CHAPTER 6. A DYNAMIC CONCEPTUAL APPROACH TO INNOVATION IN TOURISM

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Abstract

The importance of innovation has long been underestimated in the service sector. In contrast to the radical innovations vital for growth in manufacturing, in the service and particularly tourism innovation has played a secondary role and capital has been scarce. There has consequently been little government interest. This situation has changed with the emergence of new information and communication technologies (NICTs), which have had a major impact on tourism. There has been much research into the dissemination of new modes of production and the resulting organisational upheaval and marketing adjustments. But the information revolution has not been the only source of innovation in tourism, an area in which many other questions need to be addressed.

Methodology

This contribution is based on part of the 2002-2003 report to the National Tourism Board "Tourism and Innovation: Assessment and Outlook". Our method has been to:

- Examine statements made during interviews with tourism industry leaders in the light of recent theoretical findings on innovation in services.
- Assume a context of complexity: tourism products are composite goods.
- Take an approach that is comparative (at the industry level), multidisciplinary (at the academic level), and systemic (tourism's location-specific nature and government intervention are core considerations).
- Avoid the pitfalls of "common sense" and such myths as "the innate unproductiveness of service activities", "inability to innovate" ("Can one imagine a hotel-restaurant performing research?"), "low capital intensity", "inability to generate substantial productivity gains" or "low quality of jobs in tourism".

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Defining innovation

Innovation can be defined in many ways. Its leading theoretician, Joseph Schumpeter (1883-1950) had a broad vision of the concept, encompassing new products, new production processes, new markets, new raw materials and new forms of organisation. For Schumpeter the common thread between all these changes is that they involve "carrying out new combinations" which are qualitatively important and introduced by dynamic business leaders ("entrepreneurs"). There has been no major change linked to any particular theorist in the definition generally accepted today.

Today however we above all need to take into account the risky nature of the innovation process, and the fact that in the final analysis it is the consumer who will be the judge of the value it is supposed to create:

"…a process of creating new value … geared first towards customers, as the main arbiters of business competitiveness, but one that can also involve other stakeholders as major beneficiaries, such as the organisation itself (employees), shareholders (profitability), external partners, etc."[43]

Innovation does not mean creation ex nihilo

Innovation is not identical with creativity, which means the production of new ideas, new approaches and new inventions. Innovation is the application of such new and creative ideas and inventions. From this it follows that people and organisations may be innovators without being creators.

Innovation is the sum total of a social process which produces an invention that may or may not find a use. Since to be successful inventions must be adopted, the time lag between invention and innovation can be considerable. Such an invention may in fact involve only marginal changes. Does a thing have to be new at the level of a country to be accepted as "innovative"? Can the level be that of a market, or even just a firm? There seems to be agreement on this, least of all in the programmes of the European States. Innovation is indeed a "chaotic concept"!

43. [Translated from] Jean-Paul Flipo (2001), *Innovation dans les activités de service*, Éditions d'Organisation.

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Innovation does not necessarily mean progress (technical, economic or social)

Innovation imposes discontinuity, Schumpeter's "creative destruction". A product that brings greater satisfaction to the user or a process that improves the efficiency of a firm, will at the same time render an existing product or process obsolete. It therefore creates victims or, at the very least, readily appears as a threat to certain interests. The advent of superstores triggered the decline of small shops. New information and communication technologies disrupted the world of tourism distribution. Innovation in tourism impacts not only on competitors but also on territories, and it does not always advance the cause of sustainable tourism development!

Innovation does necessarily bring success

The job of an innovator is not like that of a manager, who according to traditional economic theory must concentrate on improving existing practices. An innovator must accept risk, and the more radical the innovation the greater the risk. Successful innovations are "the trees that hide the forest" of failures. Risk may act as a deterrent to innovation. But there is also risk in ***not*** innovating, such as falling technologically behind, losing ground to innovative competitors, inertia, and ultimately failure.

In the words of Bernard Bellon: "*Nine out of ten innovations are never completed, 99 out of 100 innovations serve no purpose. The one that succeeds makes the effort worthwhile*".[44]

Innovation in tourism and innovation in other service sectors

What is unique about innovation in tourism services?

Although innovation in tourism is more or less similar to innovation in any service industry, manufacturing models and even examples from agriculture can help us understand the process better.

