

Knowledge management in tourism – the application of Grant’s knowledge management model to Austrian tourism organizations

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Abstract

Purpose – *This paper aims to explore the pertinent issues of knowledge management in tourism using the example of tourism organizations in Austria.*

Design/methodology/approach – *The paper undertakes a review of the relevant literature before applying Grant’s model of knowledge management to Austrian tourism organizations. Data are gathered by means of a standardized online questionnaire.*

Findings – *The results of the study show that the majority of Austrian tourism organizations have implemented knowledge management according to Grant’s model. However, there is potential for development and further improvement.*

Practical implications – *The implications for knowledge management in tourism organizations are provided in terms of general prerequisites for knowledge management as well as practical implications and suggestions relating to the identification, measurement, storage, sharing and integration of knowledge.*

Originality/value – *The use of knowledge has long been of interest to academics and practitioners, but research on it has been under-developed in tourism. Despite the increasing conceptual studies on knowledge management in tourism in the last few years, this research uses a knowledge management model to assess the current status of knowledge management in Austrian tourism organizations and provides practical implications.*

Keywords *Knowledge management, Tourism organizations, Grant’s model of knowledge management, Tourism management, Austria, Organizations, Knowledge economy*

Paper type *Research paper*

1. Introduction

Strategic management literature originates from industrial organization models of competitive advantage (e.g. Bain, 1968) as the critical source of competitiveness of organizations, which is also referred to as the market-based view (MBV) of a firm. Following this approach, the success of a company is a function of two issues: “the attractiveness of the industry in which the firm competes and its relative position in that industry” (Porter, 1991, p. 99f). The seminal works of Selznick (1957) and Penrose (1959) see the organization as a bundle of resources and create the resource-based view (RBV) of the firm, which is an inside-out perspective of the company. Thus, from the early 1980s onwards the interest of strategic management turns towards the inside of the organization, which means towards the resources of a firm (Peteraf, 1993; Mahooney and Pandian, 1992; Barney, 1991; Wernerfelt, 1984). Barney (1991, p. 101) defines resources as: “all assets, capabilities, organizational processes, firm attributes, information, knowledge etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness”. During the 1990s, the RBV continually focused on intellectual resources such



as learning capabilities, intellectual capital, and knowledge (Liebeskind, 1996; Spender, 1996; Nonaka and Takeuchi, 1995). Today, the study of knowledge management in organizations from a strategic management perspective is commonly referred to as the knowledge-based view (KBV) of the firm (Grant, 2005; Grant and Baden-Fuller, 2005). Thus, we talk about knowledge management as a specific domain of organization theory.

Nowadays, we live in a knowledge society, in which knowledge is the most important means of production (Drucker, 1993). As current markets are characterized by high complexity caused by decreasing market entry barriers, increasing competition, shorter (product) life cycles, and increasing risk, the roots of corporate competitiveness and success have changed. In particular, the significance of knowledge management has increased. Accordingly, Nonaka (1991, p. 96) notes that: "In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge". Obviously, the knowledge of a firm is the key resource that can lead to a sustained competitive advantage (Gupta and Govindarajan, 2000; Teece, 1998; Grant, 1996).

This is particularly true of the highly developed service sector, which constitutes the fastest growing industry worldwide (Hodgson, 2003). In the tourism industry in particular, the tourism product consists of multiple service products that customers perceive (Kandampully, 2002; Grönroos, 2001; Normann, 2000) at a destination. A destination is generally defined as a "location of a cluster of attractions and related tourist facilities and services which a tourist or tour group selects to visit or which providers choose to promote" (World Tourism Organization, 1993, p. 22). Inskip (1991, p. 411) states that it is tourism organizations "at the regional, national, and international levels [which need to] [...] plan, develop, market, coordinate, and manage tourism in a country or region". Among the main functions of tourism organizations, therefore, are product planning, product development and marketing (Heath and Wall, 1992). However, as knowledge within a tourism destination cannot be accumulated in a single organization but is related to a multitude of service providers, the generation, combination, transfer, and storage of knowledge has become another key issue for tourist organizations (Knight and Harland, 2005).

The tourism literature, however, has only a few studies on the subject of knowledge management, revealing that only a few tourism companies are managing their knowledge professionally (Braun and Hollick, 2006; Carson and Adams, 2004; Ruhanen and Cooper, 2003; Bouncken and Pyo, 2002; Gamble *et al.*, 2001). "Hospitality and tourism industry awareness on managing knowledge is at infant steps" (Sigala and Chalkiti, 2007, p. 456). However, the generation, transfer and application of knowledge are of great importance in the tourism field, especially with regard to innovation and product development (Hjalager, 2002). In this regard, Chalkiti and Sigala (2008) illustrate how information sharing and knowledge creation might foster the tourism industry by researching to what extent a virtual community of tourism practitioners can facilitate knowledge management. Carson and Adams (2004) examine how market knowledge impacts the performance of tourist information offices, while Bouncken and Pyo (2002) examine hotel management in a similar way. Sheldon's research focuses on the distribution of destination information of individual national tourism offices (NTOs) in their promotion and marketing activities.

The present study aims to survey the status of knowledge management in tourism by applying Grant's (2005) model of knowledge management to Austrian tourism organizations. The findings are based on a standardized online questionnaire that empirically tests the model on tourism organizations on a national, provincial and regional level in Austria.

