recognising the competences that create a compelling value proposition. Being aware of both the current – forever changing – market situation as well as of the needs of a particular customer helps the subcontracting company in staying competitive; it is possible that the competences needed today will tomorrow no longer be seen as attractive by the customer. (Warsta et al., 2001; Levina & Ross, 2003.)

Negotiating the agreement

Zhu et al. (2001) list items to be considered when the terms of the business relationship are being agreed. They argue that it is important that the business relationship is clear to both parties before the agreement is completed. At this stage, the risks of the relationship, liabilities, potential effects on the end customers, and product ownerships should be considered.

This is the time of commitment, discussing openly the goals and objectives for the relationship, and establishing the terms of the relationship and codifying them in a formal agreement. A good agreement is often seen as the basis of a successful relationship. It helps both parties to avoid legal impediments which might affect the relationship harmfully and also helps both parties to understand the terms of the relationship clearly. The entire agreement should always be reviewed by a competent legal council prior to signing. Items to include in the agreement are e.g. the services the subcontractor is providing to the customer, monetary terms, escape clauses, how to make changes to the agreement, warranties, guarantees, possible audits, patent rights, publicity, and recovering from a disaster. (Ring & Van de Ven, 1994; Lacity & Hirschheim, 1996; Zhu et al., 2001.)

Snir and Hitt (2002) have also studied from the selection process point of view how to find the best suited supplier or subcontractor for the company's needs. They maintain that having a two-stage contract where first a

piloting phase is conducted and after that the project is either continued or cancelled based on the subcontractor performance, helps in evaluating if the subcontractor selection was successful.

Pidduck (2006) has criticized the common straightforward view to the collaborator selection. She argues that the existing models in collaborator selection are based on a rigid set of characteristics or criteria and the collaborator selection process in literature is typically seen as a very "straight-line start to finish selection process". Se has found out that at least in software industry the selection criteria may change according to e.g. how easy it is to find a suitable collaborator or how many collaborator candidates are available.

The central finding seems to be that supplier or subcontractor selection criteria need to be based on the goals and needs of the relationship. If the customer company has a clear strategy and understands its own needs, the supplier or subcontractor selection process has better chances for success.

2.3 Relationship types

As discussed earlier, relationship types differ depending on the needs of a customer company. However, to better discover how to find the best suited relationship in the situation at hand, it is useful first to understand the software subcontractor's point of view. A software subcontracting company's business strategy may be based on traditional subcontracting, where the customer company pays for each work hour. Alternatively, the customer company may pay for the completed project, independently of the work time used. Or, as in a more partnering type relationship, the payments may be tied to the possible profit of the customer company. In the worst case the subcontractor will not get any compensation, whereas in the best case, the compensation will be very rewarding. The software subcontracting company needs to choose the best suited alternatives for its own business strategy. Traditional subcontracting type relationships are usually short term and their future is not very predictable but they bring 'easy money' to the company. A closer, more partnering type relationship, on the other hand – if chosen wisely – gives stability for both the subcontracting company as well as for the customer company (Tuten & Urban, 2001).

For the customer company the relationship type is important as well. It is good to consider whether the original idea of a relationship type was a good one, and also to document the reasons behind the decisions, whatever they are. If the company wants to hold the balance of power rather than be equal with the other party, a subcontracting type relationship is more suitable. If the company needs a collaborator to help in its core activities, an attempt to develop a partnering relationship is a better idea. Another reason to consider the relationship type is that in technology-intensive industries it is extremely important that a company won't get locked into a relationship where the collaborator's technology is no longer up-to-date. In any case, what is important is that the company makes decisions based on what is best for itself – how it can get the maximum competitive advantage in the situation in hand. It is also good to remember that the possibility also exists that the collaborator may acquire skills and know-how, and in the future become a competitor to the customer company. (McIvor, 2000.)

