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Martin Rønningen Associate Professor

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Innovative Processes in a Nature-Based Tourism Case: The Role of a Tour-operator as the Driver of Innovation

MARTIN RØNNINGEN

Lillehammer University College and Centre for Rural Research, Norway

ABSTRACT *This paper develops four propositions for the role of a tour-operator as the driver of innovations in a nature-based tourism case. This system features small-scale tourism firms that cooperate with a tour-operator who holds the position as the driving force. The propositions are analysed in a comparison with the empirical data from a case-study, which includes a tour-operator and 12 firms that offer nature-based products and services. The empirical findings indicate that the system works well for entrepreneurs still in the founding stage. Additionally, small- and medium-sized firms are quite satisfied with the tour-operator both as a transfer channel of competence and as a distributor of the supplier's services. The most professional firms are more critical of the outcome of the system. The system has, however, contributed to innovations and innovative capacity in general. To meet the skilled firms' demands for support for complex developmental processes, the system requires refinement.*

KEY WORDS: Nature-based tourism, innovation, cooperation, tour-operator, driver

Introduction

Innovation in the nature-based tourism industry is the subject central to this study. The question is how cooperation, or more precisely a special kind of cooperation, can increase the innovative capacity in small-scale tourism enterprises that offer nature-based products and services.

In Norway, nature is an important resource for tourism. The qualities of the Norwegian natural environment give the tourist the opportunity to experience panoramas and wildlife, engage in a wide range of activities, and pursue peace, rest, and contemplation. Norwegian tourists and especially foreign ones are well aware of these qualities of Norwegian nature (Kleiven, Holmengen, & Rønningen, 2002; Rønningen, 2001). Obviously, one strategy for developing tourism in Norway is to draw upon the qualities of its natural environment. For obvious reasons, rural areas have the best

Correspondence Address: Martin Rønningen, Associate Professor, Lillehammer University College and Centre for Rural Research, PO Box 952, 2604 Lillehammer, Norway. E-mail: Martin.Ronningen@hiil.no

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resources for the development of nature-based tourism, and many governments have implemented strategies to develop rural areas by promoting nature-based tourism (Pouta, Neuvonen & Sievänen, 2006)

Yet, both researchers and public statements have claimed that the innovative capacity of the tourism industry is quite low (Fussing-Jensen, Mattson & Sundbo, 2001; Hjalager, 2002; Ioannides & Petersen, 2003; Mattson, Sundbo & Fussing-Jensen, 2005; Peters & Pikkemaat, 2005). Consequently, there seems to be a need of innovation to realise the potential of tourism growth, including nature-based tourism. In other words, it is necessary to develop or improve products and services and to gain access to new markets.

Among other things, innovative capacity relies on knowledge and competence. Consequently, the access to, the transfer of, and the development of knowledge and competence are key issues (Edquist, 2005; Hjalager, 2002). Research has indicated that collaboration between firms and between firms and institutions often increases and strengthens the advancement of knowledge (Asheim & Gertler, 2005; Hjalager, 2002; Pechlaner, Fischer & Hammann, 2005; Sørensen, 2007). Hjalager has also noted that small enterprises may especially benefit from cooperative efforts to increase innovative capacity (Hjalager, 2002). Hjalager's statement is very relevant to the substance of this article because the majority of Norwegian enterprises offering nature-based tourism activities and services are small and with dispersed localities (Nybakk, Vennesland & Lunnan, 2008).

Accordingly, it is expedient to ask which kinds of cooperation or collaborative structures could have the qualities to increase the innovative capacity in small-scale nature-based enterprises. Much innovation research has concentrated on innovation systems. An innovation system is characterised by firms – often a cluster of firms belonging to the same specific sector – with relations to universities and research institutions, financial institutions, and so on, and the relations and interactions are regulated by institutions, that is to say, a set of routines, norms, established practices, rules or laws. This approach places innovation and learning processes at the centre of the focus (Edquist, 2005; Isaksen & Asheim, 2008). A pilot study of innovation in small-scale rural tourism firms in Norway did not reveal any such system of innovation in work (Rønningen, Kvam, & Stræte, 2007). Nor did a review of the literature indicate that such systems of innovation that include small-scale tourism firms have evolved. In general, little research has focused on small-scale enterprises, especially in the context of nature-based tourism (Nybakk & Hansen, 2008). Consequently, it is worthwhile to explore other kinds of systems, cooperation or collaborative structures other than systems of innovation. This study concentrates on a collaborative system, including small-scale tourism firms that have a tour-operator as the key player of the system. The paper deals with how this kind of cooperation may increase small enterprises' innovativeness by giving access to new markets, by facilitating the transfer of knowledge and by including small enterprises in innovative practices.

