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EMERGENCE OF VIRTUAL TOURISM BUSINESS SYSTEM: EMPIRICAL FINDINGS

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Abstract

Tourism as complex system, which consists of a large range of activities and relationships, has to be managed simultaneously for regional or national tourism business system to be successful and sustainable in the long-term. The *scientific problem* is to ascertain what structure and quality of relationships among tourism distributors guarantee their successful integration to virtual tourism business system. *The aim of paper*: to identify the appearance opportunities of virtual tourism business system. *Methods of the research*: reviewing, evaluation and systematic analysis of scientific literature; in depth interviews; synthesis of findings. Various aspects of business system and explanation of virtual organizing features of business system are discussed. According to the empirical research, the virtual organizing of tourism business system members appears, but is not sufficient for distinguishing the features of virtual business system. Closer collaboration and the utilisation of ICTs would enable tourism business system members to expand their supply and to enhance their competitiveness.

Keywords: business system, tourism business system, virtual organization, cooperation, situational partnership, tour operators and travel agencies partnership.

Introduction

Contemporary business environment determines radical changes of companies' activity organisation, structure and management: hierarchical structures are changed into flexible ones; and this makes preconditions for companies to combine competencies and resources, to exchange knowledge and information. A central feature of these challenges is the recognition by most scholars and business executives that building relationships with other companies is essential to compete effectively in the turbulent and rapidly changing competitive era confronting developed world economies (Cravens & Piercy, 1994).

A great number of competitors, particularly in tourism sector, obligate tour operators and travel agencies to create new and to improve offered services, to maximally adjust them to individual consumer needs and specific interests. Buhalis (2000) argued that tourism enterprises formed networks to become more competitive *vis-à-vis* other networks of enterprises. It could be emphasized, that the creation and delivery of tourism products is based on partnerships between a range of organizations, including: transportation, accommodation, catering, entertainment and cultural heritage. Thus companies strengthen their partnership in order to maintain the market. The growing influence of information and communication technologies (ICTs) and global competition require understanding the complexities of interactions with multiple stakeholders along global tourism supply and distribution chain (Walker *et al.,* 1999). Business system actors can either integrate their resources with others, form networks to exploit market opportunities, or link their organizational systems in partnerships with other local and international tourism companies. ICTs empower networking throughout the industry and also improve the interactivity between tourism production and distribution partners, supporting a closer cooperation towards the provision of wide ranging products (Buhalis & O'Connor, 2005). Taking advantage of the characteristics of virtual reality, organizations will be forced to adapt their product constantly to satisfy tourism demand; use information extensively; develop partnerships; and outsource a significant amount of functions in order to achieve economies of scope (Buhalis & O'Connor, 2005). Camarinha-Matos & Afsarmanesh (2002), Braun (2005) state that the dominating form of business system becomes the virtual organization in the twenty-first century.

It is important to highlight that a *virtual organization* is the partnership network, which is the background of today's dynamic environment. Small and medium enterprises (SMEs) in particular are increasingly forced to adopt new organizational forms in order to stay competitive in the local and global markets. The virtualization of the value chain through increasingly intensive, extensive and flexible interorganizational cooperation is seen as being central to their strategic response (Goldman *et al.*, 1995; Sieber & Franke, 1998; Suter, 1999). Moreover, the transition from industrial to knowledge based competition is increasingly shaping the way in which companies act (Suter, 1999). Thus the scientific *problem of this paper* is to ascertain what structure and quality of relationships among tourism distributors

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guarantee their successful integration to virtual tourism business system. *The aim of paper*: to identify the appearance opportunities of virtual tourism business system. *Methods of the research* are as follows: reviewing, evaluation and systematic analysis of scientific literature; research employing in depth interviews with tourism industry experts; synthesis of findings from theoretical literature and empirical research. On the theoretical level this paper starts with a review and analysis of scientific literature on various aspects of business system and explanation of virtual organization as one of the business system's organizational forms. The survey of experts helps to identify the existing organizational form of the tourism business system in Lithuania.

The peculiarities of a virtual tourism business system

Against dynamic environment, small and medium tourism enterprises are increasingly forced to adopt new organizational forms in order to stay competitive (Suter, 1999). The emergence of virtual business systems through increasingly intensive, extensive and flexible interorganizational cooperation is seen as the strategic response being central for small and medium tourism enterprises (Goldman *et al.*, 1995; Sieber, 1998, Suter, 1999).