2. Literature review

2.1 The concept of "knowledge"

The meaning of the word "knowledge" is subject to a number of different interpretations, with the difference mainly resulting from the different types of organizations authors address when they discuss knowledge. In the past, knowledge has been linked to terms such as data, information, intelligence, skill, experience, expertise, ideas, intuition, or insight, which all depend on the context in which the words are used. Thus, the concept of knowledge has



been investigated in varied disciplines such as philosophy, psychology, sociology, or business sciences (e.g. Jasimuddin *et al.*, 2005; Nonaka and Takeuchi, 1995; Popper, 1972; Berger and Luckmann, 1966; Polanyi, 1966). Plato views knowledge as “justified true belief”, later modified by Nonaka and Takeuchi (1995, p. 58) to “a dynamic human process of justifying personal belief toward the truth” at the organisational level. Drucker (1993, p. 18) defines knowledge as information that “changes something or somebody either by becoming grounds for action, or by making an individual or an institution capable of different and more effective action”. According to Davenport and Prusak (1998, p. 5), knowledge is “a fluid mix of framed experiences, values, contextual information and expert insight”. Boisot (1998, p. 20) refers to it as “a capacity that builds on information extracted from data or the set of expectations that an observer holds with respect to an event”. However, it can be agreed upon that knowledge is a social capital and according to Polanyi (1966) can be explicit or implicit (see Table I).

Implicit or tacit knowledge is regarded as action-based and unformulated, highly personal and hard to transfer, while explicit knowledge is formalized and written knowledge. Knowledge within an organization is information pooled with the experience of employees in terms of their implicit and explicit knowledge (Von Krogh *et al.*, 2000). This implies that organizational knowledge not only refers to the knowledge of the organization, but to the knowledge of the individual. If both explicit and implicit types of the individual and the organization merge, the knowledge of the organization starts becoming a strategic asset of the firm (Bolinger and Smith, 2001).

2.2 Knowledge management

There have been a number of different perspectives from which researchers and practitioners have approached the management of knowledge. Although definitions and schools of knowledge management vary in their description of knowledge management, there seems to be a consensus that knowledge management is a process of capturing and sharing knowledge among people to create additional value (Dunning, 1993). Gurteen defines knowledge management as a “business philosophy [...] a set of principles, processes, organizational structures, and technology applications that help people share and leverage their knowledge to meet their business objectives” (Gurteen, 1999, p. 3). Thus, corporate knowledge management essentially consists of processes, instruments and tools to effectively capture and share data as well as use the knowledge of individuals within an organization. Knowledge management therefore discusses the need to identify, generate, use, exchange and collect the knowledge necessary to respond in a flexible way to market changes and new challenges. As Evanschitzky *et al.* (2007, p. 273) state: “To be of value to the organization, the transfer of knowledge should lead to changes in behavior and to changes in practices and policies, and to the development of new ideas, processes, practices, and policies”.

There are various models and concepts to explain knowledge management, which all identify different knowledge processes (Spender, 2005; McElroy, 2003; Nonaka and Takeuchi, 1995). One model which describes the way in which tacit knowledge is translated into explicit knowledge is Nonaka and Takeuchi’s (1995) spiral of knowledge creation. According to them, the process of knowing is a social process where knowledge is socialized through direct experience. McElroy (2003), however, argues that knowledge

Table I Classification of knowledge

Knowledge type	Possessed by	
	Individuals	Collectively within groups
Explicit	E.g. formal training and educations, personal notes and documentation	E.g. mutually agreed upon and documented business rules, registered patents
Implicit	E.g. problem solving skills, communication skills, negotiating ability	E.g. group heuristics, intra-group cohesion and stability

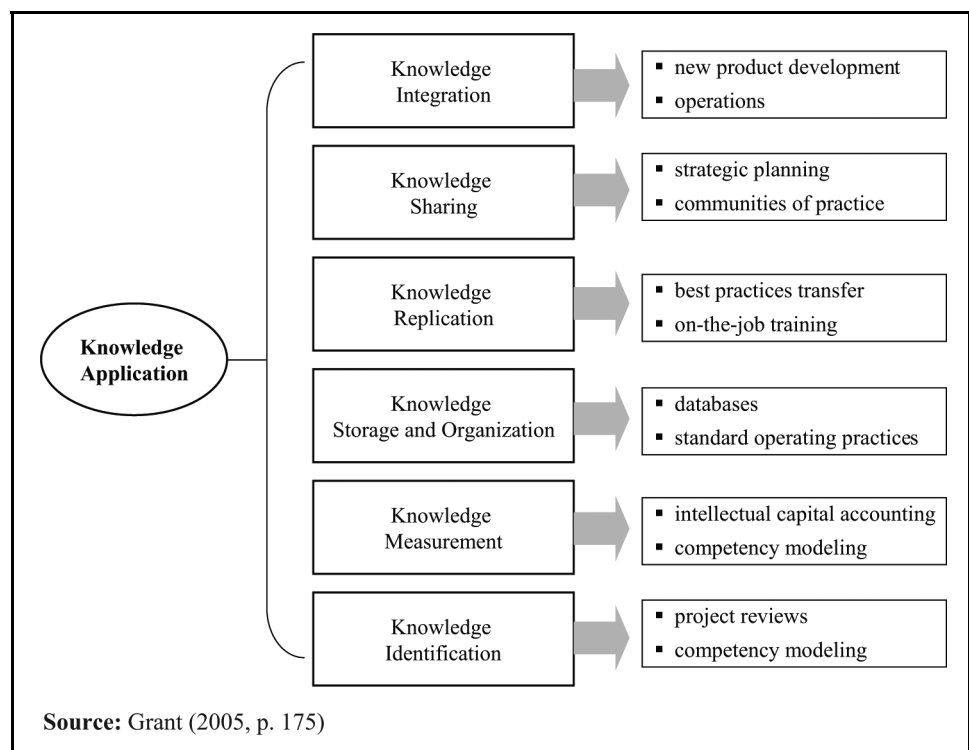
Source: Caddy (2001, p. 241)



processing is not only a social process but a self-organizing one as well; this ultimately means that no management is required, but nonetheless, policy and programs need to support and set the conditions for emergent knowledge. Grant (2005) does not focus on the processes (social or self-organized), but depicts the process of knowledge management in a model that specifically follows six steps of knowledge management (see Figure 1).