- Comparing the approach to innovation in tourism and in other service industries such as retailing, banking and recreation.

44. [Translated from] Bernard Bellon (2002), *L'Innovation créatrice*, Economica.

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Tourism products are "experience goods" ***par excellence***, validated ***ex post facto*** by consumers. This is consistent with the trend towards "customisation" or "mass production of the made-to-measure"[45]. Tourism is spatially rooted, has a "heritage" background, attractions and some kind of accommodation. The sequential dimension of consumption affects the quality of the overall experience. Retailing can shed light on the manner in which tourism products are distributed and consumed. Tourism has features in common with cultural, sporting and recreational pursuits. Tourism and leisure activities are both subject to industrialisation. The influence of innovations in urban tourism on the supply of leisure activities (casinos, museums, special events, etc.) accentuates the convergence to the point where it becomes difficult to establish a clear boundary.

- Services differ from industrial models in various ways: marketing, the role of R&D, lack of patentability, responsiveness to markets, low technology content, etc. Innovation in services cannot be analysed in the same way as in manufacturing. Taking an evolutionist approach Keith Pavitt classifies service firms, and especially those performing services for individuals, as "supplier-dominated", and essentially users of technologies developed in the realm of manufacturing. Innovation tends to be non-technological, focusing on such areas as professional know-how, brands and design, which play a major role.

- The industrialisation of services and the impact of new information and communication technologies (NICTs) are making tourism more innovative. This can be seen from the preponderance of tourism services in electronic commerce.

- Classification of innovation in tourism.

  - Technological and non-technological

  - Product or process related, organisation or market related, ad hoc

  - Radical, incremental or architectural

45. BRESSAND Albert *et alia* (1988) *Les services au cœur de l'économie relationnelle.*

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Based on Schumpeter's idea of "creative destruction" the Abernathy-Clark model[46] involves a dual classification of innovations: degree of obsolescence of knowledge subsequent to an innovation, and degree of change in industrial linkages prompted by the innovations. This has been applied to tourism by Anne-Mette Hjalager (2002)[47]. It is worth noting that certain concepts do not have the same meaning for all authors, indicating that there is still room for research in this field.

Synthetic approach

The Barcet model[48] reflects a more synthetic vision of innovation. The author's model divides the sequential process (co-production) linking a customer and a service provider at four levels, from customer expectations to the means and resources deployed by the provider. This may be summarised as follows:

Levels 1 and 2 represent demand for services: innovation in the customer's system (beyond the providers' reach) and "product-service" innovation, the emphasis being on the customer's expectation of results.

Levels 3 and 4 represent supply of services: process innovation that is either internal or intended to alter the customer/service provider relationship, and innovations in means or resources, generally intended to rationalise internal operating conditions or to position a given service more strategically within total supply.

Zone 2, which is the overlap between supply and demand, constitutes the core for the construction of innovation.

The set of innovations instituted around a new air service such as Air France's shuttles can be represented as follows:

46. See graphic representation of the *Abernathy-Clark model* in: WEIERMAIR, Klaus (2004) *Product improvement or innovation: What is the key for success in Tourism?,* p.30, Figure 1.