3. Offshore software development cooperation between Finnish and Russian firms

Despite the incentives for using international sourcing mentioned in the introduction, fairly few Finnish firms actually employ foreign subcontractors. In a software product industry survey conducted in 2005, only 7 % of respondents reported subcontracting significant amount of R&D from abroad (Kuitunen et al., 2005). Nevertheless, according to a survey made for Ministry of trade and industry of Finland (Market-Visio, 2002), over 60 % of interviewed Finnish software companies considered subcontracting a possible option in the future. Nearly half of them had also experienced difficulties in finding domestic work force. Russia was indicated to be the most interesting offshore location, but only 10 participants out of 96 had any experience of subcontracting to Russia. Also in a more recently study, Russia's attractiveness as offshore location exceeded that of India and was second only to Estonia (Kyöstilä & Cardwell, 2005). Both Finnish and Russian sides think the lack of trust toward Russian companies to be the single most important factor preventing broader cooperation. However, it is given far less importance by the companies having experience of cooperation. (Market-Visio, 2002.)

3.1 Offshore development in Finnish case companies

In the first phase of empirical investigation, a case study of four Finnish software companies that have supplemented their internal product development by subcontracting to Russia was conducted. Selection of the companies for the case study was based on purposeful sampling (Patton, 1990). The criteria were having software product development activities and experience of cooperation with Russian companies. The case

companies represent different branches of ICT industry. They include a communications operator, a developer of mobile software, a software project organisation and a developer of mobile games (Table 2). Three of the case companies can be described as small companies as they have less than 50 employees which is the criterion used by EU for categorising small-sized firms. The experience in subcontracting varies in length between twenty years and a couple of years. All four companies are familiar with subcontracting to several countries. The material was gathered through semi structured interviews. All interviews were recorded and transcribed.

Table 2. Finnish case companies

	Company Alpha	**Company Beta**	**Company Gamma**	**Company Delta**
Business offering	Communication	Mobile software	Software projects	Mobile games
Subcontracting since	1980s	1994 (domestic) 1997 (offshore)	1995	2002
Domestic subcontracting	Yes	Yes	Yes	Yes
Offshore subcontracting	Several countries including Russia	Poland, Serbia, Romania, Russia, USA, Western Europe	Germany, Norway, Russia	Iran, Russia
Reasons for offshore subcontracting	Neither reasonable nor cost-effective to do everything internally. Need for specialised know-how of good quality. Concentrating on core functions.	Need for capabilities unavailable internally. Flexibility. Proficiency in programming. Regulation of fixed costs. Dealing with demand peaks.	Need for specific knowledge and skills unavailable internally. Keeping organisation lean.	Limited internal resources. Shortening development time. Cost efficiency.

Case companies' reasons for cooperation with Russian firms included access to high level mathematical and scientific resources, high level of professionalism due to the level of science and education, better availability of talented resources, quality of work, and lower level of costs. Engaging external resources, instead of hiring own staff, enabled temporary increase in the work force, but was also a way of minimising risks related to changing economic trends and turbulence of the industry. The quality of the outcome was of high importance and it was considered more decisive criterion than price. As compared to other potential offshore collaboration destinations, it was stated that Russia may not be the cheapest, but it has an extensive pool of human resources with technical inclination. The level of mathematical modelling is also high. Hence, there are good preconditions for cooperation in the development of high-end, complex software. The price-quality ratio of Russian development has proven to be rather good.

Table 3. Success and failure factors of subcontracting in product development

Success	**Failure**
• Complementary skills • Knowledge of business processes • Understanding development process as a whole • Initiative partner • Mutual values • Good communication and problem solving capabilities • Trust	• Rigid operational models • Ambiguity in goals • Lack of commitment • Differences in organisational culture • Poor language skills • Negative attitude of company's customers

Based on the interviews, the level of necessary compatibility of the parties depends on whether subcontracting is practised on a long-term or a short-term basis. In the short run, cost efficiency is essential and the complementarity of resources and capabilities is of less importance. However, if subcontracting is planned to last for a longer period, other reasons such as know-how and capabilities of the subcontractor become decisive. Among factors speaking in favour of long-term collaboration were trust formation and getting accustomed to each other's ways of working. The factors mostly affecting ease of cooperation with a foreign collaborator were maturity of the subcontractor and similarity in organisational values; whereas advantages of domestic subcontractors were seen in having a common language and short physical distance. Factors generally

contributing to success or failure of organising product development through international subcontracting are highlighted in table 3. Communication and coordination of offshore subcontracting are supposed to pose difficulties to small firms (Carmel and Nicholson, 2005). However, in the case, it was noticed that such difficulties diminished with growth of trust and familiarity between parties.