Grant's model states that the first step to knowledge integration in an organization is knowledge identification, which refers to the assessment of the competencies and knowledge assets of employees. The next step is knowledge measurement, which, according to Grant, means applying metrics to knowledge assets. Step three would then be knowledge storage and organization, which he regards as the most critical step. This step is closely related to technology and it is largely agreed that technology plays a part in knowledge management (Tenkasi and Boland, 1996). However, we must not overlook that "technology alone won't make a person with expertise share it with others. Technology alone won't get an employee who is uninterested in seeking knowledge to hop onto a keyboard and start searching or browsing. The mere presence of technology won't create a learning organization, a meritocracy, or a knowledge-creating company" (Davenport and Prusak, 1998, p. 142). Steps four and five then are knowledge replication and sharing, which refer to the transfer of knowledge among employees (Malhotra, 2000). In this context, Enkel *et al.* (2007, p. 9) particularly speak about the significance of informal knowledge sharing, about which they write that "links between individuals provide informal networks and work relationships within a company as well as with individuals outside the company. Those informal relationships, e.g., with employees in the same field of a profession, or with the same private interests, help individuals to exchange and gain additional knowledge that the established formal structure can't provide". This means that a specific set of linkages among a defined set of persons increases knowledge transfer and benefits knowledge management. Finally, the last step in Grant's model is knowledge integration, which refers to the integration of knowledge into the company according to the strategic vision of the company (Davenport and Prusak, 1998).

Figure 1 Model of knowledge management



Despite the fact that Grant's approach is not without criticism, and given the scope of knowledge management and the vast range of frameworks, concepts and models that have been developed, the author concludes that this model in particular helps to identify the linkage between knowledge as the basis, which can then be highlighted by the key processes through which knowledge is generated and applied. The knowledge process depicted by Grant clearly shows that every knowledge process must take account of the characteristics of the knowledge being deployed. In another step, knowledge can then be shared, replicated, stored, organized, measured and identified within an organization. However, the model must be criticized in so far as it does not focus on explicit knowledge. The justification for it is argued by Grant as follows: "It is in the area of tacit knowledge (which includes, typically, the major part of the knowledge relevant to organizational capability) where the major challenges and opportunities in knowledge management lie" (Grant, 2005, p. 181). Furthermore, it can be said that information technology has helped to store, analyze and systematize knowledge; however, this is mostly explicit knowledge. But, the greater part of organizational learning is based upon experience and the intuitive knowledge of people, which shows the importance of identifying implicit knowledge.

2.3 Knowledge management in tourism

The study and practice of knowledge management has grown rapidly since the 1990s, driven by social, economic, and technological trends. According to Cooper (2006), tourism has been slow in adopting this approach. However, the generation, use and sharing of knowledge is critical for the competitiveness of tourism destinations (Hjalager, 2002). Years before, Faulkner *et al.* (1994) already state that one of the key challenges is to transfer knowledge to tourism by saying that there is a need to develop a "knowledge culture" for service organizations. Knowledge management in tourism, therefore, should look into the question of what kinds of knowledge activities are inherent in tourism service providers (Von Krogh *et al.*, 2000), with knowledge activities comprising knowledge generation, knowledge use and knowledge transfer. In particular, the process of knowledge generation is crucial as the number of people included in the process of providing the tourism product is multiple and mutual interaction leads to an increase in knowledge (Nonaka and Takeuchi, 1995). The more people are involved in the knowledge generation process, the bigger the knowledge spiral grows (Malhotra, 2000).

However, the big challenge of knowledge management in tourism relates not to the company level, but to the macro level of knowledge management, as destinations are the real competitive units of tourism. And as Pyo *et al.* (2002, p. 396) put it: "destination knowledge management requires a multidisciplinary approach and an understanding of tourism". Gretzel and Fesenmaier (2004) illustrate how a knowledge-based information system at a destination level integrates knowledge between different levels. Pyo (2005) suggests knowledge maps in the sense of blueprints that are a technological tool that helps find knowledge in an organization. Wang and Russo (2006), on the other hand, propose a conceptual framework in relation to the functions of DMOs in order to provide tourists with up-to-date information about the destination. They conclude by saying that tourist organizations should not be gauged simply by the number of technology applications, but by how effective they are in utilizing the applications.

In many European countries, the tourism industry is characterized by the large proportion of SMEs (Getz and Carlsen, 2000; Morrison *et al.*, 1999; Thomas *et al.*, 1999; Smallbone *et al.*, 1999; Buhalis and Cooper, 1998), with the majority of hotels being run by families. Such providers have to cope with competitive disadvantages, which include economies of scale and scope, minimal potential for diversification and innovation, and limited access to capital markets. Furthermore, it is postulated that knowledge increase in destinations depends on size (Bieger, 1998), i.e. small tourism organizations, therefore, are likely to have problems in processing the information they receive (Pechlaner and Tschurtschenthaler, 2003) which might result in barriers for building corporate knowledge. However, today it is acknowledged that knowledge management is vital for competitiveness in service industries, especially for small companies (Hallin and Marnburg, 2008; Yang, 2007; Claver-Cortés *et al.*, 2006; Orfila-Sintes *et al.*, 2005; Jacob *et al.*, 2003; Siguaw *et al.*, 2000). Therefore, the tourism literature has seen an emerging number of papers on knowledge management, but much of



that work is conceptual rather than empirical (Shaw and Williams, 2009; Brackenbury, 2006; Decelle, 2006; Keller, 2006; Weiermair, 2006; Scheidegger, 2006; Cooper, 2006; Hjalager, 2002; Poon, 1993).

The current study applies Grant's knowledge management model to destinations, specifically to tourism organizations that are responsible for marketing the tourism product at a destination. It is them who are therefore also responsible for creating and sharing knowledge among single service providers within a destination. Knowledge management of destinations includes acquisition, explication, and communication of mission-specific professional expertise in a manner that is focused and relevant to destination's management (Pyo *et al.*, 2002; King, 1999). And although Pyo (2005) and Ruhanen and Cooper (2004) have carried out studies on how knowledge can be used to support the tourism industry, they have not shown how a knowledge management framework can be applied, how tourist organizations can acquire knowledge and how that knowledge can then be disseminated. The present study tries to close this research gap.