47. HJALAGER, Anne-Mette (2002) *Repairing Innovation Defectiveness in Tourism.*

48. BARCET, André (1996) *Fondements culturels et organisationnels de l'innovation dans les services.*

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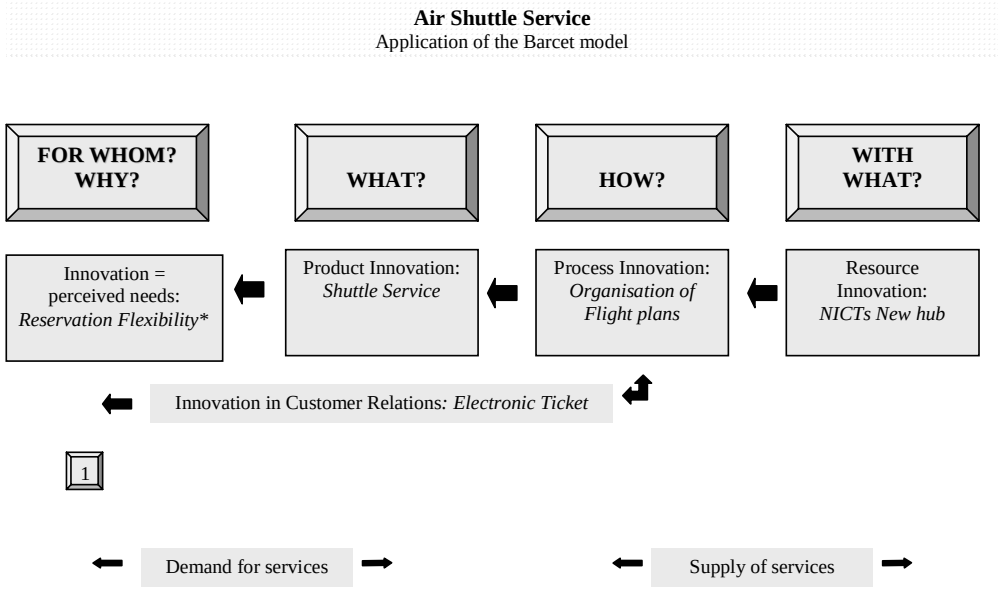
Figure 6.1 Application of the Barcet model

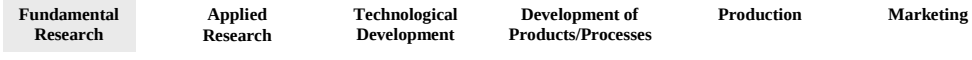


Source: Xavier Decelle.

The dynamics of innovation in tourism: which models?

The dynamics of innovation in tourism can also be interpreted using the innovation modelling efforts found in economic literature and management sciences. Modelling expresses a certain approach to innovation, the forms in which it evolves and the forces driving that change in a formal, simplified way. With no pretension of being exhaustive, one could cite:

Figure 6.2 Linear models



The (regular) linear perception of the dynamics of innovation is the oldest. It is the one that underlies Schumpeter's work. It proceeds directly from the invention to the marketing of the invention. This vision is consistent with a perception of progress (technical, economic and human) that is direct and irreversible. For

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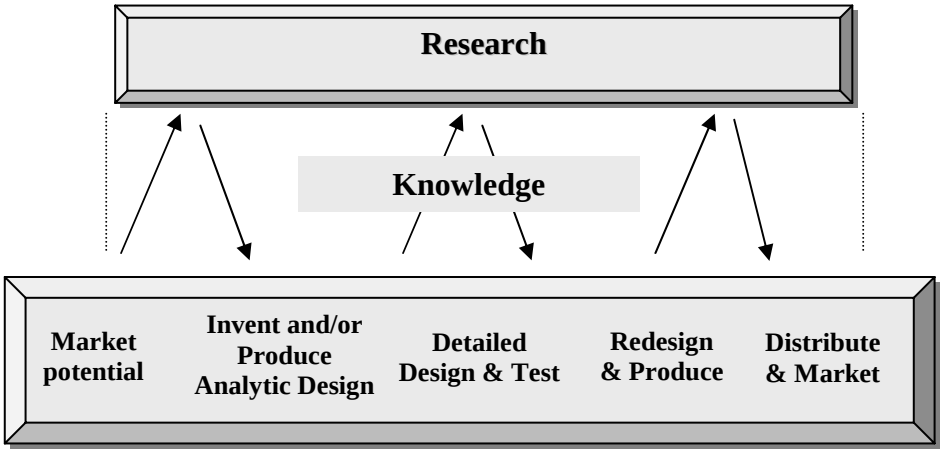
tourism, it can be used to understand the approaches taken to the dissemination of technological innovations imported from other sectors, such as NICTs.

Figure 6.3 Chain-linked models



Source: Kline, Steven J. and Nathan Rosenberg, *An Overview of Innovation*

Here, one-way causality ceases. These models show, first, that innovation appears as a "coupling phenomenon"[49] between technique and market, which operates in an interactive mode[50]. Second, this research shows that it is the progressive nature of innovation activities that dominates[51]. Demand-pull innovations, driven by new demand and expressing new needs, thus get better coverage here. We have already stressed the importance of these coupling phenomena in the transformations currently taking place in tourism.

49. FREEMAN, C. (1974) The Economics of Industrial Innovation. Harmondsworth: Penguin Books.

50. MOWERY, D. and ROSENBERG, N. (1979) The influence of market demand upon innovation: A critical review of some recent empirical studies, Research Policy 8, 102-153.