The next section reviews the literature on innovation in the tourism industry, followed by the study's propositions about the innovative ability in the tour-operator-based system. The paper then addresses the research method, followed by discussions of the findings. The final section provides a summary and conclusions.

Review of the Literature

Prior to the review of the literature on innovation, it is necessary to clarify the term “nature-based tourism”. Although it is hardly possible to find a commonly accepted definition, a number of definitions have focused on tourism activities and practices based on wilderness and unmodified natural environments (Hall, Müller & Saarinen, 2009; Laarman & Durst, 1987; Valentine, 1992; Weber, 2001). Our subject is innovative activities in nature-based tourism enterprises, and thus the definition of nature-based tourism should focus on the supply side. If we take the criterion above as the starting point, we may define nature-based tourism as tourism enterprises offering experiences and services based on wilderness and relatively unmodified natural environments. The proposed definition is also quite close to definition presented by Pouta, Neuvonen & Sievänen (2006).

Schumpeter (1934) is the classical theorist of innovation research. He distinguished between five forms of innovation. Later, inspired by Schumpeter’s definitions, other scholars have introduced a number of typologies (Fagerberg, 2005, pp. 4–9). The Community Innovation Survey (CIS) executed by national statistical offices throughout the European Union also uses definitions quite similar to Schumpeter’s. CIS differentiates between product innovation, process innovation, organisational innovation, and market innovation. Product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities. Process innovation is the implementation of either a new or significantly improved production technology or production process or a method of distribution. An organisational innovation is the implementation of new or significant changes in the structure of the enterprise or managerial methods that are intended to improve the enterprise’s use of knowledge, to improve the quality of the goods and services, or to improve the efficiency of work flows. Organisational innovation also includes changes in the firm’s relations with other enterprises or public institutions. Finally, a marketing innovation is the implementation of new or significantly improved marketing or sales methods to increase the appeal of the enterprise’s goods and services or to enter new markets (OECD, 2005).

Some researchers have questioned whether the theory of innovation developed in relation to the manufacturing sector is applicable to service sectors (Boden & Miles, 2000; Coombs & Miles, 2000; Tether, 2005). Notwithstanding the debate on the definition and understanding of innovation, Sundbo and Gallouj (1999) have proposed a typology of innovation adjusted to the service sector, which is almost identical with the CIS definitions of the four types of innovation. However, they note that innovation in services, including tourism, can be minor and exhibit more gradual changes of service products rather than the discrete jumps that are typically associated with innovation in the context of manufacturing.

The relevant literature on innovative ability in the tourism industry centres around two propositions. First, research indicates that innovative activities are quite limited due to a variety of reasons. Secondly, various types of collaboration and networks tend to increase innovation capacity. The review of literature below deals with both conclusions.

As mentioned, a number of publications indicate that the innovative ability in tourism enterprises is rather weak (Fussing-Jensen, Mattson, & Sundbo, 2001;

Hjalager, 2002; Ioannides & Petersen, 2003; Peters & Pikkemaat, 2005). According to Fussing-Jensen, Mattson, and Sundbo this tendency can be explained by several factors. One is the size of firms. The tourism industry includes many micro and small enterprises, and studies have documented that innovation capacity is positively correlated with business size (Mohnen, Mairesse, & Dagenais, 2006; Salte, 2007). Another factor that may be related to the size of company is a lack of adequate managerial systems to support innovative activities. Thirdly, employees usually have low competence. Furthermore, many tourism enterprises are not involved in networks, or collaborative structures and this has the effect of restricting the transfer of knowledge and experience and of hampering innovative capacity (Hjalager, 2002). Thus, many tourism enterprises cannot meet the knowledge requirements for innovation.

Certainly, far from all tourism enterprises lack collaborative relations. Several studies have demonstrated that enterprises benefit from suitable forms of cooperation. Sørensen (2007) has concluded that networks provide accommodation firms with information benefits sustaining innovation. Nybakk, Vennesland, and Lunnan (2008) have drawn a similar conclusion. Their analysis of nature-based tourism firms in Norway indicates that there is a positive connection both between networking and innovativeness and between innovativeness and performance.

Pechlaner, Fischer, and Hammann's (2005) empirical analysis also indicates that collaboration with the transfer of knowledge and experience increases the innovative capacity of the firms. They have also claimed that "decentred leaders", that is, managers of tourist organisations, have to coordinate the transferring process to ensure the flow of knowledge and to reduce the transaction costs for the enterprises involved.