3. Empirical study

3.1 Research design

The standardized online questionnaire was developed online by means of an open source tool called LimeSurvey, and sent to the directors of all Austrian tourism organizations. The sample size was $n = 115$, and followed the three-level structure of Austrian tourism organizations. The top level is the national tourist board (Österreich Werbung), which positions the destination of Austria on the market and promotes Austria ($n = 1$) as a country. The second level is the provincial level with nine organizations ($n = 9$) that act as umbrella organizations, promoting the province and supporting the regional tourism organizations. On the third level are the regional tourism organizations, the numbers of which differ from province to province ($n = 105$).

The questionnaire was set up according to the logic of Grant's model of knowledge management (see Figure 1), which means that each stage of the model represented a question in the questionnaire that interviewees answered. Hence, as the first step in Grant's model is knowledge identification (assessment of competencies and knowledge assets of employees), respondents were asked to indicate how they find out the qualifications and competencies of their employees. Step two in Grant's model is knowledge measurement, which means applying metrics to knowledge assets; for that reason, respondents were asked: "Which specific measurement tool helps you assess the degree of knowledge of your employees?". Steps three (knowledge storage) and four (knowledge organization) relate to technology; therefore, respondents were asked about the way knowledge is stored in the organization and how often the various instruments are applied. Step five is knowledge replication and sharing which refers to the transfer of knowledge among employees; therefore, interviewees were asked to rate with whom they exchange knowledge and in which hierarchy levels of the company. The last step in Grant's model of knowledge management refers to the integration of knowledge into the company; here respondents were asked whether there is a person in charge of knowledge management.

3.2 Findings

The following paragraphs outline the most important findings. The SPSS statistics and Microsoft Excel packages were used for data analysis.

Altogether, 115 e-mails containing a link to the online questionnaire were sent out during May 2009. A reminder was sent out after the first week of response. The study produced a response of 49 questionnaires, i.e. a response rate of 42.6 percent (see Table II).

Before testing Grant's model, the aim was to find out whether the size of the organization in terms of employees impacts the degree of knowledge management and tools used, as postulated by the literature (Pechlaner and Tschurtschenthaler, 2003; Bieger, 1998). The following results become apparent (see Table III). Training for employees is used more often



Table II Response rate

<i>Tourism organizations in Austria</i>	<i>Total number</i>	<i>Response frequency</i>	<i>Response percentage</i>
National tourism organization	1	1	100
Provincial tourism organizations	9	5	55.6
Regional tourism organizations	105	43	41.0
Total	115	49	42.6

in tourism organizations with more than 60 employees than in smaller organizations; however, the difference is not significant (significance = 0.420). Job rotation is another instrument of knowledge management that is implemented more frequently in tourism organizations with more than 60 employees; 41 tourism organizations (83.7 percent) hardly or never use job rotation. However, the more employees a tourism organization has, the more it makes use of project teams within a department for knowledge transfer and management (significance = 0.009). The same picture becomes apparent for project teams across departments; however, the results are not significant (significance = 0.780).

3.2.1 Knowledge identification. According to Grant (2005), knowledge identification is the first step in knowledge management and refers to the assessment of the competencies and knowledge assets of employees. Therefore, respondents were asked to indicate how they find out about the qualifications and competencies of their employees (multiple answers were possible). Following the classification of knowledge (Caddy, 2001), it has to be noted that the tools listed in the questionnaire (see Table IV) all belong to explicit knowledge rather than implicit knowledge.

A total of 45.5 percent of Austrian tourism organizations with fewer than ten employees use electronic databases as a tool for knowledge identification, while more than 50 percent are making use of electronic databases in larger tourism organizations. Personnel handbooks used to identify the knowledge of employees are seldom used by all tourism organizations

Table III Impact of size (Kruskal-Wallis test)

<i>Number of employees</i>	<i>n</i>	<i>Medium rank</i>
<i>Training</i>		
1-10 employees	22	27.93
11-25 employees	14	23.43
26-40 employees	6	19.75
41-60 employees	4	28.75
More than 60 employees	3	16.33
<i>Job rotation</i>		
1-10 employees	22	27.57
11-25 employees	14	20.21
26-40 employees	6	26.42
41-60 employees	4	32.75
More than 60 employees	3	15.33
<i>Project teams within a department</i>		
1-10 employees	22	31.55
11-25 employees	14	23.86
26-40 employees	6	18.75
41-60 employees	4	13.25
More than 60 employees	3	10.50
<i>Project teams across departments</i>		
1-10 employees	22	26.14
11-25 employees	14	26.46
26-40 employees	6	24.00
41-60 employees	4	21.50
More than 60 employees	3	16.50



Table IV Knowledge identification (cross tabulation)

	Size of organization					Total
	1-10 employees	11-25 employees	26-40 employees	41-60 employees	More than 60 employees	
Electronic database	10	8	5	4	2	29
Personnel handbook	4	3	2	1	0	10
Database for employees with specific knowledge	2	5	1	0	0	8
Interviews with employees	14	9	9	3	2	31

($n = 10$). Only eight organizations have databases for employees with specific qualifications. The majority of tourism organizations undertake interviews with their employees to identify their knowledge, with 66.7 percent applying this tool in organizations with fewer than ten employees.

3.2.2 Knowledge measurement. The next step in Grant's model is knowledge measurement, which means applying metrics to knowledge assets. All respondents indicate that there is no specific measurement tool that helps them assess the degree of knowledge of their employees.

3.2.3 Knowledge storage and organization. Knowledge storage and organization is closely related to technology and refers to the way knowledge is stored in the organization. This question made use of a four-point Likert scale ranging from 4 = very frequently, 3 = frequently, 2 = rarely and 1 = never. A total of 73.5 percent of respondents ($n = 36$) very frequently make use of e-mails to store information, and 18.4 percent ($n = 9$) use this tool often. Internal newsletters are used very frequently by 51 percent of tourism organizations, whereas smaller tourism organizations with fewer than 25 employees only rarely or never use internal newsletters. Written protocols and documentation are used very frequently and frequently by 85.7 percent of tourism organizations. Electronic discussion forums, however, are rarely or never used by the majority of respondents (81.6 percent).