51. ROSENBERG, N. (1976) *Perspectives on Technology*. Cambridge University Press, Cambridge.

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Logistic models: life cycle

- Product cycle and cycle of dissemination of new tourism products:

  Reference to the product life cycle theory also enables the various phases in the dissemination cycle of new tourism products to be presented in a summary manner, along with their properties and a characterisation of the various segments of tourist industry supply.[52] As a rule, this dissemination does in fact follow a logistic curve with three phases:

  Incubation: small number of innovative firms, demand still virtual, innovators' rents.

  Take-off: extension of the market and the number of firms; possibilities for imitation ans difficulties for effectively protecting the innovator's intellectual property rights. As the market becomes more structured, segmentation, differentiation and branding strategies develop.

  At the end of the cycle, saturation expresses the limits of the market and the banalisation of the product; price competition and concentration movements.

  This modelling can also be used to specify the technical and economic "age" of such forms of tourism as rural, industrial and spatial tourism, etc. In addition, it is close to analyses of the life cycle of tourism destinations based on the approach of Butler (1980).

- The reverse cycle of Richard Barras: adoption of NICTs in tourism distribution:

  The impact of new technologies on services is a particular focus for the reverse cycle model of Richard Barras.[53] The application of NICTs to service activities can be understood from a cyclical standpoint:[54] at first, there is incremental process innovation intended to enhance the efficiency of a

52. CACCOMO, J-L., SOLONANDRASANA B. (2001), L'innovation dans l'industrie touristique, enjeux et stratégies.

53. BARRAS Richard (1986); *Towards a Theory of Innovation in Services*.

54. This is a cycle that is reversed in relation to the traditional view which postulates, initially, a radical (product or process) innovation that then generates incremental innovations.

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service by substituting capital for labour (*e.g.* automation of the back offices of tourism operators), and then an accumulation of knowledge and IT progress making radical process innovations possible that improve the quality of service (including front-office operations such as changes in reservations). Today, we would appear to have come to the third phase of the cycle, characterised by product innovations, the role played by network technologies and the domination of product differentiation strategies by firms in the sector.

Period	Nature of the innovation	Objective	Means	Example
1 ▼	Incremental process innovation	Productivity gains	Substitution of capital for labour *Agencies acquire IT equipment*	Back office automation
2 ▼	Radical process innovation	Improvement of service quality	Accumulation of competencies (IT)	Front office operations: reservations
3	Product innovation	Product differentiation	Network technologies	New on-line products: auctions, "last minute"

- Technological innovations, life cycles and competitive advantages – matrix of Air France strategies:

Company strategies can try to utilise their portfolio of competencies by combining their own positioning[55] on the innovative product market (via BCG Matrix, Figure 4)[56] with the life cycle of innovation. Given the latter's influence on competitive impact this can highlight appropriate strategies.

55. In a knowledge-based economy, this can incorporate recognition of accumulated competencies. TREMBLAY Pascal (1998), *Le nouvel âge du tourisme stratégique.*

56. Boston Consulting Group (1970) BCG Growth-Share Matrix; *A graphical approach to resource allocation within a multi-segmented corporation*.

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Table 6.1 Interpretation of Figure 6.4

Technological innovations	Strategies
NEW MOBILITY TECHNOLOGY: *"QUESTION MARK" TECHNOLOGICAL INNOVATIONS* Cutting-edge technological innovation at the research (launch) phase or being tried out by other industries, having uncertain but promising differentiation potential.	Invest cautiously if the technology meets the needs of Air France's customers. Develop partnerships with the new technology industry.
WEB SITE AND DERIVATIVE PRODUCTS: *"STAR" TECHNOLOGICAL INNOVATIONS* Cutting-edge technological innovation being tested (growth); potential for differentiation is great and will impact the company's future.	Step up penetration efforts: Air France site, Opodo site, Skyteam.
HUB: *"CASH COW" TECHNOLOGICAL INNOVATIONS* Key technological innovation being operated or in the maturity phase; strong competitive impact.	Develop the hub at Roissy-Charles de Gaulle Airport, captive clienteles (barriers to entry), international presence and consolidation of competitive advantages over other carriers and high-speed trains (TGV).
CONCORDE *"DOG" TECHNOLOGICAL INNOVATIONS* Basic technological innovation exploited extensively by the company and its competitors (decline phase); low competitive impact.	Keep Concorde because of the image associated with the company in terms of prestige and refinement or cease operations (the decision eventually taken).