Collaboration among autonomous and geographically disperse enterprises is a process that is clearly facilitated by the advances in computer networks and related technologies. A growing number of collaboration networks, including the virtual factory as agile manufacturing system (Jain *et al.*, 2001), virtual company (Goldman *et al.*, 1995), imaginary organization (Gummesson, 1999), entrepreneurial networks (Buhalis & Molinaroli, 2003), as well as other organizational forms, are emerging. All new organizational forms of business systems are possible because information and communication technologies have the capacity to modify the traditional time-space interaction.

The concept of the virtual organization as the business system's organizational form is still relatively new organizational and management paradigms. The virtual organization has been variously defined as "a temporary network or coalition of independent companies" (Black & Edwards, 2006; Dimitrakos *et al.*, 2004), "an opportunistic alliance of core competencies" (Goldman *et al.*, 1995), "an alliance of separate firms" (Shekhar, 2006) and so on. The concept of a virtual organization is explained from network structure position. According to Goldman *et al.* (1995), a virtual organization tends to be non-hierarchical and decentralised.

A set of common characterizing elements can be found in various definitions. Katzy (1998) argued that virtual organizations are frequently restructured, sustained to capture the value of a market opportunity and dissolved again to give way for the creation of a next virtual operation from the network of independent partners. The main reason for integration to a virtual organization is the core competencies, which are the most tangible, value-added activities that distinguish one company from its competitors and provide access to a variety of markets and opportunities. Jägers et al. (1998) noted that participants of a virtual organization are geographically dispersed and dependent on electronic communication (and ICTs infrastructure) for the coordination of their activities. It creates a unit where organization boundaries are blurred. The virtual organizational structure is enabled by an information infrastructure made up of continually improving information and communication technology. Many different information technologies can be integrated to form an information infrastructure that can support the management of virtual organizations (Sieber, 1998). Different authors and researchers have identified and described various characteristics of virtual organization on the ground of two views: (1) institutional view (network of legally independent units, geographical dispersion, flat hierarchies, blurred boundaries/boundary crossing, less formal relations, shared risks, resources, knowledge, information technology, based on trust) and (2) functional view (learning and adaptive orientation, value-adding business processes, common business purpose, virtualness as a strategic characteristic of organization, flexibility and temporality, changing partnering, participant equality).

The institutional view represents the features of organizations that differentiate virtual organizations from other organizational forms: temporary network of independent companies linked by information technologies to share skills, costs and market success (Jägers *et al.*, 1998; Keinänen & Oinas-Kukkonen, 2001). The network has no or a very flat temporary hierarchy focusing on functionality along the value chain. Co-operation is based on trust and on the aim that each company contributes only what it regards as its core competencies (Sieber, 1998; Keinänen & Oinas-Kukkonen, 2001; Bagdonienė, & Hopenienė, 2006). The functional view of virtual organization is based on two fundamental assertions that virtualness is a strategic characteristic and can be achieved by making incremental improvements to the existing business logic; using information technology enables effective virtual organizing (Keinänen & Oinas-Kukkonen, 2001).

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Saabeel *et al.* (2002), Dimitrakos *et al.* (2004) stress that the parties forming a virtual organization are typically a part of a larger enterprise network of which a selection of partners is made. This phenomenon is known as "network activation" in virtual organization modelling theory (see Saabeel *et al.*, 2002). The entities in the universe of such networks share some broad characteristics, e.g. belonging to the same economy or market sector, and their participation in the network indicates disposition to work together taking the advantages from the future market opportunities. According to Camarinha-Matos & Afsarmanesh (2002), formation of a dynamic virtual business system requires an appropriate "breeding" or "nesting" environment (e.g., regional tourism industry cluster) in order to guarantee basic requirements such as: (1) trust building, (2) common infrastructure and agreed upon business practice, (3) a sense of community and some sense of stability. Virtual business system's members can provide services and thus participate as a single entity in the creation of recursive structures with multiple layers of "virtual" value-added service providers. Membership and structure of virtual business systems may evolve over time to accommodate changes in requirements or to adapt to new opportunities in the business environment (Dimitrakos *et al.*, 2004). Members of virtual business system collaborate towards a common objective, share competencies, ICTs infrastructure and capabilities of different independent partners. It could be stated that all members of virtual business system have their own (partly overlapping, partly conflicting) interests. If their own objectives no longer align with the goal of the system, they can resolve to go out of this network. A specific kind of a dynamic virtual business system is the capability to unite when the business opportunity is emerging. A virtual business system may be embedded in a larger network of corporations, from which certain members are recruited to deliver the required performances.