3.2.4 Knowledge replication and sharing. Knowledge replication and sharing refers to the transfer of knowledge among employees. Again, the question made use of a four-point Likert scale ranging from 1 = very frequently to 4 = never and asked respondents to indicate with whom they share their knowledge. Findings are shown in Table V.

Table V shows that knowledge sharing within the organization (employee ↔ employee and employee ↔ director of tourism organization) is more intense than knowledge sharing with other service providers or employees of other tourism organizations. Knowledge sharing among employees and directors of tourism organizations is intense with a mean value of 3.43; only four organizations indicate that knowledge sharing among employees and directors of tourism organizations seldom happens. Knowledge sharing with other parties shows the highest mean value when it comes to sharing knowledge among directors of tourism organizations and service providers at the destination (3.35), followed by employees with service providers in the destination (3.16). Knowledge sharing between employees and employees of other tourism organizations shows a mean value of 3.05. The sharing of knowledge between directors of tourism organizations and employees of other tourism

Table V Knowledge sharing (mean values)

Knowledge sharing between ...	Mean value
Employee ↔ Employee	3.73
Employee ↔ Director of tourism organization	3.43
Employee ↔ Service provider in destination	3.16
Director of tourism organization ↔ Service provider in destination	3.35
Employee ↔ Employee of another tourism organization	3.05
Director of tourism organization ↔ Employee of another tourism organization	2.81

organizations produces a mean value of 2.81, with 32.4 percent indicating that there is no knowledge sharing at all with other tourism organizations.

3.2.5 Knowledge Integration. The last step in Grant's model of knowledge management refers to the integration of knowledge into the company according to the strategic vision of the organization. A total of 38.8 percent of respondents (17 regional, one provincial and the national tourism organization) indicate that there is a person specifically in charge of knowledge integration according to the vision and main functions of the tourism organization; 40.8 percent of tourism organizations ($n = 20$) do not have a person in charge of integrating knowledge.

4. Interpretation of results

Before summarizing the contributions of this study and its implications, it is important to interpret the findings along Grant's model of knowledge management and to assess the findings in comparison with previous studies.

- *Knowledge identification* – The findings show that tools and instruments of knowledge management are more frequently used within larger tourism organizations than within smaller ones. This results from the general increase in necessity of knowledge management instruments with increasing numbers of employees.
- *Knowledge measurement* – The findings show that today there are no specific measurement tools that tourism organizations use to assess the degree of knowledge of their employees. This may relate to the rather recent application of knowledge management in tourism. Gretzel and Fesenmaier (2004) also argue that technology adoption typically occurs in three stages and correlates with the experience that organizations have in knowledge management. This might be another indicator regarding the measurement of knowledge in Grant's model; however, it was not tested empirically in the present study.
- *Knowledge storage and organization* – According to the study, it is e-mail communication as well as written documentation that is primarily used by tourism organizations to store knowledge. Internal newsletters are only used in larger tourism organizations and discussion portals are hardly used by any of the tourism organizations at all. This result indicates that tourism organizations in Austria prefer to stick to traditional ways of storing knowledge rather than use new means of knowledge storing which largely rely on new technologies. Pyo (2005) suggests knowledge maps to help store knowledge within a unit for the benefit of customers. Knowledge maps are blueprints to help find knowledge, which could easily be introduced within a tourist organization too.
- *Knowledge sharing and replication* – As Allee (2003, p. 113) says, "people require conversation, experimentation, and experiences shared with other people". The findings show that the frequency of sharing knowledge within the organization is not significantly different for employees and directors of tourism organizations. However, the intensity of intra-organizational knowledge sharing is higher compared to inter-organizations knowledge sharing. This is especially interesting when we look at the complexity of the tourist product which indicates that tourist destinations are dependent on each other, as, although they are competitors, they have to work together in creating the overall quality of the tourist product provided for the tourist (Von Friedrichs Grängsjö, 2003). The present study confirms findings of the literature, which say that it is informal get-togethers during breakfast, coffee breaks and lunches, which help to share knowledge among employees (Brown and Duguid, 2000).
- *Knowledge integration* – The majority of tourism organizations have a person in charge of integrating knowledge according to the strategy and vision of the organization. However, it needs to be stated that it is not clear whether this person is only responsible for this task or has multiple tasks and functions within the organization, which then again would probably lower the level of knowledge integration. It probably indicates that the number of tourism companies managing knowledge professionally is starting to increase (Bouncken and Pyo, 2002).



5. Implications

This section discusses the practical implications for tourism organizations with regard to knowledge management resulting from the findings of the current study.

