Tourism, Sustainability and Regional Development: Knowledge and Innovation Perspectives

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Abstract
Knowledge is one of the key resources available to any firm or territory, and this applies to tourism, even though the nature of knowledge creation and transfer, as well as the protection of property rights, are highly distinctive in this sector. The paper examines the role of knowledge as a driver of regional economic development as well as a shaper of sustainable tourism. The key to the relationship between them lies in the distributed nature of knowledge in modern societies and the need to engage a wide range of stakeholders, whether in terms of narrowly growth-focussed strategies or sustainability strategies. More specifically the relationship is articulated through how they address issues of temporality, spatiality and co-production.

Zusammenfassung
Tourismus, Nachhaltigkeit und Regionalentwicklung: Wissen und Innovationsperspektiven
1. Introduction: Tourism as a System of Knowledge Transactions

To understand tourism we have to understand the central role played by knowledge. Moreover, knowledge and knowledge transactions lie at the heart of uneven regional development and of both regional and sustainability policies. There is a considerable literature on this in the fields of innovation, and territorial externalities. Competitive advantage is seen to be infused by the ability to learn and transfer knowledge quickly, within or across organizations and local/regional economies, in response to rapidly changing endogenous and exogenous conditions (Welch 2001, p. 21). For Drucker (1993), writing about the role of knowledge in economic development, ‘knowledge is the only meaningful resource today’. This is an oversimplification, of course, but knowledge is increasingly critical – whether for individual firms or territories – in the face of increasing competition, linked in part to processes of globalization.

Both in academic and policy circles, the debate about the role of knowledge has mainly concentrated on the knowledge-intensive sectors, neglecting the importance of knowledge in all sectors, and the existence of knowledgeable workers in all sectors of the economy (Thompson et al. 2001). There has been a tendency to focus on technology and on R&D investments, rather than the process, organizational and design innovation that characterise service sectors such as tourism. However, ‘the most obvious characteristic of modern economies is the distributed nature of knowledge generation and the consequent distributedness of the resultant innovation processes’ (Metcalf 2005, p. 12). Not only is there significant innovation within the low tech sector, but there are also substantial knowledge flows between sectors. As Hirsch-Kreinsen et al. (2006, p. 14) argue ‘... the knowledge that is relevant to an industry may be distributed across many sectors or agents’.

These comments about knowledge and the distribution of knowledge apply particularly to tourism, a sector which plays a significant, if still relatively neglected, role in economic development. In many European economies, the complex of activities involved in the production and consumption of tourism represents a major component of the economy, and demonstrates relatively rapid growth rates (as well as some spectacular declines in particular situations, such as some of the lower altitude Alpine tourism resorts, as the work of Zimmermann 1998 indicates). Tourism is also increasingly significant in ‘regional external economies’ (Kitson et al. 2004), whether in relation to place marketing and branding (Evans 2003) or through its contribution to creating an attractive, diverse and vibrant social environment, which facilitates creativity and innovation (Florida 2002).

Distributedness is an important concept for considering both regional and sustainability issues, because it resonates with, respectively, notions pertaining to maximizing capacity across regions (arguably to the benefit of the national economy) as well as the importance of engaging all stakeholders, rather than just the more powerful producers or controllers of knowledge. In recent years, local and regional development policies have increasingly recognized the role of tourism in development and regeneration strategies. In the case of the Alpine economies, Zimmermann (1998) provides a comprehensive review of the evolution of policies and planning for tourism, and their spatiality. This chapter argues that such policies could be further enhanced by understanding tourism to be an activity based on, and driven by, knowledge transactions, so that innovation should become a central concern of positive and strategic policies and practices (Hall and Williams 2008).

2. Is Tourism Knowledge Distinctive?

Knowledge is difficult to define, and that is why it is often contrasted to information, by way of illustration. Chang and Chen (2004, p. 24) explain that: ‘Information relates to data, while knowledge involves a wider process that involves cognitive structures that assimilate information and put it into a broader context’. The classic work on knowledge stems from Polanyi’s (1966) distinction between codified knowledge and tacit knowledge which approximates to what Polanyi (1975) later termed ‘personal knowledge’. Tacit knowledge has remained an elusive concept but is generally understood as the personal knowledge that is held by individuals, and which is difficult but not impossible to share with others, and sometimes even to express.
BLACKLER (2002) has further advanced the understanding of tacit knowledge, identifying four main types: embodied, embrained, encultured and embedded. *Embrained* knowledge is dependent on conceptual skills and cognitive abilities, which allow recognition of underlying patterns, and reflection on these. The individual mindset is a key influence on learning. *Embodied* knowledge results from experiences of physical presence. This is practical thinking rooted in specific contexts, physical presence, sensory information, and learning in doing. *Encultured* knowledge emphasizes that meanings are shared understandings, arising from socialization and acculturation. Language, stories, sociality and metaphors are mainsprings of knowledge. *Embedded* knowledge is embedded in specific contexts, and is generated in different (organizational) cultures and (work) groups.