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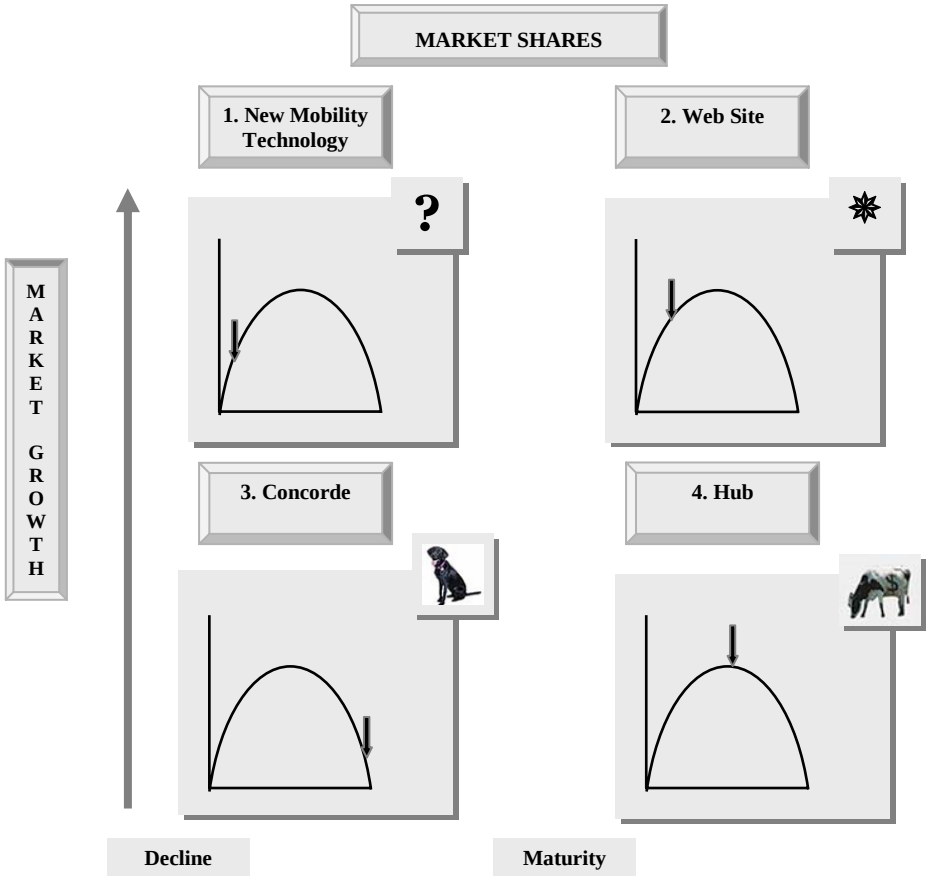
Figure 6.4. BCG Growth-Share Matrix



Source: Boston Consulting Group.

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Structural approach: the framework for innovation in tourism

From traditional tourism to "new tourism": a regulationist approach

	Heteronomy	**Autonomy**
Provision of simple services	**Fordist tourism** ▪ Evaluation of quality: price ▪ Form of uncertainty: quantifiable risk ▪ Competition: price-based *Stays in clubs, organised tours*	**Simple tourism** ▪ Evaluation of quality: conviviality and relationships ▪ Form of uncertainty: of little importance ▪ Competition: on prices and proposed attractions *Camping, family tourism, seaside holidays, rural tourism, etc.*
Provision of complex services	**Organised, customised tourism** ▪ Evaluation of quality: satisfaction of individual expectations, importance of service ▪ Form of uncertainty: uncertainty vis-à-vis others ▪ Competition: quality-based *Luxury cruises, sophisticated organised travel (high-end sporting stays).*	**Self-organised customised tourism** ▪ Form of uncertainty: radical ▪ Competition: on the basis of prices and originality of activities *Backpacking in off-beat locations*

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For industry operators, to what extent does the emergence of "new tourism" entails a shift in learning strategy from controlling productivity to better exploiting knowledge of demand?[57] Is not innovation in tourism based more on the objective of product differentiation[58] (non-price differentiation) than competition on price? Today there are many models of tourism practices superimposed one on another, with no clear model to follow. In offering their products, firms must adapt to the protean nature of tourism demand.