Hjalager (2002) has made an important contribution by defining a theoretical framework for the creation and diffusion of knowledge and competence. She proposes that the transfer of knowledge to the tourism business can take place in different ways through other organisations or systems that are involved in, or are supporting, the tourism business. The knowledge transfer channels suggested by Hjalager are the trading system, technological system, the infrastructural system and the regulatory system.

Mattsson, Sundbo, and Fussing-Jensen (2005) have almost the same starting point as Hjalager, noting that the innovation potential on a micro level, i.e., in the single small tourism firm, is very limited. While Hjalager has primarily focused on supportive systems and channels of knowledge transfer such as remedial action, Mattsson et al. have looked for innovative potential in another system. They propose an attractor-based innovation system with the attractor and the scene-maker as the distinct originator of innovation. Also, they have identified a certain line of development where a scene-taker succeeds the scene-maker and creates local networks. We shall not here outline the model, but note the researchers' attention to the driving forces in the system. One driver is the scene-maker, the innovator, who starts the process by becoming aware of an attractor, which is something that creates attention and draws visitors. The scene-maker creates a scene by providing a context for the attractor and by constructing a concept that characterises the attraction on the basis of the attractor. The scene has to be maintained and improved to keep visitors' attention over time. This is done by the other driver in the system, the scene-taker. Local firms as hotels, restaurants, transporters, shops, etc. have to exploit the possibilities of the location

and the scene, and can benefit from the scene and the scene-taker's efforts by participating in a collaborative network that emerges on the scene.

This review of the literature points to some critical conditions for innovative capacity. First, cooperation and networks appear to be very important because the interaction within collaborative structures improves the flow of information and the transfer of knowledge, competence, ideas, and advice. Secondly, small enterprises hardly possess the qualifications required to consult or use complicated and "non-focused" knowledge, such as research results. Accordingly, cooperation should include actors who can "distil" knowledge into relevant competence and practical recommendations for small firms. In short, it is necessary to have channels for the transfer of relevant competence. Thirdly, some researchers underline that cooperation and networks should have leaders to promote and manage developmental processes. Pechlaner, Fischer, and Hammann (2005) have suggested that "decentred leaders" should be the coordinators who assure knowledge flow. Mattsson, Sundbo, and Fussing-Jensen (2005) accentuate more extensive roles by pointing to the necessity of drivers and not only coordinators of interaction. By accentuating the role of leadership, Pechlaner et al. and Mattsson et al. differ somewhat from other contributors dealing with network and collaboration as antecedents of innovation (Nybakk, Vennesland, & Lunnan, 2008; Sørensen, 2007). Their focus on the drivers and the leaders of innovative processes are significant to the focus here on small-scale enterprises.

By combining the perspectives of Mattsson et al. (2005) and Hjalager (2002), we can hold that drivers, on the one hand, and supportive structures for transfer of competence, on the other, can strengthen processes of innovation in the tourism industry. We may then ask if it is possible to identify a system which includes both drivers of innovation processes and channels for the transfer of knowledge, competence, and advice. If we consider the system of production, it would be of interest to examine the function of tour-operators of searching for such a combination of driver and knowledge channels.

For several reasons the concept of a system with the tour-operator as the driver of innovative processes seems quite compelling with regard to innovation in small-scale tourism enterprises. First, the research implies that small enterprises individually have low innovative ability. Secondly, small-scale enterprises in rural settings hardly have close links to channels for the transfer of knowledge. Thirdly, a tour-operator can represent a channel of knowledge and competence transfer. Fourthly, a tour-operator can act as a driving force in the system. The next section offers a more detailed description of mechanisms in the model of a tour-operator-based system.

Propositions about the Tour-operator-based System with the Tour-operator as the Driver of Innovative Processes

The collaborative structure that comprises the tour-operator and its suppliers meets the general criteria of a system because there are components with relations among them, there is a function, and there is a demarcation between the structure and the surrounding world (Edquist, 2005). Hence, it is reasonable to characterise the case under study as a system.

The primary task of a tour-operator is to develop and distribute package holidays and trips by combining services on behalf of suppliers (Fyall & Wanhill, 2008). Naturally, then, one proposition about the tour-operator-based system is that a tour-operator represents an important distribution channel and can possibly give small-scale firms access to new markets. This is market innovation by definition. Another proposition deals with the transfer of knowledge embodied in technology. If small-scale firms cooperate with a tour-operator, they will get access to booking-systems, systems for financial transactions, help in developing homepages, etc. The operator may offer technology and systems which the individual small-scale firm can hardly afford or implement on its own. The technology and the systems also embody knowledge that the individual firm can utilise indirectly by using the operator's services. This mechanism is quite similar to Hjalager's (2002) technological system for the transfer of knowledge. The firms' access to those systems may be interpreted as process innovation because the firms implement technology that improves the production or method of distribution.