3.2 Offshore development services in Russian case companies

In the second stage, a case study of four Russian software firms was carried out (table 4). Although general evaluations of the Russian offshore software industry exist (American Chamber of Commerce in Russia, 2001; Hawk & McHenry, 2005; Russoft & Outsourcing-Russia, 2006), the variation between the firms is great. Many firms appear to lack specialisation and only closer discussions with company representatives reveal that each company has a very specific knowledge area, where it wants to operate (Väätänen et al., 2005). The descriptions of relationships between customers and subcontractors are typically limited to references on web sites. These factors motivated the choice of qualitative research approach and conduction of a multiple case study (Yin, 1994). Selection of the case companies was based on purposeful sampling (Patton, 1990). Each case company has offshore software development activities and experience of cooperation with Finnish companies. Respectively, in interviews, an emphasis was made on cooperation with Finnish companies. The material gathered in the Russian companies was supplemented by discussion with a representative of Scandinavian Group, a virtual community created to promote member companies on Scandinavian, at the moment particularly Finnish, market.

Table 4. Overview of Russian case companies

	Arcadia	**AvantLab**	**Digital Design**	**Lanit-Tercom**
Year founded	1993	2003	1992	1991 (originally state enterprise Tercom)
Number of employees	around 100	8 programmers and 3 managers	210	over 700 in offshore development
Office locations	Saint-Petersburg Subsidiaries: USA and Finland	Saint-Petersburg	Saint-Petersburg (3), Moscow	Saint-Petersburg, Moscow, Novosibirsk, Minsk
Foreign clients	Finland, Norway, Sweden, UK, USA	Netherlands, Finland, Germany, Switzerland, USA	e.g. Sweden, Finland, Germany, UK, USA	e.g. Germany, Denmark, Finland, Sweden, Switzerland, Japan, USA
Quality assessment	ISO 9001:2000	-	ISO 9001, CMMI level 3, National Quality Award	ISO 9000

A significant share (30-100 %) of case companies' turnover comes from foreign clients. Companies have been very active in seeking publicity and promoting themselves on the target markets. In several cases, the general manager or the head of the company contributes significantly to public relations and marketing of the company. Arcadia has two local subsidiaries (one in USA and one in Finland). Furthermore, Scandinavian Group was formed on the initiative by Arcadia. Digital Design redefined its strategy in 2005, deciding to allocate more efforts to foreign marketing and aiming for increase in turnover from foreign clients. Nowadays, the company has a distributor/partner network covering 19 countries. Digital Design facilitates sales by providing promotional material and informational assistance to the distributors. Lanit-Tercom seeks its clients through network of partners in several countries, but dealing through middleman is considered a complicated task. Some contracts are also concluded due to contacts at industry events and through company's Web site. The brand Lanit-Tercom is better recognised in Russia than abroad and there are plans to improve the PR policy to achieve better company recognition. AvantLab is considerably smaller than the other case companies, therefore its marketing efforts mostly consist of general director's participation in industry events and directly contacting firms.

The case companies are located in Saint-Petersburg, where software industry is strongly oriented towards export market, whereas Moscow companies tend to serve needs of local customers (Selioukova, 2005). Establishing permanent representation in foreign countries is an expensive arrangement and few firms have resorted to it. More typical is to have a collaboration agreement with an agent or distributor as it is difficult and laborious to establish contacts on one's own. Efforts on attracting clients in a particular country are also channelled through participation in exhibitions, trade shows and other industry related events. Characteristically, these appearances are aimed not only on creating awareness of a particular firm, but also improving image of the

whole Russian offshore software development industry. It was stated that Russian software firms traditionally pay less attention to advertising themselves because of the dominant orientation on technical skills. However, being a Russian company requires certain investments in marketing and PR in order to overcome the negative effect of the country on company image. Deficiency in company's PR further affects agents' ability to sell the company's services. Russia is perceived an unstable country and this affects also the credibility of the offshore software industry. This is in line with the proposition made by Zaheer and Zaheer (2006) that nationality of different collaborators and perception of the legitimacy of their institutional context can lead to asymmetry in trust levels.

