

The Role of Quantitative and Qualitative Research in Industrial Studies of Tourism

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ABSTRACT

Many areas of research in tourism concentrate on quantitative or qualitative studies. Some even discuss the complementarity between the two types of studies. Hardly considered are the possibilities for combining such works within an integrated framework that also considers the business environment in which tourism operates. The purpose of this paper is to return to long neglected possibilities by reinvestigating areas of methodology and epistemology concerned with the generation of a framework that embraces both quantitative and qualitative research. A hypothetical example, in terms of industrial organisation and strategic decision making, is introduced discussing the possibilities for the triangulation of methods and paradigms and the role of the business environment. The conclusion is that an improved understanding of the tourism business requires a broader research methodology than presently exists. Both types of research and the dynamic context of tourism are important and need to be combined within an integrated framework. It has been concerned with the construction of integrating frameworks that embrace an alternative logic of inference and the context of the tourism business environment. This requires refinements of existing approaches together with a broader research methodology. Only by establishing such frameworks will an improved understanding of the tourism industry be achieved. The

suggested framework presented here, with particular reference to industrial organisation and strategic decision making by tourism suppliers, is not offered as a panacea. For future work, the validity and choice of framework rest squarely on how the world and 'truth' are viewed. However, within this, the contribution of triangulated quantitative and qualitative research should help understanding by studying phenomena in their natural setting and in terms of the meanings people have of them. This should lead to a 'truer analysis' of business behaviour and hence a more purposeful investigation of hotels, tour operators, travel agents and the business of tourism in general. It is in seeking to produce this 'truer analysis' that future research activities need to concentrate. Copyright © 2003 John Wiley & Sons, Ltd.

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INTRODUCTION

Tourism research has grown apace during the past two decades. An indication of this is the growth of dedicated academic journals. Topics range far and wide—from tourism demand studies to tourists' motivations, from studies of the traditional tourism destinations in Europe of Spain and Greece to far away specialist destinations such as the Polynesian islands. Investigations into the industrial organisation and interfirm re-

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relationships in the package tour and airline businesses, amongst others, have also proliferated. Many researchers use qualitative and quantitative research. However, most articles concentrate on one or the other. Very little exists that combine both approaches. In fact, like many academic disciplines including sociology, economics and marketing, the positivist paradigm of quantitative analysis dominates almost to the total exclusion of qualitative approaches. Neither do theoretical underpinnings and the differing purposes of academic inquiry receive much attention.

This paper seeks to address some of these issues. It returns to long neglected possibilities of combining both quantitative and qualitative approaches by reinvestigating issues of methodology and epistemology. However, its main concern is to construct a research framework, incorporating both qualitative and quantitative results, along the lines suggested by Pearce (2001). The need is to find, as Pearce says:

‘...a way of integrating a steadily growing but as yet largely fragmented body of research and providing structure for future efforts..., both conceptually and empirically’.

He calls for a clear analytical framework offering a general overview and a means of putting specific studies into context, thereby resulting in better integrated solutions to problems that arise.

Pearce uses a cell matrix and suggests that it needs complementary integrative approaches both horizontal and vertical in nature. The question is then posed:

‘...having decided to examine a problem across several scales or to bring together different themes, how is this to be done? How are the linkages to be conceptualised and measured?’

Of particular interest is how such a framework could be designed for investigating the industrial organisation of, and strategic decision making by, tourism suppliers within their business environment. In pursuing a useful design, the ontology, epistemology and dynamics of research are discussed together with an investigation into the problems and possi-

bilities for triangulation of methods and paradigms. Such discussions are necessary precursors to the development of a framework of the kind developed by Pearce.

The paper proceeds in the following way. In order to develop a framework, the following section discusses the ontology, epistemology and dynamics of research, commenting on the dominance of positivism and the appropriateness of such deductive models to the study of the tourism industry. The next section seeks to establish alternative perspectives to incorporate the nature of the tourism product and the realistic and dynamic features of markets. The possibilities for future work in tourism research are then addressed by discussing the logic of inference that the study of tourism now needs to develop. Subsequently, the philosophy and complementarity of triangulation are examined and an example of strategic decision making is presented through which both quantitative and qualitative research and the changing nature of tourism may be accommodated.

ONTOLOGY, EPISTEMOLOGY AND DYNAMICS

In seeking a relevant framework, several ontological and epistemological concerns are raised, concerns that have been addressed for a number of years and been revived recently in the work of Walle (1997) and Jamal and Hollinshead (2001).