Proposition 3 treats the transfer of competence and the tour-operator's role as a driver of innovative processes in the suppliers' enterprises. One reason for this role is the professional tour-operator's competence. The operator most likely has the competence to screen information about markets, consumer preferences, competitors, management, best practices, etc. Furthermore, the operator may have the capacity to process knowledge and information into ideas or recommendations for the relevant suppliers. Finally, an operator gains experience and develops knowledge while running the business over time. Consequently, one can expect that an operator is a valuable source of knowledge, competence, and advice for the small-scale suppliers.

One might ask why an operator will use time and resources to help the suppliers. The best argument is linked to the tour-operator's role in the tourism production system. An operator develops holiday and travel packages for the market and has to compete with other operators. Accordingly, a tour-operator wants suppliers of a high standard, equipped with the capacity to offer competitive services. If an operator is not completely satisfied with a supplier's product, the operator may decide to help the supplier in improving his product instead of looking for another supplier. Most likely – or at least in most cases – it is less demanding of an operator's resources to help a supplier already linked to the operator instead of spending the time needed to recruit new suppliers because of the transaction costs related to negotiations about agreement, price, etc. The operator may also decide to keep a supplier in order to avoid losing the supplier to another tour-operator.

This consideration leads to proposition 4: even non-innovative firms may be included in the processes of innovation in the system. Over time these firms may profit from the knowledge processes in the system which in turn will increase the individual firms' ability to act innovatively. Such firms may also be included in product innovation if their services are integrated into new packages developed by the tour-operator, even if the individual firms do not act innovatively themselves. Furthermore, the same suppliers may gain access to new markets. For the individual firm, it is also an organisational innovation being linked to a tour-operator because the collaboration includes changes in the firms' relations to external actors.

Therefore, if a tour-operator helps small-scale firms to improve or renew their services or to include their services in new product packages, offers a channel of distribution, and filters knowledge and competence into practical operations, then the tour-operation business will be a system for improvement, innovation and growth of nature-based tourism. However, we also have to ask whether the tour-operator-based system works equally well for all firms because the firms may have dissimilar needs for assistance according to their respective strengths and weaknesses. Firms at different stages of development or firms of different sizes may have dissimilar needs of help and support.

To sum up, this study has proposed that the tour-operator-based system can increase the innovative capacity in relation to small-scale firms offering nature-based products because:

- (1) The tour-operator gives small-scale firms access to new markets.
- (2) The tour-operator offers professional systems and services with embodied knowledge, e.g. booking systems, systems for financial transactions, help in developing homepages, etc.
- (3) The tour-operator is a channel for the transfer of ideas, relevant knowledge, and practical recommendations for the suppliers linked to the operator.
- (4) The tour-operator-based system may include firms that are less innovative or non-innovative when they act individually. By being linked to the tour-operator, such firms can nevertheless be included in innovative processes.

Methodology

As this is a study of relations and interactions within a system, it is appropriate to employ a case methodology. The theoretical approach about a system with the tour-operator as the driver of innovative processes is to some extent deductive. The aim here is to examine the propositions in an empirical manner. Accordingly, this case-study is more explanatory than exploratory or descriptive (Yin, 2009).

Selection of Case

The case must include small-scale firms that offer nature-based products and that have formal links to a tour-operator. To find an appropriate case, we searched for presentations of firms and tour-operators on the Internet, in papers, and in brochures, and we discussed possible cases with key informants and members of a reference group. We identified some relevant tour-operators in Norway, which were mainly small and recently established ones. One of these, Norway Nature Travel (NNT), seemed to meet our criteria. Key informants and the reference group also considered NNT as an appropriate case.

Choosing NNT, we have focused on sea fishing in the county of Troms in Northern Norway. Sea fishing is thus a product that incorporates such commercial services as accommodation, boats for rent, and other additional services. The case-study includes the tour-operator and 12 suppliers of sea-fishing products. A profile of the tour-operator and the suppliers is presented below.

Data

All 12 suppliers are quite small enterprises. We interviewed the owners using a semi-structured questionnaire. In addition, two representatives of the tour-operator were interviewed, the director and his deputy manager in the county of Troms.

Three researchers carried out the in-depth interviews. All interviews were recorded and later transcribed. All three researchers have assessed the data and have discussed the information from the respondents comprehensively to check interpretations and to improve reliability and validity. The tour-operator and the suppliers have their own presentations on the Internet, which give practical information about products, capacity, and the booking system. The researchers have also received the tour-operator's business plan, manual, and checklist for the control of the suppliers' quality of service and the standard contract regulating the cooperation between the tour-operator and the suppliers.