Virtual tourism business system could be defined as a dynamic collaborative network of tourism stakeholders (private and public organizations) able to combine own capabilities and resources that could be proposed as integrated value-added services to satisfy consumer needs in tourism destination. At the regional or national level the tourism business system is the nexus between the state tourism organizations, the regional tourism organizations, and the local council and tourism operators. Members of a virtual tourism business system are able to rapidly form functionally and technologically diversified but interdependent tourism organizations and adapt to changing conditions provide good intuitive approaches to face the challenges of turbulent markets. The formation of any collaborative coalition depends on its members sharing some common (or compatible) goals, possessing some level of mutual trust, having established common (interoperable) IT infrastructures, and having agreed on some common (business) practices and values. According to Afsarmanesh & Camarinha-Matos (2005), achieving of these conditions is a pre-requisite for agility and integratability in a virtual business system as collaborative network. A collaboration of tourism business system's member provides access to innovation, new markets and technologies, and connects different competencies into a consistent product.

Research methodology

Tourism distributors play the most important role in a tourism business system. They combine the supply of primary services companies belonging to this system and present customers the collection (combination) of tourism services as total tourism experience. In order to accomplish this, tourism distributors contract and keep different (collaborative and competitive) relationships not only among themselves, but also with other members of tourism business system.

This research focuses on the evaluation of relationship among the tour operators and travel agencies as collaborators and competitors to identify a tourism business system organization form. In order to research emergence of virtual tourism business system qualitative – *expert* – survey was chosen as it allows the benefits of deeper understanding and better rapport with an interviewee (both benefits of unstructured interview). For the research the experts were chosen according to three criteria: 1) the experience in the area of outgoing tourism – professionals having not less than 10 years of the experience of the work in the area of outgoing tourism were chosen to participate in the survey; 2) competence of expert that is witnessed by hierarchical position in an organisation; according to this requirement, the top-level managers were chosen; 3) self-evaluation of an expert. Having been explained the aim of the research, potential experts themselves evaluated their possibilities to provide the research with valuable information.

Respondent selection is one of the key criteria determining validity of the research. The research object is Lithuanian tour operators and travel agencies as travel distribution sector in tourism industry. Most of the company owners surveyed where from Kaunas and Vilnius. Necessary information about potential

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experts was collected by means of telephone survey. 39 respondents corresponded given criteria and 20 of them refused to participate in the research by motivating in lack of time as well as confidentiality of any information about cooperation of tour operators and travel agencies. Congruity index s_j for congruence of different opinions of group experts is calculated according to Bešeliov & Gurvič (1980). Evaluation scale of investigative attribute *k* is not less than 3. The nearer the index to 1, the more experts' opinion coincides ($0 \leq s_j \leq 1$). Evaluation scale of investigative attributes was measured on 45 items as the criteria of the virtual business systems quadrants and counted average of experts' opinions. The survey of experts helps to identify the peculiarities of collaborative relationships of Lithuanian tour operators and travel agencies with local and international partners and to use adapted Klüber's (1998) "wheel of virtual organizing" model to identify the virtualness of travel distribution sector as one of the major part of tourism business system.

According to Klüber (1998), this criteria specific model is used to describe the current situation that the organization is in. It should also represent possible development paths along the dimensions, which could be used to identify new objectives, strategies, and actions. If these already exist, then identifying any deviation from the profile can help to prioritize the necessary actions to reduce this. Furthermore, the model should provide some foundation for an analysis of the consistency of the current situation – or the future status – and to help better understand interdependencies between the different dimensions. The basic structure of analysis consists of four areas, which are organized as quadrants of a circle. The analysis can be conducted as a consistency check of the status quo and a desirable future state as well as a comparison between both (Klüber, 1998). The basic structure of analysis consists of four areas, which are organized as quadrants of a circle: Quadrant 1 –*human resources and information & communication technologies (HR & ICTs) potentials*; Quadrant 2 – *focus on strategy*; Quadrant 3 – *intensity of co-operation*; Quadrant 4 – *form of co-ordination* (see Figure 1). The quadrants' criteria and their evaluation demonstrate the existing status quo of tourism business system members. Relative meaning of quadrant's vectors is obtained by calculating media of experts' opinions, and the final result of the vector measurement is obtained by using the programme *SPSS*. The final results of the vectors are pointed on *Exploitation of HR & ICTs Potentials, Cooperation & Virtual organization (VO) potential, Co-operation Intensity, Non-hierarchical Co-ordination* axes respectively. The analysis of the status quo is complete when the current position in the wheel is determined. To aid the visualization of the results the area from the centre to the positions of the vectors is filled with grey. Depending on the (weighted) average of the positions of the vectors, the position of the black first level vector is determined and the four points of the black vectors are connected and filled with transparent grey. A possible further step could be an analysis of any planned future development plans, inconsistencies and major deviations. This could lead to the identification and implementation of new action paths.