- *General prerequisites* – Before knowledge management processes can be implemented in a tourism organization, general prerequisites need to be set up in order to guarantee a knowledge-based management of the organization. With regard to the size of the organization, it would be vital for regional tourism organizations to provide electronic instruments for knowledge sharing among employees. Besides virtual space, physical space for sharing information and knowledge informally within the company needs to be provided. As far as the organizational structure of the tourism organization is concerned, a low hierarchy level would benefit knowledge management. Another general prerequisite for knowledge management in tourism organizations is collectively striving towards achieving the organization's vision and a knowledge-based organizational culture based on trust and values. Some of these general prerequisites are also listed by McElroy (2003), who argues that company policy and programs need to support knowledge management in order to set the conditions for emergent knowledge.
- *Knowledge identification* – Larger tourism organizations could benefit from setting up databases where qualifications, training and the specific knowledge of employees are archived. Such a database would very easily give an overview of the knowledge profile of all employees and would facilitate the identification of knowledge within a tourism organization.
- *Knowledge measurement* – Defining measurements and metrics to assess and evaluate the amount of knowledge within a tourism organization could be useful in terms of learning more about the general amount of diverse knowledge in the organization in order to enhance knowledge management in the organization. As already stated, Pyo (2005) suggests knowledge maps to help store knowledge within a unit. These blueprints could easily be developed for employees in a tourism organization in order to depict the type of knowledge a person has. In case all blueprints are put together, the knowledge of the company can be recorded and measured according to a scale, which would need to be defined. This, in a subsequent stage, could be the basis for measuring knowledge of employees on a regular basis. Another way of measuring knowledge is to regularly hold quizzes on specific topics in the organization at meetings where all employees are present. This would be a playful way to measure knowledge.
- *Knowledge storage and organization* – Electronic information portals could help to archive the knowledge of the organization. Moreover, the use of e-mail, newsletters and discussion forums could be increased in order to better organize knowledge. A “news section” on the intranet of tourism organizations could, for instance, store information and knowledge that employees gain when receiving training, etc., as the most important advantage of the intranet is that it can be stored for later use. Knowledge derived from project groups within a department or across various departments needs to be documented in written form in order to make use of the experiences and information at a later date.
- *Knowledge sharing and replication* – Intra-organizational knowledge portals, databases, and forms of documentation could help to share knowledge among employees. Furthermore, the main results of a meeting could be documented and employees could also document their main findings and outcomes after having attended training days or finished a specific project. Job rotation is another tool that helps to share knowledge as employees have new challenges, which increase their motivation and again benefit knowledge creation, replication, sharing and storing within the tourism organization.
- *Knowledge integration* – Tourism organizations should have a person in charge of knowledge management in order to identify, measure, store, share and integrate the organizational and individual knowledge of employees. What would be most vital would be to define a knowledge strategy and knowledge goals for the organization which go hand in hand with the organization's vision.



Although the suggested implications do not go into a lot of depth and the various forms of measurement or knowledge sharing have their limitations, the author hopes that these suggestions might help develop a sound knowledge management in DMOs.

6. Conclusions and limitations

In today's knowledge-based economy, greater emphasis is being placed on managing organizational intangible knowledge assets (Grant, 2005). This is also true for the tourism industry, which can be regarded as a knowledge-intensive field (Bouncken and Pyo, 2002). The results of the study show that the majority of Austrian tourism organizations have implemented knowledge management according to Grant's model of knowledge management. It is interesting that there is no statistical difference among smaller and larger tourism organizations with regard to the types of instruments and tools used for managing knowledge in the organization. However, there seems to be a tendency for larger tourism organizations to use the instruments and tools of knowledge management more often than smaller ones do.

The majority of Austrian tourism organizations use electronic databases as a tool for knowledge identification followed by personal interviews with employees and personnel handbooks. However, there is no standardized measurement or assessment of the knowledge of employees, which is suggested by Grant's model in order to quantify the amount of knowledge within a company. According to findings, intra-organizational sharing of knowledge is more common than inter-organizational sharing of knowledge with third parties. This could imply that it is more important to share knowledge with colleagues within the organization than with colleagues outside the organization, which again benefits knowledge management in the organizations as a whole. Regarding the way knowledge is stored within the tourism organizations in Austria, electronic instruments and tools such as emails, internal newsletters or discussion forums are not yet frequently used.

The present paper has certainly acknowledged the limitations that need to be taken into account when considering the results of the study and its contributions. One limitation relates to the small sample size of 49 tourism organizations. The study reports the results of knowledge management in Austrian tourism organizations that does not allow generalizing results to the population at large. The study at hand deals with a limited number of issues concerning knowledge management in tourism organizations following Grant's (2005) model and is far from comprehensive – i.e. there are many questions with regard to the knowledge management of tourism organizations which still need to be answered.

More generally, as with any academic work, it is hoped that the present paper will stimulate other researchers to study the issue of knowledge management in tourism and the role that this can play in securing competitive advantages for providers of tourism products such as tourism organizations.

References

- Allee, V. (2003), *The Future of Knowledge: Increasing Prosperity through Value Networks*, Butterworth-Heinemann, Oxford.
- Bain, J. (1968), *Industrial Organization*, Wiley, New York, NY.
- Barney, J.B. (1991), *Gaining and Sustaining Competitive Advantage*, Addison-Wesley, Reading, MA.
- Berger, P.L. and Luckmann, T. (1966), *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*, Anchor Publishing, Garden City, NY.
- Bieger, T. (1998), "Reengineering destination marketing organizations – the case of Switzerland", paper presented at the 33th TRC-Meeting, Brijuni, May 15-18.
- Boisot, M. (1998), *Knowledge Asset: Securing a Competitive Advantage in the Information Economy*, Oxford University Press, New York, NY.