The analysis of the data was mainly conducted by following Merriam's (1998) steps in case-study analysis.

A Brief Presentation of the Case

Before we discuss how the four propositions matched with the empirical findings, it is necessary to present the tour-operator and the 12 enterprises included in the case-study.

A Brief Presentation of the Tour-operator

Established in 1995, NNT is quite a small company with about 10 employees. NNT's main business is tour-operation, distributing services provided by many suppliers in Norway. NNT offers sea fishing and many other kinds of nature-based activities and experiences for both the national and international markets. As already noted, NNT's packages, with sea fishing as the main attraction, are the most important products distributed by NNT. NNT is located in Central Norway, but cooperates with small firms in many parts of the country. These firms are suppliers of accommodation and nature-based activities. NNT has almost 100 suppliers.

NNT has several sales offices abroad, an online booking system, an adequate system for financial transactions, and the mandatory insurance as directed by Norwegian law. NNT finances the tour-operation business by commission on the sale.

NNT offers consultancy to entrepreneurs and firms, e.g., planning and recommendations about product development. The suppliers are welcome to make use of advisory services any time, as a compensation for NNT's commission on the sale. Furthermore, NNT visits all suppliers regularly to discuss business matters, to give advice, and to evaluate services and products.

According to the representatives for NNT, the company has the relevant knowledge and competence for the suppliers. NNT possesses, for example, sufficient market intelligence about the relevant market segments' needs and preferences. NNT has also gathered information about suppliers outside the system, including foreign suppliers.

Table 1. A brief presentation of the suppliers.

	Year of foundation	Firm size	Product	Network	Competence/attitude to improving own competence
Firm No. 1	2003	Small	Plain core product	Sparse	Ordinary/ low priority
Firm No. 2	2003	Small	Plain core product	Sparse	Ordinary/low priority
Firm No. 3	2004	Small	Plain core product, plus quite many additional services	Sparse	Ordinary/moderate priority
Firm No. 4	2006	Small	Plain core product, plus some additional services	Some extensive	Ordinary/high priority
Firm No. 5	2006	Small	Extended core product	Some extensive	Ordinary/moderate priority
Firm No. 6	2004	“Medium”	Plain core product	Sparse	Medium/moderate priority
Firm No. 7	2004	“Medium”	Extended core product, plus some additional services	Some extensive	Medium/medium priority
Firm No. 8	1991	“Medium”	Extended core product, some additional services	Some extensive	Medium/medium priority
Firm No. 9	1995	“Medium”	Extended core product, many additional services	Extensive	Quite good/quite high priority
Firm No. 10	2003	“Large”	Very extended core product, plus many additional services	Extensive	Quite good/high priority
Firm No. 11	1995	“Large”	Very extended core product	Extensive	Quite good/high priority
Firm No. 12	1999	“Large”	Very extended core product, plus many additional services	Extensive	Quite good/high priority

Furthermore, NNT carries out customer surveys and collects customers' evaluations of the products. NNT is also aware of the need of product development, and thus they recommend to the suppliers to include additional services with their products, by cooperating with local, complementary providers, for instance, or by utilising other resources or qualities that the destination offers.

A Brief Presentation of the Suppliers

Table 1 gives a short description of the suppliers.

The measure of firm size is rough. "Small firms" have less than 10 beds, and one to three boats for rent; "medium-sized firms" have less than 20 beds and less than five boats; "large firms" have more than 20 beds and five boats. We did not receive the firms' accounts, but the respondents gave estimates of turnover which correlated quite well with firm size.

The firms' products or services are depicted in column 4 in Table 1. All firms have sea fishing as their main product, which is indicated by the term "core product" in Table 1. A "plain core product" means that a firm offers only accommodation and boats for rent. An "extended core product" indicates that a firm offers additional services directly related to the core product, e.g., echo sounder, training in sea sense, fish guiding or small fishing boats with skipper to reach distant fishing places. "Additional services" are other services than the core product, e.g., safaris, guided tours in nature, trips with snowmobiles, horseback riding, dog sledding or catering. Those services are partly offered by the firms mentioned in Table 1, and partly by other local suppliers. Additional services give, of course, a more complementary tourism product than the core product.

The column labelled "Network" in Table 1 reports the relevant relations to other firms, organisations, local authorities, consultants, etc. Table 1 characterises the firms' relational webs and reflects the respondents' evaluation of their networks, respectively. The statements on the firms' level of competence and attitude towards improving competence also reflect the respondents' opinions. The statements correspond quite well with such indicators as formal education, business experience, and how often the owner or employees attend courses offered by NNT or industrial/tourism organisations.