Research results and discussion

Following the brief overview of respondent' demographical data, all of the respondents were working in tourism sector at least 10 years. Some have been working all over 15 years. An average among respondents is 12 years. It is safe to say that all the respondents have tremendous industry understanding and practical experience. 9 out of 19 respondents are representing tour operators (Group A) and 10 – travel agencies (Group B).

The basic structure of analysis consists of four areas which are organized as quadrants of a circle. Referring to the methodology of the Klüber's model of a virtual organization, average values of experts' opinions revealing common meaning of the criteria within each quadrant were measured (see Figure 1). Common average value of the axes of the ***first quadrant Human resources and information and communication technologies potentials*** is 4.12 out of 5 possible points. The experts agree that, in order to integrate into a virtual business system, unique and exclusive competencies as well as resources, which would grant a competitive advantage for its members, have to be at disposal (s_j=0.52). It is necessary to point out that human resources as well as information and communication technologies are one of the main media in participating within a virtual business system because the functioning of the system is impossible without these factors. As the experts state, information provision is an essential condition to provide a qualitative service, and provision with ICTs – to keep relationships with foreign and Lithuanian partners. The experts of both groups assume that in this respect Lithuanian tour operators keep pace with colleagues of Western countries (s_j=0.43). Every day tour operators of Lithuania together with travel agencies exchange renewed information about flights, vacant places at hotels, trip routes, etc. Thus the organisations creating a tourism

product have all necessary information about services offered by their partners, changes of services, special offers, etc. The experts assume that the Internet access to their data also shows the trust of foreign partners. Consequently cooperation in collecting, processing and using information in order to take decisions is an important factor in retaining competitive advantage in the tourism market.

All experts state that the relationships of most Lithuanian tour operators and travel agencies are steady (s_j=0.44) and their cooperation is based on mutual interest and trust (s_j=0.51). According to the opinion of the respondents-experts, the enterprises providing services of travel organization distinguish in high level of trust in partners (average value 4.43 point) and in themselves (average value 4.4 points), as they have acquired necessary information and use common communication technologies (average value 4.28 points). The lack of core competencies decreases the potential of human resources (average value 3.3 point); that conditions the lack of motivation for cooperation (Figure 1).

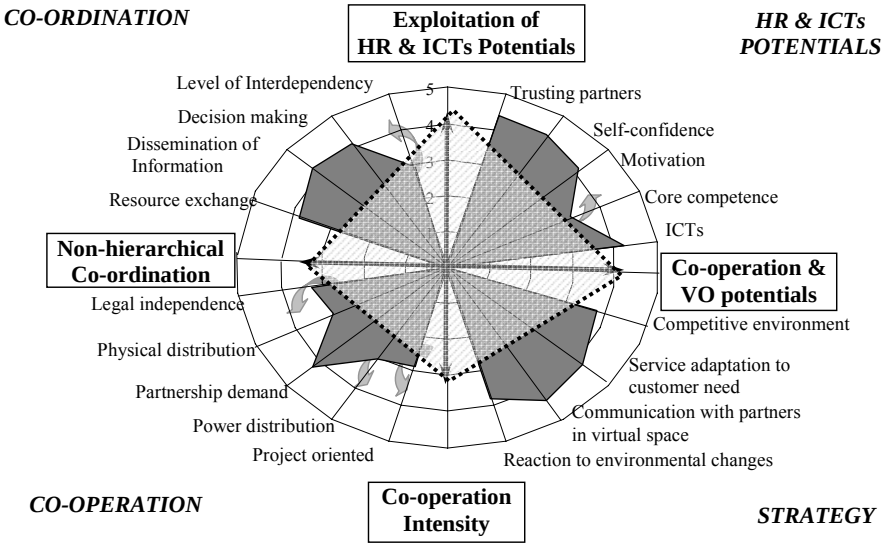

Figure 1. The assessment of the basic features of virtual business system organizations