The tourism cluster: "co-opetition", social capital and externalities

Taking an approach like that of Michael E. Porter, we can look at clusters as a grouping of all of the firms and other elements that help make a region competitive, including the industries cited above, education and training facilities and infrastructure. A distinction can be made in tourism between geographical clusters (such as the French Riviera) and activity-based clusters (such as "green" tourism, wine-country tourism).

The emphasis is thus on a systemic dimension: complementarity, co-localisation, synergies and integration (networking). The cluster's virtuous operation suggests ability for operators to work together - what Porter calls "social glue", which corresponds more or less to Pierre Bourdieu's concept of "social capital". The market behaviours of operators illustrate the concept of "co-opetition" – a mixture of competition (at the marketing stage) and conduct of a more co-operative sort (at the production stage, and earlier at the innovation stage).

In tourism, small operators in particular are more sensitive to competition from their partners than to the benefits of working together. Most collaboration tends to involve destination marketing driven by the authorities.

In coming years the competitive advantages of firms will not be determined primarily by the efficiency of the production factors but by their ability to exploit the resources available in the cluster in which they operate. In addition to improving competitiveness, clusters play a major role in the ability of operators to innovate (lower experimentation costs, better visibility, better responsiveness to shifting

57. TREMBLAY, Pascal (1998) *Le nouvel âge du tourisme stratégique*.

58. The personalisation of service may even be taken so far as to provide regular customers with special treatment based on an information system for tracking and analysing their behaviour and preferences, such as at the Ritz-Carlton.

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demand). This is the motivation behind a genuine "national system for innovation in tourism".

Cognitive approach: innovation in tourism and the dynamics of knowledge

The "learning" tourism firm: evolutionary approach

One of the items on the agenda of evolutionary theory was to incorporate in economic theory the principles of biological evolution and natural selection. A distinction has to be made between codified knowledge -- which is formal, recognised, taught, explicit (technical, theoretical, managerial) -- and tacit knowledge, i.e. learning and know-how that can be spontaneously mobilised. Know-how and tacit knowledge dictate economic agents' responses. When well educated and trained, they delve spontaneously into the store of answers at their disposal to come up with the correct reply, without necessarily being able to explain either their choice or the particular know-how behind it.

The frameworks of evolutionary analysis

- Routines. These are the corporate equivalent to individual know-how. They stem from a whole series of learning processes including broad areas of tacit knowledge. Agents' behaviours are based on routines. Choices are limited by the ability to identify opportunities.

- Learning has a number of important characteristics:

  - It is cumulative and implies skills that are more organisational than individual.
  - It engenders knowledge that becomes part of organisational routines.
  - Routines are not transferable and are part of the firm's specific assets.[59]

Over and above the factors of production that they mobilize, firms differ by virtue of the nature of the know-how accumulated in implementing the said factors. Basically, it is know-how and organisational skills that distinguish one firm from another.

59. A good example of the idiosyncrasy of tacit knowledge is that of the inimitable quality of the violins made in Cremona in the early 18th century by a handful of instrument makers of undoubted genius, including Stradivarius.

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It is the nature of the skills accumulated in a firm and its ability to develop in-house the learning needed to continue to evolve in a changing environment that determine the path it will take.[60]

It is that specific path which explains any changes in the firm's principal activity. Examples of this include Preussag's move from heavy metalworking to tourism (TUI) and the penetration of the travel sector by the big mass marketing companies.

Insufficient production of tourism innovations: knowledge as a public good

If innovation is driven by codified knowledge, the latter tends to circulate freely. Similarly, in tourism, product innovation is visible and can be immediately imitated. This type of new knowledge is therefore what economists call a "public good", and we know from the work of Arrow that market mechanisms can only result in a sub-optimal level of innovation production in this context since innovators cannot keep the property rights to their innovations.