Table 1 indicates that the firms have quite different qualities even though they all are small-scale firms in a regional or national context. Firms numbered 9–12 may be interpreted as the most professional ones for a number of reasons. They have better competence and give higher priority to the improvement of their own competence and they are larger and have more extensive and more complementary products than the remaining firms. These firms have also given priority to the development of products, and have come up with quite original products or packages by combining services. In other words they have combined resources in new ways, which is a form of innovation according to Schumpeter (1934). Firms no. 11 and 12 have, however, ceased to cooperate with NNT.

Firms 1–5 belong to the other side of the scale. They are all very small, have less extensive products, have rather sparse networks, and have weaker competence than the most professional firms. However, Table 1 also indicates some differences between

the small firms with regard to products, network and competence. All small firms have plans to increase capacity or to improve or extend products to some degree.

Firms 6–8 are medium-sized. They all have extended core products and some additional services, except Firm 6. Still, Firm 6 was about to introduce new services at the time of interviewing. The medium-sized firms also had better competence compared to the small ones, and all medium-sized firms had quite extensive networks, except Firm 6. With certain reservations we can assert that the medium-sized firms are slightly more professional than the small ones.

Findings and Discussion

Below, the four propositions are analysed in comparison with the empirical findings.

Proposition 1

Proposition 1 was about the tour-operator's function as a distributive channel for the suppliers. We expected that the tour-operator would give small-scale firms access to new markets. If this assumption was correct, the system with the tour-operator as the driver of innovative processes brings about market innovation for the suppliers.

All firms stated that the tour-operator had given them access to new markets, especially abroad. In other words, proposition 1 does have empirical support. However, there is one important qualification. Three firms were in operation 5–10 years before they entered into the cooperation with NNT (Firms 8, 9, and 11). They also had customers, including foreign ones, in this period. Accordingly, these firms had the ability to deal with (foreign) markets on their own. However, these firms admitted that NNT had acquired a significant number of customers, mainly from new markets abroad. One of the firms had withdrawn from the cooperation with NNT, but was not dissatisfied with NNT's efforts as a distributor. The withdrawal was caused by other problems which will be discussed later (see proposition 3 below).

Proposition 2

Proposition 2 claimed that the tour-operator offers access to such professional systems and services as a booking system, a system for financial transactions, help in developing homepages, etc. All ten firms still cooperating with NNT asserted that the tour-operator's booking system and system for financial transactions were most satisfactory. The two firms which have terminated their cooperation have bought or developed their own systems (Firms 11 and 12). Yet, they were satisfied with the tour-operator's systems for booking and financial transactions. Principally, proposition 2 has support from the empirical findings.

Proposition 3

Proposition 3 claimed that the tour-operator is a channel for the transfer of ideas, relevant knowledge, and practical recommendations for the suppliers linked to the

operator. Nine of the 12 firms interviewed have been established since 1999. NNT not only offered to be a distributor, but it also gave help to entrepreneurs and young firms in their founding stage, e.g. information about customers' demands, advice about the necessary standard of services, advice on how to compose a good mix of services based on nature resources, etc. Eight of those nine firms stated that NNT was a useful, competent, and reliable consultant in the founding stage. The ninth firm got some help, but NNT did not play any decisive role in this respect (Firm 12).

When the enterprises were asked about the tour-operator's role as a source of information, competence, and advice in the firms' operational and more established stage, the statements differ substantially.

All the small firms were still quite or very satisfied with information, feedback, and advice from the tour-operator. In addition to the small ones, three of the medium-sized firms were quite satisfied with NNT (Firms 6–8). Yet, they were more concerned about the cost-benefit ratio of the system because they find the commission on sale somewhat high. Accordingly, they evaluate the outcome of the cooperation regularly.

The most professional firms (Firms 9–12) were not confident. Firms 9 and 10 were still linked to NNT but were not sure whether to continue the cooperation. Firms 11 and 12 had left NNT's system. All four firms agreed on the deficiency of the system. First, they were all dissatisfied with NNT's commission on sale. All firms have many customers, bed nights, and thus quite high turnovers. The firms have to pay a fixed rate of commission on sale (30%), a significant financial contribution to NNT compared with the financial contributions from small suppliers. According to the most professional firms, NNT is not able to offer benefits that match the firms' financial contribution. They want a system designed for professional firms with closer interactions both between the individual firms and NNT and between the firms linked to NNT in order to increase the exchange of knowledge, competence, ideas, and experiences. The most professional firms are ambitious with respect to furthering product development and marketing, and therefore want to interact with skilled partners to develop ideas and business concepts and to implement innovations. Since the rate of commission on sale is high, the firms argue that NNT should finance the transaction costs related to development of closer and more intensive interactions. In short, the firms disagree with NNT's strategy that emphasises cooperation with many suppliers and with many very small firms in particular. According to the most professional firms, the strategy implies superficial interactions between the actors in the system. The professional firms state that they would prefer to be linked to the tour-operator-based system if the system had been improved.

