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Procedia Computer Science 64 (2015) 1172 – 1181

Procedia Computer Science

Conference on ENTERprise Information Systems / International Conference on Project MANagement / Conference on Health and Social Care Information Systems and Technologies, CENTERIS / ProjMAN / HCist 2015 October 7-9, 2015

Cooperation Networks in the Tourism Sector: Multiplication of Business Opportunities

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Abstract

Inter-organizational strategic alliances, in which networks of cooperation stand out, have proved to be a good model to provide more competitive organizations. However, there are still shortcomings concerning models and supporting technologies that help the creation of inter-organizational arrangements. This paper presents a conceptual model for the establishment of cooperation networks, an information system that supports the proposed model and, finally, the results of a case study in the tourism sector.

Peer-review under responsibility of SciKA - Association for Promotion and Dissemination of Scientific Knowledge

Keywords: cooperation networks; business opportunities; tourism.

1. Introduction

Companies, particularly Small and Medium Enterprises (SMEs), are nowadays facing many difficulties and threats to their survival. The economy globalization, the proliferation of large commercial or industrial chains, the inconstancy and mutation of the environment, and the economic crisis, are some of the variables that threaten the businesses.

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Peer-review under responsibility of SciKA - Association for Promotion and Dissemination of Scientific Knowledge
doi:10.1016/j.procs.2015.08.552

In fact, modern companies face many pressures from the ever changing external economic, technological, social and political environments [21]. The highly competitive market has led companies to look for new approaches to take advantage, adopting new strategies and models that allow them to be able to meet the current requirements [1, 2, 3]. The search for increased competitiveness and efficiency of the last decade resulted in several organizational approaches. Some of these approaches rely on dynamically reconfigurable partnerships in permanent alignment with the market, and strongly supported by information and communication technology [34]. We can affirm the need for organizations to adopt new organizational models in order to ensure a permanent adjustment to the market. These models should allow organizations to obtain enough dimension to act on a global market and simultaneously ensure enough flexibility so that they can quickly adjust to new market requirements [4].

In this paper we advocate the continue reconfiguration of organizations to gain agility [5], the vertical integration [6], the cooperation and co-opetition approaches [7, 8, 9]. In the next section a brief contextualization of Cooperation Networks is presented. Following, we describe a model and an information system to support the implementation of inter-organizational cooperation networks. Then, it is presented a case study of the application of the model in the economic tourism sector. Finally, we present some conclusions and future work.

2. Cooperation Networks

A strategic alliance is when two or more organizations decide to join forces to achieve common strategic objectives [11]. The establishment of cooperation networks between organizations appear to be a strategy for organizations to be able to develop common strategies that allow to obtain and maintain competitive advantage. Engaging in new forms of collaboration and maintaining relationships within business networks have become a natural way for organizations to meet performance requirements in competitive markets [12, 13, 14]. In this way, a cooperation network is an aggregator competence center of the cooperation firms [4].

Some of the most important criteria for competitiveness include responsiveness, agility, adaptability to environmental change, and high flexibility [35,36]. The goal of the enterprise is to fulfill the customer requirements, but, traditionally, using the limited set of resources available within the walls of the organization [33]. The inter-organizational cooperation networks favors the competitiveness of the cooperating enterprises, as they become more flexible, minimize costs, share resources, skills and knowledge, define common strategies and still gain scale.

Information Technology (IT) plays an important role as facilitator of setting up cooperation networks, supporting the development of alliances, allowing the creation of virtual organizations with other business partners and developing inter-organizational information systems that support strategic business relationships, with clients, suppliers, subcontractors and others [12].

In the Information and Knowledge Era, the role of IT is fundamental to establish communicating channels between cooperating networks. The correct adoption of IT in companies is a key factor for achieving superior business results and competitive advantages [23], being IT one of the main drivers of changes and innovations in corporations [38].