From the investment point of view, lower travelling expenses direct preferences to closely located countries as opposed to promoting the firm in United States. As a consequence, it is not surprising that many firms state Scandinavia (in this context typically including Finland) or Western Europe to be the main markets of their interest, especially taken into account that the competition there is less fierce than in the USA. Working with clients from different countries has its own challenges and there are differences even between European countries, for example in preferred communication practices. It was brought forward that it is easy to work with Finns and they look kindly on cooperation with Russian offshore firms. Interviewees mentioned cultural similarities and neighbouring relations, which facilitate fluent communication and mutual understanding. However, decision-making on starting cooperation, following the initial inquiry, seems to take a lot of time.

Based on the case companies' experience, there are several reasons for engaging their services and they vary depending on the profile of the client. For example, software development companies tend to be specialised and in need of complementary skills. Often, the stimulus is difficulty in finding qualified work force. On the other hand, offshore development provides added flexibility if demand is fluctuating and the alternative to temporarily reducing cooperation would be cutting down fixed costs by downsizing own personnel. Employment legislation of many Western countries is quite rigid and there is pressure on behalf of trade unions. The costs of development in Russia are 2-3 times lower as compared to Western countries, but this is not the main decisive factor. The customers are also seeking better quality. The advantage of Russian developers is their ability to jointly work on specification with the customer even if the problem is poorly structured. This criterion is becoming increasingly important along with quality aspects. For example, in Digital Design, the level of quality management has been a highly positive argument during negotiations with potential clients.

The companies employ two main models of offshore development: ODCs (Offshore Development Centre) and projects. The ODC model stands for establishing a dedicated unit within an offshore company, creating a virtual extension of the client's team. This unit is working solely for a particular customer. ODCs enable clients to scale up their team according to the needs. The project model typically has a fixed price and duration. The length of a project may vary from several weeks to years. The initial evaluation of a project by a subcontractor is based on its technology domain, customer's attraction and technological competence of the subcontractor. The profit margin of projects is smaller as compared to ODCs and in case of short projects, profitability can be insignificant. Longer duration of projects is preferred because of the costs related to communication, project evaluation, administrative issues, and staffing. Finding new projects requires investments in PR and marketing. Projects are typically used in the first stage of cooperation, when a customer wants to conduct a pilot project. This is an opportunity for both, client and subcontractor, to evaluate each other and the fluency of cooperation.

4. Discussion

Selection of a collaborator in the Finnish case companies was based on a combination of both task-related and partner-related criteria (Table 5). The most important task-related criteria were *skills* and *technological capabilities*. The aspects related to markets were not considered important as the case companies were not aiming for the Russian market. Typically, companies had different collaborators for development and sales tasks. The *origin* or *location* of development collaborators was considered to have lower significance as compared to technical and organisational characteristics of an individual collaborator. Q*uality of the work* was rated high as a decisive factor. Even though *cost of the work* was not considered to be the main decisive factor when choosing the collaborator, it was also mentioned as affecting to the decision. The most frequently mentioned partner-related criteria were ones related to the ease of collaboration, such as *compatibility of organizational culture*, *trust*, *commitment*, *ease of communication*, and *prior ties* of the company.

The subcontractor selection process in case companies seems to follow the processes presented in earlier research. Based on observations from both Finnish and Russian sides, screening potential subcontractors for offshore software development collaboration is mostly conducted through either negotiated contracts or a selective tender. The level of formality of screening is higher in bigger companies. Small companies are not

particularly efficient in screening potential candidates. Instead, they utilise other contacts (e.g. professional networks of the entrepreneur) and their decision-making on starting collaboration is more often based on informal criteria. Several of the Russian companies regretted scarcity of open tenders in Finnish companies and public sector.