This typology has particular relevance for tourism. Tourism workers and tourists possess all four types of knowledge. The tourism service encounter – between tourist and tourism worker – is directly mediated by these different types of knowledge. They both have particular conceptual skills and cognitive abilities, and the encounter is based on sensory experiences – appearances, ways of speaking and body language all influence the tourism experience. In other words, the encounter involves both embodied and embrained knowledge.

However, tourism intrinsically also involves travel, which implies the crossing of boundaries between different systems of encultured and embedded knowledge. Both tourists and tourism workers bring encultured and embedded knowledge to their encounters, or the service experience. The differences in their knowledge, based on learning and socialization in distinctive cultures and contexts, can be a cause of friction. Does the tourism worker understand the language or the cultural expectations of the tourist and, similarly, does the tourist understand the local context and culture of the tourism worker, and more generally of the host community? It follows that the tourism development policies, and the tourism workers, which understand and engage with these knowledge differences are more likely to deliver successful tourism experiences. And successful tourism experiences, of course, constitute a necessary, but not sufficient, basis for long-term and sustainable tourism development.

For both entrepreneurs and policy makers, tacit knowledge has been recognised as the key to competitiveness. Unlike explicit or codified knowledge, it is person-bound and not so easily imitated by competitors (MASKELL and MALMBERG 1999). It is an intangible resource which is critical to the competitiveness of firms and local economies. And, of course, the really critical issue is the way in which different types of knowledge are combined (NONAKA and TAKEUCHI 1995). ASHEIM and COENEN (2006, p. 164) argue, even if codified knowledge can be transferred with very little friction across space, ‘... it relies on tacit knowledge embedded in people and organisations to be understood and applied’. This is a source of competitive edge, but it is also a constraint. For example, a tourism development strategy may buy in international consultants to design an effective marketing campaign. But they may lack tacit knowledge of the local tourism industry, so that they may propose marketing images which the local tourism workers do not understand, and are unable to deliver, leading to unsatisfied tourist expectations. Sustainable development, virtually by definition, seeks to bridge these external-localized knowledge gaps.

3. Knowledge and Sustainable Tourism Development

Both the pursuit of sustainable development, and the effective management of knowledge and innovation are challenging in all industries, but especially so in tourism because of the distinctive nature of the sector. Some of the key issues relating to sustainability are about the need to engage all the key stakeholders, and this is particularly appropriate in relation to innovation:

- The tourist is a co-producer of the tourism experience. Indeed, the defining feature of the tourism experience is often the service encounter, between tourists and tourism workers, or between tourists. In other words, tourists are actively involved in creating the tourism experience, along with the employees of the tourism experience. They need to be involved in tourism innovation, if medium and long terms sustainability goals are to be achieved.

- Tourism has a distinctive temporality (SHAW and WILLIAMS 2004). Tourism experiences are
enjoyed in particular places at particular times. A theme park has a maximum number of entrance tickets it can sell each day, and a hotel has a fixed number of beds to rent each day. Yet demand is temporally highly uneven, across the week and the seasons. Therefore, a priority for innovation is how to match demand with supply across time. But, at the same time, sustainable development emphasises the need to take into account both long and short term perspectives.

- Tourism also has a distinctive spatiality. Tourism experiences are enjoyed in particular places. Some are in fixed supply (ancient monuments) while others can be replicated (mass tourism beach destinations). But tourism is necessarily highly polarised, generating enormous pressures on local environmental, economic and social systems. An improved understanding of tourists’ knowledge systems may stimulate innovation which addresses this issue – finding new ways to involve the local community positively, or introducing new means of dispersing tourists and tourism pressures. The achievement of sustainability goals is difficult in individual places, because of the interdependent nature of spatial systems.