The cooperation agreements should be aware of legal constraints. As such, anticompetitive agreements are not allowed, i.e., are not allowed agreements that limit competition, regardless of the intention of the parts (Article 101 of the TFEU - Treaty on the Functioning of the European Union). An agreement violates antitrust rules when the parts sign up to the following terms [13]:

- Fix prices;
- Limit production;
- Share markets or customers;
- Fix the resale prices (between a producer and its distributors).

Another legal aspect that should be observed about the data sharing is the law of personal data protection. See, for example, the Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. In this way, personal information can be shared only with the consent of the data holder.

3. Conceptual Model

Tourism operators may interact in different way. Four coalition's types can be recognized and each of them represents a different level of integration among considered groups of actors: networking; coordination; cooperation; collaboration [17, 14].

The model presented in Figure 1, which was adapted from [18], aims to simplify the implementation of inter-organizational networks in the tourism sector. This proposal is based on the assumption of sharing information and knowledge about clients and potential business opportunities that each client could represent for the various members of the network. Companies can gain a competitive advantage by using this information [30]. This way it will be possible to create business opportunities, providing rich information to network members in order to be proactive in terms of sales. This will allow a company to do promotions and offers on products or services with any client on the network, thus leveraging potential clients and business opportunities.

As already mentioned, the model is based on sharing information among the participating actors, enabling the creation of a network of companies that have complementary competences and skills in order to reach all clients' needs.

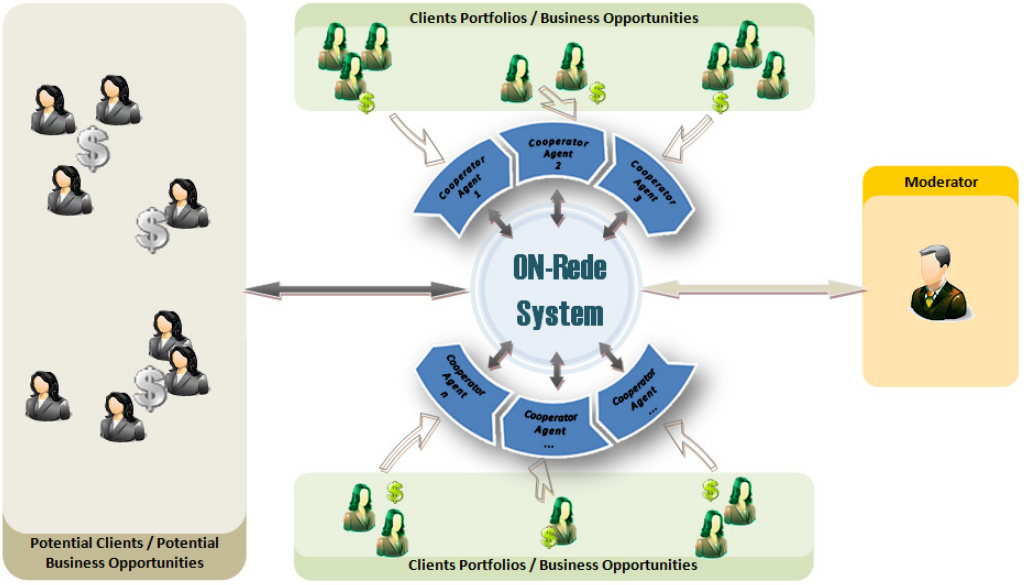

Figure 1 – Conceptual Model

As can be seen in the proposed model (Figure 1), a cooperation network is supported by an information system (ON-Rede System), which enables and facilitates the sharing of information between network members. This system is the interface between the different participants in the network.

Systems interoperability is also an important issue, since it allows users to perform tasks, regardless of hardware, operating system or applications, interconnected by different data networks [31].

According to the World Tourism Organization, tourism and entertainment service industries include a wide range of actors [19]. These actors are identified in Table 1.