Table 5. Russian software subcontractor selection criteria in Finnish software development companies

Task-related criteria	**Partner-related criteria**
• Complementary skills • Technology capabilities • Location of the company • Quality of the work • Cost of the work	• Compatible organization culture • Trust • Strong commitment • Ease of communication • Prior ties and successful prior association

For Russian companies, finding the first foreign customer is difficult and the outcome of search is determined not only by competencies of the firm but also luck and open-mindedness of a customer. Russian software firms need to convince their potential clients that there is no additional risk because of the country of origin. As response, nondisclosure agreements are widely used in the industry and all intellectual property rights are transferred to the client. However, because of non-disclosure agreements, subcontractors may not be able to refer to accomplished work and use it as a selling argument. As compared to other potential offshore development destinations, Russia may not be the cheapest, but it has an extensive pool of qualified human resources with technical inclination. This is an asset strongly emphasised by the representatives of the industry and companies themselves.

Evaluation of collaborator candidates was based on selection criteria discussed above. For Finnish companies the evaluation was clearly based on the strategy of the company and the current needs. Previous experience and portfolio of references of the candidate were considered very important criteria. Word of mouth is a significant marketing channel. Inquiries that come from a potential client on recommendation from a peer typically lead to contract. Likewise, it was considered very important among the Russian case companies to establish a personal contact with potential client. Specialisation is necessary for improving positioning of a firm and increasing the attractiveness of its offer, but majority of Russian software development companies has until recently been unable to define their specialisation. Consequently, their choice of customers has not been based on the strategic fit, but mainly functional considerations. In terms of labour costs, Russian offshore software firms are loosing their advantage due to rising salary level. The likely tendency is for cost-based sourcing to continue shifting from maturing offshore countries to the emerging ones. Because of eroding price advantage, average firms have to reconsider their positioning and offering. Companies' aim is to define their niches both in terms of technologies and customers, and position themselves as specialised providers. So far, only a small number of the most mature companies have been able to do this.

The practice of utilising pilot projects was rather typical when starting offshore cooperation with a new subcontractor. It was considered a good opportunity to learn to know each other in both technical and organisational sense. Similar notice was made in one of the companies on the subcontractor side.

Relationships between Finnish and Russian software development companies are mainly of basic subcontracting type. Those customer relationships of Russian case companies that were considered by them as partnering were typically managed through ODCs. Consequently, their payments were not tied to the possible profit of the customer company. On the other hand, we did not have the data from the corresponding customer to assess whether it perceived the role of that particular relationship as partnering. It would be interesting to evaluate both subcontractor and customer side's opinion on strategic importance of a relationship.

Our empirical observations support Pidduck's (2006) critique on straightforwardness of existing models of collaborator selection. The straight-forward view on selection process presumes clear definition of tasks and goals on the customer side. Similarly in discussion on offshore software development, it is generally thought that specification of requirements is responsibility of the clients and offshore collaborator is only responsible for programming according to specifications. However, in software development assignments are not necessarily clearly defined, but specification is refined as a collaborative effort between a customer and a collaborator. For example, all Russian case companies have experience of participation in the specification process. In Lanit-Tercom, it was actually stated that they always contribute to specification and some clients even employ agile development models. Customer does not necessarily have complete understanding of the project and offshore company's expertise can be used to optimise the solution to the customer's problem. Nevertheless, sufficient, but

not necessarily extensive, specifications are needed for composing appropriate tender to an inquiry. On the client side, decisions are not necessarily made by technical specialists, so they are not able to provide all necessary technical information during negotiations. This can lead to underestimation of time and resources necessary to complete project according to schedule.

5. Conclusion

Based on our preliminary study and its findings, the subcontractor selection criteria in Finnish-Russian offshore software development collaboration resemble those presented in the previous literature. However, our observations suggest that the critique presented by Pidduck (2006) is justified. This can be due to small body of research on both collaborator selection in software development subcontracting, and Finnish-Russian offshore collaboration. Both nationality and institutional context of potential collaborator can affect decision-making in the customer company. However, it is difficult to evaluate their importance if the company does not use formal criteria for selection, as is often the case with small companies. Either way, it is clear that collaborator selection in software development subcontracting is not as straightforward activity as could be assumed based on previous research. Therefore, it is necessary to further study collaboration in this particular context.

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