- Bolinger, A.S. and Smith, R.D. (2001), "Managing organizational knowledge as a strategic asset", *Journal of Knowledge Management*, Vol. 5 No. 1, pp. 8-18.
- Bouncken, R. and Pyo, S. (2002), "Achieving competitiveness through knowledge management", in Bouncken, R. and Pyo, S. (Eds), *Knowledge Management in Hospitality and Tourism*, The Haworth Press, New York, NY, pp. 1-4.
- Brackenbury, M. (2006), "Has innovation become a routine practice that enables companies to stay head of the competition in the travel industry?", in Organisation for Economic Co-operation and Development (Ed.), *Innovation and Tourism Policy*, OECD Publishing, Paris, pp. 71-83.
- Braun, P. and Hollick, M. (2006), "Tourism skills deliver: sharing tourism knowledge online", *Education + Training*, Vol. 48 Nos 8/9, pp. 693-703.
- Brown, J.S. and Duguid, P. (2000), *The Social Life of Information*, Harvard Business School Press, Boston, MA.
- Buhalis, D. and Cooper, C. (1998), "Competition or co-operation? Small and medium sized tourism enterprises at the destination", in Laws, E., Faulkner, B. and Moscardo, G. (Eds), *Embracing and Managing Change in Tourism*, Routledge, London, pp. 324-46.
- Caddy, I. (2001), "Orphan knowledge: the new challenge for knowledge management", *Journal of Intellectual Capital*, Vol. 2 No. 3, pp. 236-45.
- Carson, D. and Adams, K. (2004), "Strategic knowledge management in tourism: effectiveness and constraints", in Cooper, C., Arcodia, C., Solnet, D. and Whitford, M. (Eds), *Creating Tourism Knowledge*, Common Ground, Melbourne, pp. 5-18.
- Chalkiti, K. and Sigala, M. (2008), "Information sharing and idea generation in peer to peer online communities: the case of 'DIALOGO1'", *Journal of Vacation Marketing*, Vol. 14 No. 2, pp. 121-32.
- Claver-Cortés, E., Molina-Azorín, J.F. and Pereira-Moliner, J. (2006), "Strategic groups in the hospitality industry: intergroup and intra-group performance differences in Alicante, Spain", *Tourism Management*, Vol. 27 No. 6, pp. 1101-16.
- Cooper, C. (2006), "Knowledge management and tourism", *Annals of Tourism Research*, Vol. 33 No. 1, pp. 47-64.
- Davenport, T. and Prusak, L. (1998), *Working Knowledge – How Organizations Manage What They Know*, Harvard Business School Press, Boston, MA.
- Decelle, X. (2006), "A dynamic conceptual approach to innovation in tourism", in Organisation for Economic Co-operation (Ed.), *Innovation and Tourism Policy*, OECD Publishing, Paris, pp. 85-105.
- Drucker, P.F. (1993), *Post-capitalist Society*, Butterworth-Heinemann, Oxford.
- Dunning, J.H. (1993), *Multinational Enterprises and the Global Economy*, Addison Wesley, Wokingham.
- Enkel, E., Back, A. and Von Krogh, G. (2007), "The concept of knowledge networks for growth", in Back, B., Enkel, E. and von Krogh, G.T. (Eds), *Knowledge Networks for Business Growth*, Springer, Berlin, pp. 1-32.
- Evanschitzky, H., Ahlert, D., Blaich, G. and Kenning, P. (2007), "Knowledge management in knowledge-intensive service networks", *Management Decision*, Vol. 45 No. 2, pp. 265-83.
- Faulkner, W., Pearce, P., Shaw, R. and Weiler, B. (1994), "Tourism research in Australia", *Proceedings of the Tourism Research and Education Conference*, CAUTHE, Brisbane, pp. 3-25.
- Gamble, P., Chalder, M. and Stone, M. (2001), "Customer knowledge management in the travel industry", *Journal of Vacation Marketing*, Vol. 7 No. 1, pp. 83-91.
- Getz, D. and Carlsen, J. (2000), "Characteristics and goals of family and owner-operated businesses in the rural tourism and hospitality sectors", *Tourism Management*, Vol. 21 No. 6, pp. 547-60.
- Grant, R.M. (1996), "Toward a knowledge based theory of the firm", *Strategic Management Journal*, Vol. 17 No. 4, pp. 109-22.
- Grant, R.M. (2005), *Contemporary Strategy Analysis*, Blackwell, Oxford.



- Grant, R.M. and Baden-Fuller, C. (2005), "A knowledge accessing theory of strategic alliances", *Journal of Management Studies*, Vol. 41 No. 1, pp. 61-84.
- Gretzel, U. and Fesenmaier, D.R. (2004), "Implementing a knowledge-based tourism marketing information system: the Illinois tourism network", *Information Technology & Tourism*, Vol. 6 No. 3, pp. 2454-5.
- Grönroos, C. (2001), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18 No. 4, pp. 36-44.
- Gupta, A.K. and Govindarajan, V. (2000), "Knowledge flows within multinational corporations", *Strategic Management Journal*, Vol. 21 No. 4, pp. 473-96.
- Gurteen, D. (1999), "Creating a knowledge sharing culture", available at www.gurteen.com (accessed June 3, 2008).
- Hallin, C.A. and Marnburg, E. (2008), "Knowledge management in the hospitality industry: a review of empirical research", *Tourism Management*, Vol. 29 No. 2, pp. 366-8.
- Heath, E. and Wall, G. (1992), *Marketing Tourism Destinations – A Strategic Planning Approach*, Wiley, New York, NY.
- Hjalager, A. (2002), "Repairing innovation defectiveness in tourism", *Tourism Management*, Vol. 23 No. 5, pp. 465-74.
- Hodgson, G.M. (2003), "Capitalism, complexity, and inequality", *Journal of Economic Issues*, Vol. 37 No. 2, pp. 471-9.
- Inskip, E. (1991), *Tourism Planning – An Integrated and Sustainable Development Approach*, Van Nostrand Reinhold, New York, NY.
- Jacob, M., Tintore, J., Guilo, E., Bravo, M. and Julet, J. (2003), "Innovation in the tourism sector: results from a pilot study in the Balearic Islands", *Tourism Economics*, Vol. 9 No. 3, pp. 279-97.
- Jasimuddin, S.M., Klein, J.H. and Connell, C. (2005), "The paradox of using tacit and explicit knowledge", *Management Decision*, Vol. 43 No. 1, pp. 102-12.
- Kandampully, J. (2002), *Services Management – The New Paradigm in Hospitality*, Pearson Education, Frenchs Forest.
- Keller, P. (2006), "Towards an innovation-oriented tourism policy: a new agenda?", in Walder, B., Weiermair, K. and Pérez, A. (Eds), *Innovations and Product Development in Tourism: Creating Sustainable Competitive Advantage*, Erich Schmidt, Berlin, pp. 55-70.
- King, W.R. (1999), "Integrating knowledge management into IS strategy", *Information Systems Management*, Vol. 16 No. 4, pp. 70-2.
- Knight, L. and Harland, C. (2005), "Managing supply network: organizational roles in network management", *European Management Journal*, Vol. 23 No. 3, pp. 281-92.
- Liebeskind, J.P. (1996), "Knowledge strategy and the theory of the firm", *Strategic Management Journal*, Vol. 17, pp. 93-107.
- McElroy, W.M. (2003), *The New Knowledge Management Complexity: Learning and Sustainable Innovation*, Butterworth-Heinemann, Oxford.
- Mahooney, J.T. and Pandian, J.R. (1992), "The resource-based view within the conversation of strategic management", *Strategic Management Journal*, Vol. 13, pp. 363-80.
- Malhotra, Y. (2000), *Knowledge Management and Virtual Organizations*, Idea Group Publishing, London.
- Morrison, A., Rimmington, M. and Williams, S. (1999), *Entrepreneurship in the Hospitality, Tourism and Leisure Industries*, Butterworth-Heinemann, Oxford.
- Nonaka, I. (1991), "The knowledge-creating company", *Harvard Business Review*, Vol. 69 No. 6, pp. 96-104.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, New York, NY.