Table 1 – Actors of tourism and entertainment service industries

Area	Actors
Transportation services	Airline companies; Cruise ships; Trains; Buses; Taxis; Car rental agencies; among others.
Hospitality services	Hotels; Hostels; Resorts; Guest houses; Camping; Bed and breakfast; among others.
Entertainment venues	Amusement parks; Casinos; Shopping malls; Music venues; Theatres; Cinemas; Museums; Galleries; Operas; Night clubs; Restaurants; Kart club; Golf club; among others.
Others	Tourism offices; Tourist guides; Weather forecast; Guides (on-line, paperbased); Voyage agencies; among others.

Thus, considering the concept model applied to the tourism sector, the various economic agents which cooperate on the network will be able to share information about the clients and business opportunities that each identify, in order to retain those same clients in the cooperation network. Consider, for example, a business opportunity generated by the fact that a client looks to stay for holidays in a rural tourism house (gîte). This client is, or may represent, not only an opportunity for the network member who owns the house, but can also help to identify business opportunities for other members of the network, relating to guided tours, tasting of products, selling local crafts, among others.

The system, beyond sharing information between cooperating agents, also allows clients to publish their own needs independently, i.e. without intermediation, which are real business opportunities for the cooperation network.

The purpose of this kind of information sharing is to reduce the funding costs of new clients and offer complementary products and/or services.

It should be noted that, in tourism sector, the demand tends to be cyclical, and as such, the model includes feedback, that is, the information shared by any of the cooperative agents may give rise to a new business opportunity later. Thus, the loyalty of clients can be managed also at the cooperation network level.

4. ON-Rede System

Information Technology and Information Systems play an extremely important role in contemporary organizations, since they are present in almost every aspect of business [25, 26]. Particularly, Internet has changed the way companies perform business [28]. In recent years the World Wide Web (WWW) has shown a continuous expansion, concerning size and used technologies, being today fundamental for conducting business [24]. A good example of that evolution and impact is the Web 2.0, which has "hit" businesses all over the world, stimulating collaboration between persons and companies [37].

The information system "ON-Rede", designed to support the model presented in section 3, plays a key role in achieving the primary objective of the model, which is to facilitate the sharing of information between cooperating agents. For this, a Web platform (ON-Rede - Business Opportunities System Network) was developed, which is the interface for cooperation between network members.

Figure 2 provides an overview of the system. In this figure we can see the actors who interact with the system, as well as generic services that the system offers to these actors.

According to the model presented in Figure 1 and Figure 2, there are three types of actors: Moderator - responsible for validating and admitting participants in the network, as well as for configuration management of value chains in which the network will work, i.e. it is responsible for typifying the information to be shared; Cooperators - agents that are part of the cooperative arrangement and are responsible for enriching the system with information about their customers and business opportunities that each client may represent to the network - this type of actor can make use of the information provided by the system, i.e., by other cooperators clients; Clients – a client or potential client is someone who, autonomously, can register himself in the system and register their own needs in order to get offers from companies operating in the system.