Walle points out that tourism scholarship: ‘...bear(s) the imprints of logical positivism, statistical investigation.... A truism of the scientific method asserts that the phenomenon under consideration must be empirically verifiable and observable....’ (Walle, 1997, p. 525). However, he does recognise scholars and practitioners are augmenting such quantitative methods to give more general perspectives. Further, for Walle ‘...all the methods of social science are, in essence, tradeoffs allowing one option by abandoning other alternatives...’ (Walle, 1997, p. 528).

Jamal and Hollinshead (2001) favour more qualitative research. They query how the dominance of positivism and scientism can be overcome, claiming the existence of a ‘forbidden zone’ of qualitative inquiry in

tourism studies. They also point out the chasm that has developed between qualitative and quantitative research. Qualitative is taken to be subjective and quantitative objective with the result that:

... since 'objective' research is a requirement for validity in the natural sciences and those social science domains that pursue the positivistic model, interpretative approaches tend to be banished as 'merely subjective'. (Jamal and Hollinshead, 2001, p. 69)

Hence qualitative inquiry is undervalued because it is 'messy' – contextual, idiosyncratic and often having difficulty capturing the whole of behaviour.

The aim of positivism is to seek one, unambiguous 'truth', which Jamal and Hollinshead (2001) contrast to a naturalistic inquiry which believes in multiple constructed realities requiring holistic study. This latter may entail mixing paradigms and multiple methods as they explain in:

'While some researchers subscribe to an approach favouring mixed paradigms and methods associated with specific theoretical frameworks within such paradigms (typical of discipline bound functionalist studies that claim to be 'qualitative'), others favour an eclectic approach that enables multi-method, multi-theoretical approaches to be used'. (Jamal and Hollinshead, 2001, p. 65)

This paper seeks to build upon these contributions but disagrees with Walle (1997) on two key issues. He seems to infer that qualitative research lacks rigour compared with quantitative. Although criteria are not stated, 'less rigour' could be interpreted to mean less accurate. The danger is that a positivism judgement may be generated – the very perspective he seeks to criticise. Secondly, the notion of trade-off between quantitative and qualitative research is debatable. Trade-off is not necessarily axiomatic. Although depending on the situation, the method preferred in the trade-off may have more appropriateness, the method rejected can still generate useful insights. It may also depend on what is being researched and what is being pursued. A

practical, i.e. time-dated piece of research may need trade-off. However, if some other goal is the focus of research, then both approaches are equally necessary to generate knowledge and understanding. This would be the case in an ontological pursuit of 'truth'. He hints at this, 'This, of course, is not to say that researchers should only be concerned with 'bread and butter' issues...', but then goes on to say, '...in general, knowledge needs to be focused around specific goals.' (Walle, 1997, p. 533). Again, this is limiting the research focus.

Jamal and Hollinshead (2001) are also in danger of overemphasising qualitative approaches at the expense of an eclectic, holistic research approach. Further, although both papers make comments on an eclectic approach, neither conduct a rigorous investigation of the possibilities and problems of triangulation of the insights generated. The issue of the creation of a framework where differing insights from both qualitative and quantitative research can be combined remains.

If differing insights are to be combined there is a methodological issue that needs addressing. The methodological approach commented on in the above papers and used in many areas of tourism research is derived from two schools. One uses deductive theory and the other, empirical observation. The deductive school, positivism, is concerned with theory in order to address practical issues. It generates an analysis whereby general and abstract principles can be established. Assumptions made lead to logical deductions enabling determinate conclusions. On the other hand, the empirical school sees the process as one of observing specific behaviour rather than deriving abstract principles. It is through the observation of historical development and actual behaviour that the general principles can be identified. Hence, in their original formulations, the former ignores the environment and sees little role for empirical evidence. The latter, based empirically with the real world paramount, sees little role for general theory. However, if the need is for an improved understanding of tourism this requires further investigation of processes at work from both perspectives. The danger is that this may not be achievable given the dominance of the positivist paradigm.

Positivism and deduction

The methodology of positivism assumes 'absolute truth' and rational behaviour subject to constraints. It undertakes an optimisation view of the world and relies on the deduction of objective science. Models derived from this approach lead to empiricism with a positivist perspective. The specific existence and validity of knowledge are assumed to interrelate. Theory is derived and expressed mathematically leading to positivist application. This leads to the 'positivism' of statistical methods and the covering laws of general equilibrium. Empirical testing undertaken then leads to predictions on behaviour within 'absolute truth'. In the area of tourism, several studies assume this mode of analysis to provide tests of prediction as covering laws. This is the case in the work of Gratton and Richards (1997) and Baum and Mudambi (1994, 1995).