The second quadrant of the criteria of a virtual business system – ***Co-operation & VO Potential*** – discloses the strategical position in respect of cooperation with partners and the ability to work virtually by employing core competencies of partners within virtual teams. The evaluation of the criteria of this quadrant reveals whether the direction of the activity of the participants belonging to a tourism business system correspond the principles of a virtual business system activity. The common average value of quadrant's criteria defining *the strategy of the activity* of business system participants and *the potential of a virtual organization* makes 4.11 points (Figure 1). In the model this evaluation is high enough in comparison to other components of the model; it shows that it is possible to draw a premise that the strategy of business system participants' activity is oriented to the strategy of a virtual organisation, and the participants have the potential to make a cluster of a virtual business system. According to the experts, tour operators and travel agencies have the features disclosing that they can integrate into a virtual business system: the experience in cooperating with partners within virtual environment (s_j=0.46), service adaptation to customers needs (s_j=0.40). The experts indicate that tour operators are interested in cooperating and keeping long-term relationships (s_j=0.45). The importance of cooperation increases when competition intensifies. Referring to the experts' opinion, competition in the area of outgoing tourism is the strongest in Lithuania (s_j=0.67), competitors constantly develop, and thus companies are in constant competitive tension. Meanwhile the experts have a notion that long-term cooperation relations impart reliability and stability. The participants of a tourism business system, who were assessed, have possibilities to develop this potential and to acquire the feature characteristic for a virtual business system. It should be noted that the participants of a tourism business system not enough cooperate in the implementation of innovations, not enough seek to satisfy individual needs of customers and not enough assess possibilities given by the market as well as competitive environment. Thus the participants of a tourism business system should change their viewpoint to maintenance of cooperation relations.

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The third quadrant of the criteria of a virtual business system – ***intensity of co-operation*** – shows the ability of the participants of a tourism business system, who were assessed, to cooperate into new organizational structures. Thus common average value of all criteria of the third quadrant is 3.28 points. This discloses rather low *need* of the surveyed enterprises-participants of a tourism business system *to cooperate and form new organizational structures.*

The group of the criteria of the cooperation structure quadrant also presents the results that are rather far from the features of a virtual business system. This determines that the participants of a tourism business system give the priority to long-term cooperation but not to the implementation of short-term projects. The experts point out that, in order to guarantee stability and the warranty that the quality of services will not change and it will be high when rendering services for customers, constant cooperation with partners as well as consolidation of the relations is necessary. One of the most important features enabling to treat the participants of a tourism business system as members of a virtual business system is participation in short-term projects and wide geographical distribution; the surveyed enterprises evaluated this low enough – slightly higher than 3 points. When evaluating power distribution among the participants of a tourism business system, it is possible to state that the amount of power in relationships is rarely symmetrical, meaning that each member has the same power. The experts' opinions coincided in that in Lithuania the power in the cooperation of tour operators and travel agencies depended more on the reputation of a partner (s_j=0.44). The experts did not come to one opinion whether the influence and power of foreign partners determined what decisions were taken for common activity (s_j=0.26). During the interview, the experts mentioned that partners not always informed about their intentions clearly and openly; they could be indifferent to the needs of other partners; in order to defend their interests they threaten by breaking a contract and the like. This witnesses that disbalance of influence and power is inevitable in cooperating. The experts pointed out, however, that no Lithuanian tour operator had yet broken their activity due to unsuccessful cooperation with foreign partners. It is possible to draw a conclusion that possibilities of the participants of a tourism business system to integrate and form a virtual tourism business system are rather limited.

The evaluation results of the criteria of the ***fourth quadrant*** of a virtual business system – ***form of co-ordination*** – show the ability of the surveyed participants of a tourism business system and their partners to inter-coordinate the actions that are necessary for attainment of the aims of the common activity. And this discloses one of more important features of a virtual business system. The common average value of all axes in the fourth quadrant is 3.83 points. This shows that slightly higher than moderate *non-hierarchical co-ordination* prevails among the participants of a tourism business system and their partners. Dissemination of timely information as well as common decision-making at the surveyed enterprises increases the mean of coordination; but distribution of resources as well as inter-dependence decreases it. The possibility to obtain missing resources is frequently indicated as one of the most important reasons of cooperation. This means that partners share own resources. According to the opinion of the experts, Lithuanian tour operators while cooperating first of all obtain financial (Grade 1), technical (Grade 2) and human (Grade 3) resources, and provide mostly technical (Grade 1), then human (Grade 2) and financial (Grade 3) resources. Exchange of information and material resources is equivalent (in cases of receiving and providing resources the experts indicate Grade 4 and 5 correspondingly).