- It is increasingly difficult to protect innovations in all, or at least in most, economic sectors. For example, the average protection of product innovations – measured as the delay before competitor entry – fell from about 33 to three years in the course of the twentieth century (Baumol 2002). But it is particularly difficult to protect tourism innovations that are patented. Many tourism features are public goods. Views of particularly lakes or mountains, for example, attract tourists, but are public goods that cannot be patented. Hotels in the Alps may introduce new types of facilities (new types of swimming pools, or bars) or new types of services (guided tours, free pick up from airports etc). But these are ‘front-stage’ facilities and services that are easily observable and potentially can be copied by other firms. Hence, a tourism firm which innovates has a relatively short period in which it is able to enjoy a monopoly rent from its investment – by the following season this will probably have been adopted by one or more competitors. This is a real problem in two ways: it discourages investment in innovations which are essential to sustainability, and it leads to the prioritisation of short term goals over long term sustainability goals.

The difficulties faced by firms in managing knowledge and innovation are illustrated by a study of UK hotels and tourism attractions, undertaken by Blake et al. (2006, p. 1108). Most firms believed that they were under strong competitive pressures from potential new entrants. But, significantly, 58% of accommodation and 63% of attractions managers believed that if they invested in innovations, there would only be a short term return as these would be copied by their competitors. At worse, this can lead to innovation passivity, or passive business strategies, a feature of many tourism businesses (Claver-Cortés et al., 2006). It can also frustrate effective regional and sustainability policies.

4. Tourism as a System of Knowledge Interfaces: Challenges

The tourism system involves a number of inter-relationships, each of which represents a knowledge interface (see Fig. 1). Sustainability depends on being able to rework these relationships in relation to long term goals, which recognize the needs and capacities of both present and future stakeholders. Three of the key inter-relationships are between: tourism firms and tourists, tourists and local residents, and tourists and other tourists.

These knowledge interfaces are constantly shifting over time, being driven by internal and external changes (see Fig. 1). For example, external changes in communications systems – such as the Internet – may make it easier to transfer information and knowledge, at a distance. And internal changes – such as reorganization within the firm may mean that it has a stronger (or weaker) capacity for engaging in knowledge transactions with tourists or policy makers. This may make them more open to engaging with new policy initiatives that are designed to stimulate innovation, or be more open to the different ideas of the tourists.

The changes between the stages of early mass tourism, mature mass tourism, and individualised tourism are indicated in schematic and idealised
form in Tab. 1. The implications in terms of the knowledge interactions within a more sustainable tourism system are also indicated.

In the first of these phases, early mass tourism, there are usually small groups of tourists who are taken on strongly guided and structured tours to areas which previously have relatively little experience of large scale tourism activity. Typically this included some of the international tours organized by Thomas Cook and others to the Alps or to Italy and Spain in the nineteenth century. In these circumstances, the tourism firm is the main repository of knowledge about the tourism destination – about how to travel there, find accommodation, and how to visit major attractions. Given the tourists’ lack of encultured and embedded knowledge of the host community, and vice versa, the direct knowledge transactions between them are relatively limited. Tourist-tourist relationships, however, are intensified because they are travelling in relatively small groups, eating and making visits together, and exchanging views and impressions which draw on their various forms of knowledge.

In the mass tourism phase, destinations are increasingly constructed or reconstructed in ways which imitate the tourists’ knowledge – as symbolised by the increasing knowledge amongst hotel staff of some international languages, or the development of fast food chain restaurants whose codified knowledge (menus etc.) imitate those found in the tourists’ countries of origin. In this phase, local knowledge is filtered by the activities of the mass tourism companies, and by local firms that present commodified versions to sell to the tourists, typically in the form of mass produced ‘local craft’ items, or cultural events. In this environment, there is a mass of competing attractions – bars, restaurants, providers of beach equipment etc. – constructed to reflect the embedded and encultured knowledge of the tourists. In this setting, the tourists now have sufficient knowledge to act more independently within selected spaces within the destination. As a result they are likely to engage in a range of inter-relationships with other tourists outside of their immediate groups, whether meeting them on the dance floor, in the café or on the beach. Indeed, these inter-relationships – which are also forms of knowledge transactions – become part of the tourism experience.