In summary, the small- and medium-sized firms find the relationship to the tour-operator very or quite satisfactory, even if the medium-sized ones are more concerned about the cost-benefit ratio. The most professional firms are more critical, and two of those enterprises have withdrawn from the system. It seems to be difficult for the tour-operator to serve the differing needs of the various suppliers. The tour-operator has given priority to procure many suppliers, but does not have capacity to meet the demands from the professional firms adequately. The professional firms prefer a system consisting of professional enterprises where interactions, learning processes, and exchanges of experiences are organised for them.

We can conclude that proposition 3 receives limited support from the empirical findings. The system included in this study works well for entrepreneurs in the founding stage and for firms that are not making advanced demands on the tour-operator as the driver of knowledge processes and transfer of competence. The most professional firms in the study are not satisfied with the tour-operator-based system's ability to meet their demands on competence and interaction.

Proposition 4

Proposition 4 claims that the system based on the tour-operator may include firms that are less innovative or non-innovative when they act individually. By being linked to the tour-operator they can be included in innovation processes. First of all we can conclude that the tour-operator-based system represents a form of inter-organisational collaboration that brings about new elements of management practice in the small-scale tourism firms. The cooperation can then be interpreted as a kind of organisational innovation, at least seen from the firms' point of view. Secondly, the suppliers linked to the tour-operator have gained access to new markets, which is in itself market innovation. Thirdly, by becoming attached to the tour-operator, the small-scale firms have also received access to such professional systems as a booking system and a system for financial transactions. Implicit knowledge is embodied in those systems and services and made available for the firms by being linked to the tour-operator. By using the professional systems, the firms have implemented new procedures for financial transactions and the delivery of services, which can be characterised as process innovation.

With respect to product innovation, the picture becomes more complicated. The tour-operator has imparted advice about products and services, i.e. the necessary standard of services and how to mix services to meet the customers' demands. The tour-operator has also recommended to the suppliers to cooperate with other local suppliers in order to develop new or more complementary products. In this respect NNT has stimulated suppliers to act innovatively. Yet, many of the firms are probably more imitators than innovators. They have mainly imitated products offered by other firms, although they also have made some adaptations and added some minor services. The diffusion and imitation of products and business concepts is partly due to the tour-operator's transfer of ideas on products and services. The tour-operator knows for certain that there are some products that are preferred by customers and passes on this information to the suppliers. However, the tour-operator recommends the suppliers to add services to those well-known products to avoid plain copies of products. It should also be emphasised that imitation is not necessarily a problem. If quite good products are copied, and the demand balances or exceeds the supply, then no problems occur. On the contrary, the diffusion of good product concepts can even lead to economic growth in rural and nature-based tourism. Over time, however, someone has to introduce new products to avoid overproduction and falling prices.

In the system we have studied, the professional firms appear to be most innovative in relation to products. They have made serious efforts to develop both new products and products somewhat different compared to other firms offering sea-fishing services. They have added services and have combined additional services to new

products or product packages, often by cooperating with other local firms. Their efforts have resulted in product innovations according to the CIS' definition. This begs the question: have these firms been innovative due to the cooperation with NNT, or would they have developed innovative capacity on their own? Two of the professional firms were linked to the tour-operator in the founding stage. Even if they are not confident with the tour-operator today, they state that the tour-operator imparted ideas and encouraged the firms to develop new services and products. The two other professional firms claim that they have developed ideas and products without help or recommendations from the tour-operator.

The presentation and reasoning above suggests that proposition 4 is at least partially supported by the data. The cooperation has brought about market innovation and elements of process innovation and organisational innovation. Nonetheless, a majority of the firms are more imitators than innovators regarding product development. The tour-operator has, however, made efforts to stimulate product innovation.

Summary and Conclusion

Our starting point was a set of propositions about a system which includes small-scale nature-based tourism firms interacting with a tour-operator who holds the position as the driving force of the system. The propositions draw primarily on Mattsson, Sundbo, and Fusing-Jensen's (2005) argument about the necessity of a driver in an innovation system for small and less innovative tourism firms. In addition the propositions follow Hjalager's (2002) reasoning about the need for channels for the transfer of knowledge, competence, and practical advice to small- and medium-sized tourism firms. We have deduced four propositions about the system of innovation based on a tour-operator.