Although this approach provides some insights—it may be appropriate to identify structures and mechanisms without making claims about 'absolute truth'—behaviour in the broader context of the real world is not recognised. An important methodological assumption of positivism is that structures do not change or evolve, giving rise to the view of an 'ideal state' rather than concern for the real world. What needs to be investigated is changing structures in the dynamic, real world. For example, in looking at tourism industrial behaviour, the understanding and prediction of firms' ability to compete and maintain competitive advantage in a situation of change become central. The aim of a firm should not simply be to meet known demand (as per statics), but to also create new demand. In tourism many new products have been generated including the development of new resorts, the growth of short breaks, the creation of new hotel services, and new hotel products such as conferencing and airport overnight accommodation. Such dynamic responses are the result of not only demand pressures, but also proactive development of product quality and service in order to enhance reputation. Similarly, the volatility of many sectors of the tourism business ensures that providers have to be innovative. The practice of the real economy becomes important (as per Bain,

1949, p. 130). This allows investigations to be related to changing real world dynamics as opposed to imposition of some theoretical framework.

The nature of deductive models and the tourism industry

There are other, possibly more fundamental, problems with a positivist approach and research in tourism. As noted, deductive models were developed from either deductive theory building, or by utilising empirical evidence. Whether such models and tools, based on particular epistemology and empirical observation, are appropriate to the study of tourism is questionable. Tourism is not only a collection of diverse and varied attitudes about societal significance, but is also an industrial activity with interfirm relationships. (It is this latter attribute that is the vehicle used to discuss framework and triangulation issues.) This is widely recognised, but its significance is often neglected. A restatement of tourism as an industry is necessary not just for the purpose of definition, but also to determine what needs building upon. In this respect, of central importance is whether tourism can be regarded as an easily identified specific industry. If not, the choice of tools and models is not as straightforward as when unequivocal definitions of industry are possible. Two major questions arise that may influence the choice.

Is tourism production similar to manufacturing?

In research involving investigations of industrial economics and business studies, many approaches adopt the conventional neoclassical economics view of the firm as a black box of technological and managerial relationships. Inputs are turned into outputs that are often technically identical and the boundaries of the firm are given. The result is often a given standardised process. Viewing the production of a tourism commodity in the same way is questionable. There are significant differences in both the production and consumption of manufacturing and service products.

The tourism product is often considered to be heterogeneous, consisting of a complex

bundle of characteristics based round, but often incidental to, the motivations of tourists. As a consequence, the nature of inputs tends to be more eclectic in nature and from a greater diversity of sources than in manufacturing. Although in both sectors tangible inputs are necessary, in tourism a vital component involves intangibles. For example, public goods are often part of the product—not just a beach or a natural feature, but also the view and vista.

Outputs may also be less specifically identified than in manufacturing. Again, in tourism the nature of the product is not just the airline seat or hotel bed, but also the experience both pre-consumption—in deciding where to go and to book—and post-consumption—memories and sharing the experiences. Even hotels are more than the consumption of bed space. They are part of the product mix, which includes the experience encountered. At the extreme end, a hotel can be a tourist attraction in its own right, as in the case of the Savoy in London or Raffles in Singapore. Value added in tourism, therefore, is more a process of combining commodified products than one of production that transforms inputs into outputs of a different form. Hence, a physical production function would not be fully representative of the tourism product.

Is tourism an industry?

Tourism may be viewed in several ways. One way is that it is an industry because it is composed of firms that jointly co-ordinate goods and services from different industries to meet tourists' needs. Such would be the case in the tour operating industry. Tour operators co-ordinate the activities of several firms in the provision of travel, accommodation and tourist activities. An alternative view would consider it not one industry but a composition of several, connected by a common, but not exclusive, interest in supplying tourists. Clearly, firm and industry boundaries are not well defined amongst tourism suppliers. Tourism does differ from conventional industries that are based on technological substitutability with high degrees of cross elasticity of supply amongst homogeneous products

In a broader context, given the above,

research of the positivist type may not be able to accommodate characteristics such as the changing nature of firms and industries in tourism. Particularly, institutional arrangements are often an important distinguishing feature of the tourism business environment. It is well accepted that manufacturing is concerned with the flow of the production of physical products. Changes in demand could lead to both price and quantity adjustments. In tourism, in many cases, supply and consumption are simultaneously determined in the short run. There is often a time-dated constraint, witness an airline seat. Products are often the result of contracts with third party suppliers. Outsourcing of business practices occurs rather than building one's own infrastructure to provide the service. The formation of mobile 'phone and 'virtual' companies may mirror many of the characteristics of tourism supply, which are often the result of these considerations. Such institutional constraints lead to auctioning behaviour and price is more likely to adjust than quantity. 'Positivism' and covering-law logic will have difficulty in isolating such institutional arrangements. It can only reveal, in its static world, trends and data-descriptive insights.