<table>
<thead>
<tr>
<th>Knowledge interaction</th>
<th>Early mass tourism</th>
<th>Mature mass tourism</th>
<th>Individualised tourism</th>
<th>More sustainable tourism</th>
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</thead>
<tbody>
<tr>
<td><strong>Tourism firm – tourist</strong></td>
<td>Tour firm as intermediary to local knowledge</td>
<td>Reproduction of tourist knowledge system</td>
<td>Combination of codified and tacit knowledge ‘empowers’ tourists</td>
<td>Open knowledge exchanges, based on trust</td>
</tr>
<tr>
<td><strong>Local resident – tourist</strong></td>
<td>Mutual but limited engagement</td>
<td>Local knowledge is screened or sold in commodified packages by tour firms</td>
<td>Re-discovery of local knowledge systems</td>
<td>Knowledge transactions framed by shared goals</td>
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<tr>
<td><strong>Tourist – tourist</strong></td>
<td>Intra-tour group relationships are strong in small tour groups</td>
<td>Inter-tourist relationships more important in resorts, but highly structured</td>
<td>Inter-tourist interactions played out in less structured settings</td>
<td>Mutual recognition of competing but complementary interests and knowledge</td>
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Tab. 1: A schematic summary of tourism knowledge interactions (Source: Williams 2011)
In the third phase, tourists either become more individualised tourists in areas of previous mass tourism (for example, second home owners in the Alps), or seek out new and more exotic tourism experiences such as walking in the Himalayas, or skiing in New Zealand. The tourists are more likely to be experienced travellers, and to have more accumulated tacit knowledge acquired from previous tourism. They can combine this with codified knowledge from books and the Internet. One outcome is that they increasingly can organize their own travel – booking hotels, flights, cars and tickets to events on the Internet. Or they may join small, guided excursions for exotic ecotourism experiences, where their own generalised knowledge is combined with the specialist knowledge of the guide. They are more likely to be open to knowledge interactions with local populations, because they can draw on knowledge acquired on previous trips. And their interactions with other tourists, although still important, are played out in less structured settings. For example, young backpackers may sit down in a backpacker lodge, and exchange knowledge about places to visit, or the cheapest ways to obtain tickets.

The challenge for tourism firms and tourism policy makers is that these shifts – and many smaller ones within this broad framework – represent a changing innovation context. The challenge in terms of sustainable tourism policies is that these knowledge transactions need to be seen as mutual (two way), based on trust and shared values, and able to take a longer term perspective.

5. Tourism, Innovation and Regional Development

Tourism activities, and tourism development, occur in an increasingly competitive environment, due in part to processes of globalization. Transport technology has shrunk space, and more and more places have engaged in tourism, and in 'place wars', and this has increased the pressure to innovate. Several key innovation policy areas can be identified which underpin a successful tourism regional development policy.

![Fig. 2: Tourism innovation and regional economic development (Source: WILLIAMS 2011)](image-url)
First, and most obviously, regional policies may aim to provide direct support for individual tourism firms. These are all areas that can be supported, to some extent, via classic SME policies, such as providing loans for innovative investments, consultancy services to develop new products, or training programmes for managers and workers. In effect, these are mostly means of enhancing not only the flows of knowledge into firms but also of increasing their capacity to absorb and utilise these. There are, of course, obstacles to the successful implementation of such policies. The ability of other firms to imitate innovations in tourism is a significant constraint, and this is also an argument in support of the state being able to play an important role in subsidising transfers of new knowledge to individual firms, which effectively become public goods enjoyed at zero or very low costs by other firms. But there may also be barriers relating to the motivations of firms; in some circumstances, life style entrepreneurs may positively prefer to be passive in relation to tourism innovation, and be reluctant to adopt innovations which involve a reduction in their leisure time. In other words, they tend to be disproportionately at the non-innovative end of the conservative-entrepreneurial strategic management continuum (Jogaratnam and Tse 2004). However, in positive contexts, there can also be co-production of innovation between firms, either formally or informally.

Secondly, because so many aspects of the tourism experience involve public goods, there is considerable scope for regional development policies. These range from investment in transport improvements, to enhancement of public spaces (such as parks, or seafront promenade areas), to making primary attractions such as the beach and sea more attractive (bathing platforms, environmental controls etc). Investment in education and training is one of the most effective and most common forms of public good.

Thirdly, in an industry where public goods and knowledge spillovers are relatively common, there are comparatively low levels of trust amongst entrepreneurs. This is problematic in view of the increasingly blurred boundaries of the firm, and the need to make effective use of relationships across those boundaries (Hall and Williams 2008). Individual firms often find it difficult to build effective tourism partnerships, and this creates a particular role for the state in leading top-down public-private initiatives.

Fourthly, local and regional (and, indeed, national) training and education policies are particularly important because of the employment characteristics of the industry. As previously emphasised, the service encounter is central to the tourism experience. But human capital is also important in ‘backstage’ office work, as well as front stage work with the tourists. For example, although technological innovations are important in tourism, innovation has to be ‘high tech and high touch’ (Keller 2006, p. 28). Investment in IT will only be maximised if there is also matching investment to give workers the knowledge to use such technology effectively by evolving new working practices and through training. But individual firms face a problem here. Given high rates of labour market turnover in tourism (Riley et al. 2002), there are high levels of knowledge spillovers when workers change jobs. Hence, individual firms may be reluctant to invest in training their workforces, if that knowledge is then passed on as a free good to rival firms when workers change jobs. This underlines the importance of public sector or industry-led policies to support training programmes that enhance the skills of the local, regional or national labour market as a whole.