1. Insufficient tacit knowledge in tourism SMEs

Inadequate know-how and routine-driven innovations in small-to-medium-sized enterprises (SMEs) in tourism are shortcomings that justify stepping up the circulation of codified knowledge, which concerns all the institutions responsible for this function in the tourism system. The shortcoming in question reflects two separate problems:

- *The diffusion of a genuine entrepreneurial spirit and rigorous professionalism* in the tourism SME sector. It is certainly conceivable that the ability to innovate of entrepreneurs in this sector is affected by the increasing instability of their environment (bankruptcies, buyouts, NICTs, low barriers to entry, etc.). They may also suffer from a certain "limited rationality", preferring their activity's territorial and family roots to maximum profitability. Some indeed come from a traditional farming background (green tourism, camping and caravanning), small shops and craft trades. There have been some notable improvements thanks to the efforts of trade associations and the authorities, as well as the approach of a new generation.

60. CORIAT, B. & WEINSTEIN, O. (1995) *Les nouvelles théories de l'entreprise*, PUF.

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- *The mismatch between training and the jobs available in tourism* appears to be much more responsible for blocking the momentum of innovation than any supposed deficiency in the "human capital" of the firms.[61] Admittedly, as in other sectors such as BPW, SMEs in the tourism sector depend considerably on unskilled labour. A parliamentary report by A. Franco[62] (2003) points to many malfunctions: the lack of any real tourism content in training systems, jobs that lack appeal because of their resemblance to domestic work and to the leisure sector. Seasonal jobs often require no qualifications.

Furthermore, innovation in tourism tends to substitute capital for labour, rendering the skills of the labour force obsolete. Restaurant chains that use cold chain technologies for example, such as vacuum packing and pre-cooked products, rely less on the traditional skills of cooks. Such restaurants make intensive use of technological inputs from non-tourism industries.[63] The ensuing loss of know-how limits the internal opportunities for innovation.

2. Inadequate incentive mechanisms

This concerns both tourism operators and their employees:

- Operators exhibit three types of anti-innovative behaviour:

    - Since destination marketing is often supported by public bodies SMEs tend to take a "free rider" attitude to tourism innovation. Many fail to understand the need for the kind of co-operative behaviour that is crucial to the effectiveness of the tourism cluster.

61. The most common vacancies are for unskilled jobs. In the health care sector (HCR) a growing number of young people are now educated up to (BEP) -*Brevet d'études professionnelles*- and *baccalauréat* level, despite the fact that the vast majority of job offers are at level 5 (CAP) -*Certificat d'aptitude professionnelle*-. The composition of the jobs available is closely correlated to the either innovative or not, nature of the firm.

62. Mission undertaken by Arlette Franco, Member of Parliament for the Pyrénées-Orientales, May 2003.

63. HJALAGER, A.M., op. cit.

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- The increasing complexity of aids to innovation is causing the "transaction costs of innovation" to rise64 and discouraging many SME managers in tourism who are subject to routine management constraints.
- Risk aversion is also more marked among SME managers, who prefer to avoid risk rather than to manage it, even though managing risk is essential for innovation. Could the fabric of tourism SMEs be devoid of "Schumpeterian" entrepreneurs?[65]

– Employees may be discouraged from innovation by perceived job status, working conditions and pay:

- Status suffers from the seasonal nature of many jobs, multiple activities, insecurity, limited career prospects, and the perceived unlikelihood of being rewarded for efforts to innovate.
- Working conditions and pay largely explain why such jobs are unattractive. The problem of working hours in hotels and catering is well known, as is the low level of pay. As a result there is a substantial turnover of labour, which limits the opportunities for passing on tacit skills. Such conditions also explain the passiveness of employees, who have no incentive to take risks.

3. Channels for the transfer of knowledge in tourism

Since innovation in tourism is unlikely to qualify for protection by the intellectual property rights (patents) associated with industrial R&D, the channels for knowledge transfer are not the same (collaboration in fundamental research, laboratories). The role of trade and the institutional framework are vital (Figure 5).

64. I should like to thank Professor P. Keller for his comments on this question at the OECD Conference on Innovation and Growth in Tourism, Lugano, 18 September 2003.

65. Does this not confirm the correctness of Schumpeter's second model (in "Theory of Economic Development", 1942) in asserting that the structure of monopolistic markets is more conducive to innovation, thanks to the scale of the monopoly rents, than the fragmented structure in which SMEs exhaust themselves in ruinous price wars?