- Normann, R. (2000), *Service Management*, Wiley, Chichester.
- Orfila-Sintes, F., Crespi-Cladera, R. and Martinez-Ros, E. (2005), "Innovation activity in the hotel industry: evidence from Balearic Islands", *Tourism Management*, Vol. 26 No. 6, pp. 851-65.
- Pechlaner, H. and Tschurtschenthaler, P. (2003), "Tourism policy, tourism organizations and change management in Alpine regions and destinations – a European perspective", *Current Issues in Tourism*, Vol. 6 No. 6, pp. 508-39.
- Penrose, E.T. (1959), *The Theory of the Growth of the Firm*, Blackwell, Oxford.
- Peteraf, M. (1993), "The cornerstone of competitive advantage", *Strategic Management Journal*, Vol. 14, pp. 179-91.
- Polanyi, M. (1966), *The Tacit Dimension*, Doubleday & Co., New York, NY.
- Poon, A. (1993), *Tourism, Technology and Competitive Strategies*, CAB International, Wallingford.
- Popper, K.R. (1972), *Objective Knowledge. An Evolutionary Approach*, Oxford University Press, New York, NY.
- Porter, M.E. (1991), "Towards a dynamic theory of strategy", *Strategic Management Journal*, Vol. 12 No. 2, pp. 95-117.
- Pyo, S. (2005), "Knowledge map for tourist destinations – needs and implications", *Tourism Management*, Vol. 26 No. 4, pp. 583-94.
- Pyo, S., Uysal, M. and Chang, H. (2002), "Knowledge discovery in database for tourist destinations", *Journal of Travel Research*, Vol. 40 No. 2, pp. 396-403.
- Ruhanen, L. and Cooper, C. (2003), "Developing a knowledge management approach to tourism research", *Tedqual*, Vol. 1 No. 6, pp. 9-13.
- Scheidegger, E. (2006), "Can the state promote innovation in tourism? Should it?", in Organisation for Economic Co-operation and Development (Ed.), *Innovation and Growth in Tourism*, OECD Publishing, Paris, pp. 11-15.
- Selznick, P. (1957), *Leadership in Administration*, University of California Press, Berkeley, CA.
- Shaw, G. and Williams, A. (2009), "Knowledge transfer and management in tourism organizations: an emerging research agenda", *Tourism Management*, Vol. 30, pp. 523-35.
- Sigala, M. and Chalkiti, K. (2007), "Improving performance through tacit knowledge externalization and utilization: preliminary findings from Greek hotels", *International Journal of Productivity & Performance Management*, Vol. 56 Nos 5/6, pp. 456-83.
- Siguaw, J.A., Enz, C.A. and Namasivayam, K. (2000), "Adoption of information technology in US hotels: strategically driven objectives", *Journal of Travel Research*, Vol. 39, pp. 192-201.
- Smallbone, D., North, D. and Vickers, I. (1999), "SME policy and the regional dimension of innovation: background: the role and characteristics of SMEs", SMEPOL Final Report, Middlesex.
- Spender, J.C. (2005), "An overview. what is new and important about knowledge management? building new bridges between managers and academics", in Little, S. and Ray, T. (Eds), *Managing Knowledge: An Essential Reader*, Sage Publications, London, pp. 127-54.
- Spender, J.C. (1996), "Making knowledge the basis of a dynamic theory of the firm", *Strategic Management Journal*, Vol. 17, pp. 45-62.
- Teece, D.J. (1998), "Capturing value from knowledge assets: the new economy, markets for know-how, and intangible assets", *California Management Review*, Vol. 40 No. 3, pp. 55-79.
- Tenkasi, R.V. and Boland, R.J. (1996), "Exploring knowledge diversity in knowledge intensive firms: a new role for information systems", *Journal of Organizational Change Management*, Vol. 9 No. 1, pp. 79-91.
- Thomas, R., Friel, M. and Jameson, S. (1999), "Small business management", in Thomas, R. (Ed.), *The Management of Small Tourism and Hospitality Firms*, Cassell, London, pp. 78-98.
- Von Friedrichs Grängsjö, Y. (2003), "Destination networking – co-opetition in peripheral surroundings", *International Journal of Physical Distribution & Logistics Management*, Vol. 33 No. 5, pp. 427-48.



Von Krogh, G.F., Ichijo, K. and Nonaka, I. (2000), *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*, Oxford University Press, New York, NY.

Wang, Y. and Russo, S.M. (2007), "Conceptualizing and evaluating the functions of destination marketing systems", *Journal of Vacation Marketing*, Vol. 13 No. 3, pp. 187-203.

Weiermair, K. (2006), "Product improvement or innovation: what is the key to success in tourism?", in Organisation for Economic Co-operation and Development (Ed.), *Innovation and Growth in Tourism*, OECD Publishing, Paris, pp. 53-67.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, pp. 171-80.

World Tourism Organization (1993), *Sustainable Tourism Development: Guide for Local Planners*, World Tourism Organization, Madrid.

Yang, J.-T. (2007), "Knowledge sharing: investigating appropriate leadership roles and collaborative culture", *Tourism Management*, Vol. 28 No. 2, pp. 530-43.

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