ESTABLISHING ALTERNATIVE PERSPECTIVES

If tourism is so different from manufacturing then perhaps greater consideration needs to be given to alternative perspectives. This will help both research and framework design. If the phenomenon is not understood adequately by much of the existing research then alternatives warrant consideration. A first step is the development of definitions of industries, such as hotels and travel agency, along lines suggested by Coase (1972, pp. 70–71). Definitions need to incorporate both the nature of the tourism product, realistic, dynamic features of markets and behavioural characteristics. A lack of such behavioural characteristics for Bain means that:

Any hypothesis of objective determinism is in danger of overlooking the fact that human behaviour and not simply equation-solving is involved.... Significant

differences in behaviour might be expected to result from substituting different persons in given objective situations... (Bain, 1949, p. 156).

Once such definitions are established, the next stage is the development of a pluralistic approach. Using only one approach, such as deduction, presents conceptual limitations. Inductive methods and modes can help create an improved understanding of the competitive process. Combinations of modes can facilitate an alternative logic of inference. This enables a more wide ranging *a priori* theory to be developed.

Within tourism studies, some tradition of pluralism exists, particularly involving quantitative and qualitative information and techniques. In tourism demand forecasting, for example, Uysal and Crompton (1985, p. 31) suggest:

...certainly the value of the qualitative approaches should not be overlooked in providing insights or experienced judgments and forcing considered evaluation of the results provided by quantitative approaches.

Choy (1984) also refers to the variety of approaches used in tourism demand forecasting, which embrace both quantitative and qualitative techniques, including econometrics and decision analysis. Such qualitative information has proved useful for developing alternative scenarios.

The most recent (at the time of writing) contribution of Lundtorp and Wanhill (2001) demonstrates the problem of reliance on only one approach in their discussion of the resort life-cycle. They write:

...model has been the focus of many empirical studies, though mainly in terms of qualitative research...more descriptive than normative, proceeding by way of relating information from case studies to stages of the life cycle curve.

By the use of long run time-series model testing they are able to show how quantitative research can add valuable insights to that already generated qualitatively. (Such approaches are rare in tourism studies. In

demand forecasting, for example, either quantitative or qualitative methodologies are used. Even Witt and Martin (1989) chose to compare the two rather than discussing the possibilities of complementarity let alone the development of a pluralistic approach.)

The development of a pluralistic approach is not merely the linking of deductive and inductive techniques but also involves fundamental issues that may present problems in creating links between different paradigms. The central issue involves different approaches to reality and 'truth'.

Quantitative approaches are based on the belief of one 'truth' with universal laws. 'Covering laws', under the guise of boundary conditions, as predictions and explanations become subsumed under universal laws. These universal laws are the result of the constant conjecture of events. On the other hand, qualitative approaches rest on a view that multiple realities exist, can only be studied holistically and require an open system approach. There will be a plurality of partial regularities and processes that underlie events. Theory choice will be as much concerned with ontological claims as empiric. This choice must be guided by the situation under investigation rather than the search for rigour for its own sake.

A major criticism of quantitative approaches is that they are incapable of dealing with 'reality' in all its complexity. Walle points to the distinction made by Pike (1954) between *etics* and *emics*. The former hinders the latter because aspects of attitudes, motivations, actions and personalities are not, and may be incapable, of being examined with a one 'reality' approach. The positivist, 'one truth' reality has led to a research problem identified by Seaton (1997). Researchers are trained to research and verify, not to research and generate explanations. Ideas seem to be selected on the basis of their confirmation power. Explanations are then added later. This methodological approach, for Seaton (1997), has become a routine part of tourism research.

The notion of universal and covering laws is also challenged. Such laws are the result of assuming uniformity of the past. This may not be tenable and the search may be for covering laws that do not exist. Several areas of tourism

research have fallen into this trap. Much of the work on tourism demand forecasting, economic impact studies using the multiplier concept and the literature on industrial organisation as applied to the tourism sectors takes a neoclassical economics approach assuming formal rationality seeking to test covering laws. The emics of, for example, substantive rationality and household decision making based on power relationships remains unexplored.