According to the experts, the participants of a tourism business system and their partners are on the average able to inter-coordinate the aims of their common activity, i.e. they disseminate the information among themselves rather easily and fast, and are able to make decisions appropriate for them, but they exchange only the financial and material resources most frequently and are dependent on correspondent partners. According to the authors, the moderate *potential of co-ordination* of a virtual business system is characteristic for a tourism business system.

As the model presented in Figure 1 shows, the area filled with grey is unevenly distributed in respect of different quadrants, and it is rather far both from the borders of an ideal virtual organization, and from a geometric ideal of the figure – the square. When evaluating the possibilities of the surveyed tourism business system to become a virtual business system, it is possible to state that the participants have high enough potential of human resources as well as information and communication technologies and that their strategy does not contradicts the principles of the activity of a virtual business system. However, the participants of a tourism business system distinguish in low potential of co-operation structure and non-hierarchical co-ordination. It is possible to state that tour organizators and travel agencies represented by the experts develop unevenly: under tourism services being marketable enough and dynamic tourism market, organizations hardly use possibilities to implement new organizational forms.

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Conclusions and future research

The tourism business system presents exciting new challenges for tourism industry managers and academic researchers. The current approach to the development of tourism business system in tourism sector has increasingly focused on integration and cooperation between the different entrepreneurs and on networking. Cooperation and partnership in business system could help independent organizations to develop their capabilities, to reduce risks, to enhance opportunities and to get the competitive advantage. The intensive competitive situation determinates that for one organization it is difficult to possess all skills and resources needed to gain and sustain competitive advantage. Successful partnership and cooperation of a tourism business system strengthen the competitive advantage of tourism organisations. In order to create a tourism product that meets the needs of a customer, tourism enterprises integration to a virtual business system as well as the business relationships realising it are necessary.

A virtual tourism business system as the network of independent companies is established to share competencies, resources and provide opportunities to acquire contracts, which would be too complex, large or of too great a spatial extent for any small company or a micro firm. Virtual business systems actors are engaged in the joint production of a service product and competence to meet specific tourists' needs and interests. Integration to business system allows firms to find a balance between cooperation and competition, leading to a reduction of competitive uncertainty without stifling the incentives to innovate and invest in common tourism assets. Some key characteristics of virtual business system, like concentration of core competencies, strong customer orientation, creation of value-adding products and temporary, dynamic networks of independent companies based on information and communication technology were presented.

The emergence of a virtual business system has been driven by information and communication technologies and the Internet development, that blurs geographical boundaries, promotes dynamic networks, and favors customer-centric offerings. The results of experts' survey and interview witness that permanent partnership changes episodic relationships of Lithuanian tour operators and travel agencies cooperation with their partners. Consequently it is possible to confirm that contemporaneous cooperative and competitive relationships are characteristic for cooperation of Lithuanian tour operators and travel agencies. Except usual partnership, the experts see greater possibilities to integrate to business system and form the virtual organization. Such possibilities are strengthened by high potential of the application of human resources as well as information and communication technologies. The surveyed tour operators and travel agencies possess the following feature characteristics for a virtual organization: trust in partners, self-confidence, and cooperation with partners in virtual environment, understanding the profit provided by cooperation as well as the high level of information dissemination. The strategies of the activity of tour operators and travel agencies represented by the experts partly correspond with principles of the activity of a virtual organisation, but the lack of core competencies, disability to cooperate in short-term projects as well as the lack of the experience of human and information resources exchange decreases the level of cooperation intensity and coordination. Hence the virtual organizing of tourism business system members is not sufficient for distinguishing the features of virtual business system.

The qualitative research that we performed is the first attempt to present the possibilities of virtual business systems emergence in tourism sector. The experts chosen for the survey represent the leading companies of the sector, however the research results do not reflect the situation of all Lithuanian tour organizators and travel agencies. Another drawback of the research is evident in the application of the model of a virtual organisation as a tool. This modified Klüber's (1998) model is more like an effort to identify quantitative conditions as well as to compare subjective qualitative data and possessed information to the ideal being striven for.

During the nearest decade the competition would be greater and tour operators will cooperate with more partners, and relationships will be more various and intensive. We think that virtual tourism business system formation is useful to co-produce the tourism products which increase the competitiveness of tourism destinations. Closer collaboration and the utilisation of information and communication technology would enable tourism business system members to expand their supply and to enhance their competitiveness of both individual tourism firms and destinations as a total. In particular virtual tourism business systems development is useful for improving Lithuanian tourism destinations competitiveness.

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