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As well as the ability to derive new knowledge from in-house activities (learning by doing) it is important to consider a tourism firm's ability to:

- Acquire and absorb existing innovations, "internalise" knowledge that is codified and convert it into tacit know-how or routines[66] (this illustrates the relevance of Solow's paradox to tourism[67]).
- Disseminate its innovations, *i.e.* externalise them in the form of codified knowledge that can be more easily circulated.

This ability depends on structural factors: the size of the firm[68], type of organisation (see Chandler) and whether or not it belongs to a group. On this point it seems clear that hotels, which are part of an integrated or voluntary chain, have a much stronger propensity to innovate, with central management playing a vital role. However, it is the cognitive factors that would appear to be crucial: the proactive or reactive nature of routines, managerial skills (knowledge management) and wage skills (qualifications, interaction, etc.).

The role of the national system of tourism innovation is also essential in at least four ways:

- Development of research, quality of training[69].
- Tourism policy and the efforts of such institutions ad the French Agency for Tourism Engineering and the departmental and regional tourism committees.
- Direct production of innovation by public operators (carriers, the authorities) using government funds and substantial human capital.
- Indirect dissemination (percolation) by means of incentives (tax exemption) and assistance (subsidies).

66. BAKER, M. et al. (1998) *The productivity paradox and the hospitality industry*, School of Management Studies, University of Surrey, UK: "The impact of investment in NICTs on the performance of the hotel and catering sector under consideration is correlated with the level of management skills, particularly skill in setting up and managing information processing systems".

67. R. Solow, winner of the Nobel Prize for economics, said in 1987: "You can see computers everywhere, except in productivity figures", putting into perspective the hopes placed in the technological revolution.

68. The relative ability to innovate of SMEs and larger organizations has been a matter of controversy from the time of Schumpeter.

69. A reference to the hoped-for impact of the new BTS in tourism in France.

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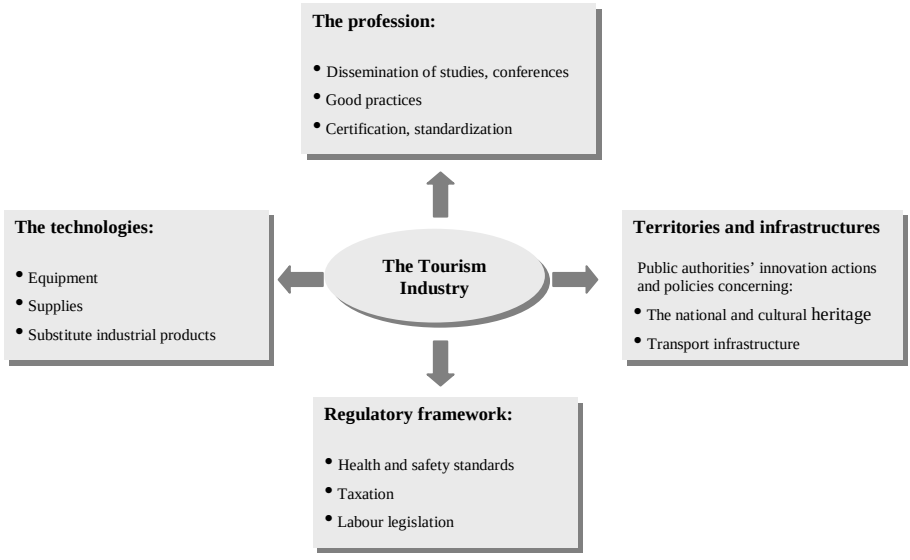
Figure 6.5. Channels of knowledge transfer in tourism



Source: A-M Hjalager

Conclusions

The success of innovation promotion in tourism will require efforts to overcome the obstacles referred to in this study. The public authorities and other tourism stakeholders can contribute in the following ways:

- Improving the internal dynamics of innovation by making companies adopt a proactive attitude, putting more emphasis on economic intelligence rather than simply monitoring changes in technology.

- Improving the efficiency of the national system of innovation, and specifically:

  - The training of operators, staff (see recommendations of the Franco report).

  - Developing the role of public and private actors, strengthening the French Agency for Tourism Engineering and regionalising its efforts.

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  - Stimulating research and creating a genuine French-speaking, multi-disciplinary network.

- Improving incentives for operators and employees.

- Maintaining the coherence of the tourism industry and its linkage with society as a whole: innovation in tourism is not possible without mobilisation of the population, and in particular cultivation of the fundamental values of hospitality.

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