Fifthly, international migration is another way of addressing not only the human capital needs of the tourism workforce, but also of enhancing knowledge transfers and innovation (Williams and Shaw 2011). This can take different forms. It may represent the managed movement of managers between different hotels owned by a transnational company, or it may involve the movement of individual workers, sometimes moving as ‘free labour agents’, who transfer various forms of tacit knowledge across borders (Williams 2006). Migrants transfer embodied and enbrained knowledge with relative ease, but encultured and embedded knowledge is more problematic. These are socially situated, having been acquired in particular places, so that an international worker in retailing, for example, is disadvantaged by lack of shared knowledge of local shopping behaviour. However, in international tourism this can be an advantage. Tourism markets are mobile, by definition. Given
the internationalization of tourism, large and increasing numbers of tourists seek services in foreign countries where their language is not spoken, and their cultural norms are unfamiliar. Tourism firms may therefore be willing to pay a premium to employ international workers who possess such knowledge, as Aitken and Hall (2000) record in New Zealand. For example, large hotels which regularly host touring parties of Korean visitors may employ Korean migrant workers. In this perspective, international migration policy can be seen as a form of innovation policy, and one which may have particular significance for the tourism industry; especially if the migrants have the knowledge to deliver enhanced tourism experiences to international tourists. The potential for this is immense in, for example, places such as London, where an estimated 60% of tourism workers are international migrants (GLA 2005).

Sixthly, the tourist himself or herself needs to be recognized as a significant centre of tourism innovation. Consumers have competence in consumption acquired through long-term personal investments in consumption and personally researching consumption (Howells 2003, p. 3–4). Indeed, some represent ‘enterprising consumers’ (Earl 1986, p. 53–84). Armed with considerable knowledge (of all types, including embedded knowledge of particular firms, or web sites), the consumer becomes an active agent in innovation, not least because he and she is the real expert on their individual consumption needs. This is illustrated in the way that some tourists become experts in booking bargain flights and hotels. In effect, such tourists become self-serving travel agents acting on their own behalf, or micro voluntary travel agents or tour operators, organizing holidays on behalf of friends and family.

Local and regional policies can target the provision of information to such ‘micro tour operators’, so as to increase the probability that they will promote particular destinations to their group members, or in their own decision making. The most obvious outcome of this has already been referred to, that is the process of disintermediation. In fact, it is more accurate to refer to innovation leading to reintermediation, rather than disintermediation, as new web site engines such as Expedia or Opodo have taken over roles previously played by travel agents. Finally, the most imaginative and risk taking ‘consumer (tourist) entrepreneurs’ are likely to be the sources of some of the more disruptive, as opposed to incremental, innovations. They may put together highly exciting new itineraries which are not available to tour companies, because the latter require minimum capacity or minimum demand levels to innovate successfully. But, over time, as the tourist entrepreneurs disseminate their innovations (typically in conversations with friends, or in internet blogs about their travel), they may create conditions for commercial tourism companies to innovate on a larger scale.

6. Conclusions: Tourism Innovation, Sustainability and Regional Development

Tourism innovation shares many features in common with service sector innovation as a whole, but production conditions and the external environment in the tourism sector favour particular types of innovation, while also posing particular difficulties in protecting property rights, or implementing some innovations. This creates the need for a distinctive approach to tourism innovation at the regional level, to complement firm-level innovation. At heart, these issues centre on the difficulties that individual firms encounter in seeking to focus on the long term as opposed to the short term, and on the full impacts of their actions including the external costs and benefits. In other words, in tourism, perhaps more than in most sectors, there are fundamental barriers to implementing sustainable development policies, while the need for such an approach is particularly acute. The challenge as always is to find ways to engage stakeholders in collaborations which are enduring, and based on trust and shared values.

The work of Friedrich Zimmermann (Zimmermann 1998; Goode et al. 2000), over many years, has been instrumental in identifying how many of these conflict areas played out in the fields of regional development and tourism development. His work on Alpine tourism has been especially important, in exposing the contradictions and limitations which face public policies and planning. Tourism is not just a driver of economic change in the Alps, but it is a major – and often the dominant – force for social and environmental changes. The challenge
ahead is to harness the innovation capacity of firms and regions to pursue goals that favour balanced and diversified growth, as well as sustainability.

References