The empirical findings mainly support three of the four propositions. In short, the tour-operator-based system brings about access to new markets for the firms linked to the tour-operator, and the system gives the firms access to such professional supportive services as a booking system, a system for financial transactions, etc. The tour-operator-based system may also include firms that are less innovative or non-innovative when acting individually. Linked to the tour-operator they are included in innovation processes. At the very least, the system has given less innovative firms access to professional services and access to new markets. However, the small- and medium-sized firms should perhaps be characterised as imitators rather than innovators.

The proposition stating that the tour-operator can represent a channel for the transfer of knowledge, competence, and advice is more questionable. The system included in this study works well for entrepreneurs in the founding stage because the tour-operator appears to be an adequate and competent consultant for entrepreneurs. In addition the small- and medium-sized firms are quite satisfied with the tour-operator's advice and consultants. However, none of the firms makes advanced demands in that respect.

The most professional firms are more critical, and two of those enterprises have seceded from the system. The professional firms prefer a system consisting of other professional firms, where interaction between the actors and transfer of competence

and learning processes are organised for the professional ones. According to those firms, the tour-operator-based system recorded in this study does not have the necessary qualities.

The tour-operator-based system works quite well if the aim is to help entrepreneurs developing and distributing nature-based tourist products. In other words, it is a system that promotes entrepreneurs. The system also works well for the small- and medium-sized firms because they do not make very strict demands on transfer of competence. They are quite satisfied with the tour-operator's work as a distributor of services, and they are quite satisfied with the access to supportive managerial systems (booking system, etc.) and advice. The tour-operator's efforts have increased those firms' business skills. Accordingly, the system recorded in this study also is adequate for firms with limited ambitions for innovation. The system does not, however, work well for professional firms that demand a system that can support more complex development processes. This dissatisfaction is also a function of the professional firms' perception of the cost-benefit ratio. The level of commission on sale is too high compared to the benefit they receive from the cooperation with the tour-operator.

The tour-operator seems to have two options. One option is to concentrate on the leading firms, prioritising their demands for support, interaction, and transfer of competence. This alternative is probably the most prosperous way to improve the innovative capacity in the tour-operator-based system and in nature-based tourism. The second option is to run the system as it does today, giving priority to recruiting and maintaining many suppliers. It is probable that the latter option will lead to a system which stagnates according to innovative capacity and processes.

The arguments above indicates that the tour-operator should prioritise the improvement of the system in order to maintain the largest firms as partners, even if they are the most demanding clients. Yet, this strategy is not without risk. If firms take advantage of the tour-operator's system to expand and increase competence, to improve networks, etc., they may over time become quite independent even if the system works well. They can gradually build up their own systems for promotion, marketing, and sales. They can develop relations to customers acquired by the tour-operator and sell services directly to them without going through the tour-operator. Besides, the firms will be exposed for competing against the tour-operator's tracing suppliers. If this happens, the firms could probably operate individually without the costs connected to the originator's commission on sale. In other words, we do not know if the professional firms will be loyal to the system. If they behave like "economic man" and pursue economic rationality, they will exit the system to optimise the economic outcome. Nevertheless, it is quite demanding for these small-scale firms to acquire enough customers on their own, even if they are quite professional. If they prefer to cooperate with other tour-operators, they still have to pay commission on sale. Accordingly, the tour-operator as the driver of the tour-operator-based system of innovation would have a fair chance of keeping the largest and most professional firms if the system is improved to meet the suppliers' demands.

One might ask if the system recorded in this study should be characterised either as a supportive system for entrepreneurs and small firms at an early age or as a system supporting and facilitating innovations. We have, however, highlighted processes that indicate that the system has qualities that support innovative activities.

The literature review indicated that cooperation, network or collaborative structures are decisive for innovativeness in tourism. The case-study sheds light on one kind of cooperation. In this respect the paper is in line with previous research. The study, however, has identified a collaborative structure that has not been paid much attention to in earlier research. This paper, thus, contributes to a supplementary perspective on antecedents of innovation in nature-based tourism.

In principle, the idea of a tour-operator-based system of innovation is compelling for two reasons. First, the tourism industry including nature-based tourism characterised by many small enterprises should increase its innovative capacity. Secondly, there seems to be a lack of adequate strategies or instruments which can raise innovation in tourism or nature-based tourism. The concept of a system with the tour-operator as a driver of innovation offers a potential answer to this challenge, and represents a complementary perspective to the scientific approaches that focus on innovation systems or networking and other types of collaboration. The empirical findings in this paper, however, come from only one case study of a rather small tour-operator. It is necessary to carry out further research in order to assess the validity of the propositions on the tour-operator-based system.

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