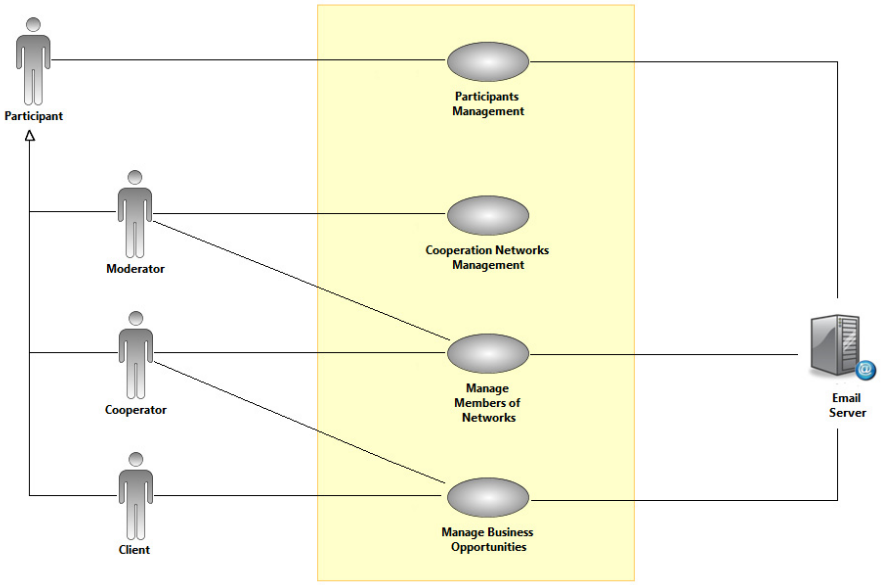

Figure 2 - Context Use Cases of the ON-Rede System

The use case Participants Management includes registration of Moderators, Cooperative agents and Clients, editing the profile of each participant, as well as the activation or suspension of registration.

The Cooperation Networks Management is of responsibility of Moderator, and includes: the configuration of value chains; typologies; phases; and needs.

The use case Manage Members of Networks allows the moderator to invite economic agents. On the other hand, economic agents can also ask to join the Cooperation Network.

The Manage Business Opportunities use case is available to the Cooperator and to clients. A business opportunity may be adjusted throughout its lifecycle. Cooperators can make promotional offers depending on the needs that every business opportunity represents, which in turn clients can consult and express interest by registering orders.

As previously mentioned, to implement technologically the model (ON-Rede System), was developed a solution SaaS (Software as a Service). Figure 3 shows the technological architecture of the system.

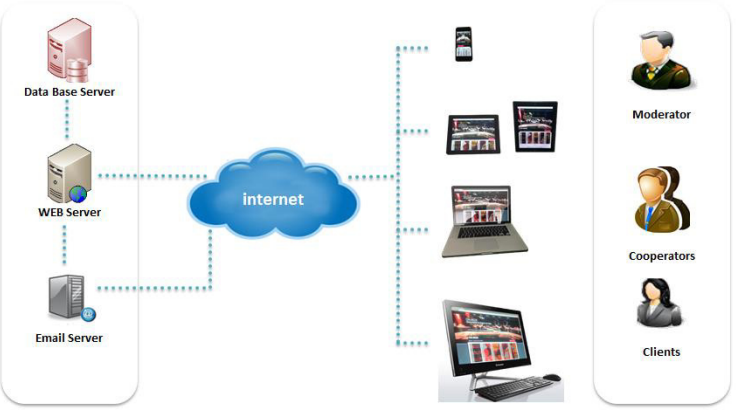

Figure 3 - System Architecture

5. Case Study: Tourism Sector

The model and the proposed system were tested in various economic sectors, including the tourism sector.

This case study focused on rural tourism, is mainly composed of small economic agents whose competitiveness is quite threatened by larger economic agents.

In the context of rural tourism is essential to create cooperation networks which would support the competitiveness and complementarity of companies [20], allowing economic agents offer a wider range of products and services to its clients.

In this sense, the effort to attract clients is made in the cooperation network. The network can be used to promote complementary products and services, such as stays, boating, tasting of regional products, equestrian experiences, agricultural experiences, extreme sports; among others.

Therefore, the cooperation network should be created by economic agents with complementary capacities to be able to offer a wide range of products and services, allowing gain competitive advantage through differentiation.

5.1. Typology of Network

The ON-Rede System allows the creation of different types of networks. These can be inter-organizational or intra-organizational, which in turn may be public, semi-public or private.

As part of this case study, it was decided to create a public inter-organizational network, allowing any economic operator to join the network, being the admission on the network managed by its moderator.

In this type of network, the public, clients and potential clients can play a key role when it is their initiative to insert business opportunities, so the cooperators can make offers of product and/or services.

5.2. Participants in the case study

In this case study participated three types of actors:

- The Moderator who had the responsibility to set up the network of cooperation and monitor the operation of the network;
- Cooperators within the network participate in economic activities in the tourism sector; and
- Clients interested or potentially interested in purchasing tourist products and services.

Table 2 summarizes the number of entities that participated in the case study.

Table 2 - Participants in the Study

Participant Type	Quantity
Moderator	1
Cooperators	14
Clients	238

5.3. Case study data analysis

The fourteen economic agents of rural tourism who cooperated in the study represent products and services according to Table 3.

Table 3 - Distribution of Cooperators by Business Area

Products / Services	Quantity
Stays	4
Catering	5
Sale of Regional Products	2

Extreme Sports	1
Guided tours	1
Handicraft	1

The information flow generated in the ON-Rede is summarized in Tables 4 and 5. In Table 4, we can see the interest of the participants based on logins made on ON-Rede platform.

Table 4 – Interest Generated Flow Summary

Flow type	Quantity
Logins of Cooperators	712
Logins of Clients	903

Table 5 shows the flow of information generated and shared between cooperators and clients who participated in the cooperation network.

Table 5 - Generated Information Flow

Information Flow	Quantity
Business opportunities	336
- Needs	994
Promotional Offers	631
Clients Requests	73

Figures 4 and 5 show the cumulative evolution of the information flow generated over time.

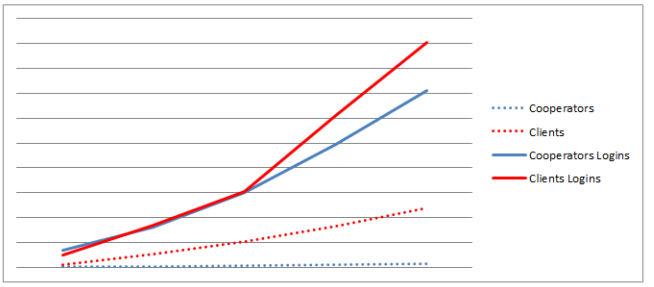

Figure 4 - Cumulative evolution of participants and logins

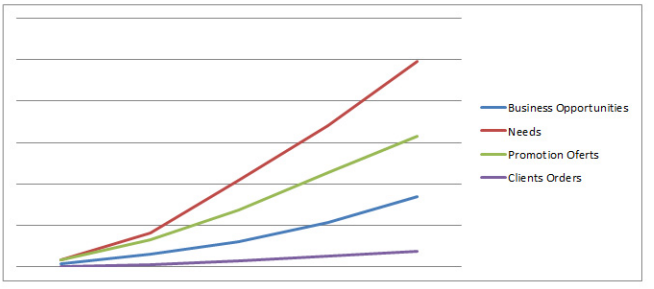

Figure 5 - Cumulative evolution of information generated

The business opportunities that were created by the network showed a positive evolution over the eight months of observation, which took place between November 2013 and June 2014. However, in practice it was found that the cooperators did not took advantage of all the needs identified in the business opportunities which have been registered. The gap between the amount of needs and promotional offers has registered a growing trend. The admission of more cooperators can fill this gap and solve the problem.

This case study revealed the need to include in the ON-Rede System a new functionality to enable cooperators to arrange packages of products and/or services, so they can be promoted more efficiently.

6. Conclusion

The driving force of business is to satisfy customers each time more demanding, each time more global, with products each time more customized to their individual needs [36]. All aspects of an organization influence their efficiency and effectiveness, being IT a core asset in this context [29]. Internal and external IT capabilities enhance firm performance [22], enabling companies to make significant improvements in the way they perform business [23], from reducing operational costs [27] and improving productivity [39], to gaining competitive advantages [38]. With increased competition in the markets and the rapid evolution of new technologies and media, the generation of innovations capable of increasing the economic value of companies who serve them become an added value to organizations nowadays [32].

The proposed IT-based model showed good results when applied in the tourism sector. However, there is a need to adjust the ON-Rede System in order to support the organization of tourist packages.

The results of the case study were very positive, since it was verified a significant number of business opportunities. Thus, we can conclude that the proposed conceptual model and the ON-Rede System can be an organizational competitiveness leverage factor to promote and facilitate inter-organizational cooperation.

In the near future the system will be tested in more cases involving other activity sectors. The system probably will evolve aiming to integrate new features that may be identified as useful considering the specificities of different sectors.

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