Structures and causes that form the premise of covering laws can change and evolve. We can learn from the past even if it does not replicate itself. There is, therefore, a need for studies on the environmental framework to understand how the past has formed and shaped it, and how it is changing as a result of the development of human knowledge and experience. If this is important, then covering law explanations *per se* have to be rejected. The need is not to seek covering laws and quantitative confirmation of itself, but to return to a Marshallian approach where theory, expressed in the form of differential calculus is combined with an understanding of practical business life. It may well be that practitioners are in advance of academic publications. Many National Tourism Organisations and hotel groups (e.g. Courtyard by Marriott developers in Australia) use quantitative surveys together with focus groups and image studies. Only intermittently has a combination of methodologies been advocated in academic literature (see Seaton, 1997). That is, deduction and induction and qualitative and quantitative methods to produce a synthesis and logic of inference has to be undertaken. However, this is no easy task. Making a distinction between quantitative and qualitative research may be unhelpful. What may be required are hermeneutic studies drawing on an eclectic range of 'approaches'.

What type of logic of inference should the study of tourism now develop?

In order to develop a logic of inference for future tourism studies, issues of importance include context, the use of quantitative and qualitative data, and how they are to be synergised within an integrating framework.

Tourism research will benefit from a logic of

inference that incorporates the importance of context. This requires the topic of investigation being well defined in its contextual setting. This is of greater importance than choosing the 'proper' quantitative variable or the addition/substitution of variables. Both quantitative and qualitative approaches are necessary to define such contexts. However, difficulties arise in integrating the recognised context into the theories and may lead to the production of exemplary theories (see Fisher, 1991). Exemplary theory tends to show what can happen, not what must. Its role is to provide a rich set of cases to systematise thoughts and to develop the understanding of crucial features. The information to create such cases lies within quantitative *and* qualitative information. To take tourism research forward, attempts to synthesise the outcomes of exemplary theories need to be explored. The problem now becomes one of creating a logic of inference using both quantitative and qualitative research results.

How is quantitative and qualitative research to be combined to create a new logic of inference? How is triangulation to be achieved?

An alternative logic of inference is triangulation. The concept of triangulation was introduced in social sciences by Webb *et al.* (1966) and used by Denzin (1978). This includes not only an understanding of the processes governing behaviour, but also the social and institutional context. Denzin (1978) would class the use of more than one research method to examine the same phenomenon as methodological triangulation. This does not rely on different theories or paradigms. It is assumed or implied that there is a common ontology and epistemology. However, criticism of such an assumption has led to philosophical objections to triangulation. A major stumbling block is precisely that assumption of common ontology and epistemology and is illustrated by Fielding and Fielding (1986). They suggest that methodological triangulation does not necessarily improve validity. The picture might be more complete, but not more 'objective'. The different methodologies used do, indeed, have differing ontologies and

epistemologies. Hence, breadth and depth may be added, but little contribution to the pursuit of 'objective' truth is made. This poses the question, 'Can counterposed paradigms be meaningfully mixed?' Purists would suggest that the fundamental issue of positivists establishing 'truth' by deduction based on theory and the 'moments of qualitative research' approach (Denzin and Lincoln, 1994) interpreting 'truth' as multiple realities emerging by induction means that never the twain should meet. The differences in belief systems are so great that any triangulation will destroy the very foundations of the paradigms.

Despite these objections, a developing literature on triangulation has arisen based on the work of Geertz (1973), Denzin (1978) and Denzin and Lincoln (1994). It involves a process of linking, mixing or combining methodologies and data and can occur at two levels. One level is the mixing of quantitative and qualitative methods. The other concerns the mixing of the conflicting paradigms on which quantitative and qualitative methods are based. If issues of complementarity can be overcome then there are potential benefits for developing the contextual setting. The problems of complementarity may be less acute in the case of mixing methods but may present serious philosophical obstacles when mixing paradigms. The former issue is considered initially and the latter returned to later.

The complementarity of quantitative and qualitative data

Both the breadth and depth of an issue can be enhanced by triangulation as the strengths of both data are heightened. This can occur only if the philosophical debate is put to one side. Miller and Crabtree (1994) developed four design possibilities (Table 1). Tourism and the related area of leisure have some history of using these designs. Archer (1980) suggests that both quantitative and intuitive techniques should be used concurrently in forecasting tourism demand. Uysal and Crompton (1985) also suggest a concurrent use of quantitative and qualitative tourism demand forecasts to improve the accuracy of such forecasts. Stabler (1993) and Stabler and Goodall (1996), in leisure provision and sustainable island tour-

ism respectively, use the nested approach within the context of environmental economics. In leisure provision, Stabler (1993) suggests that surveys to establish consumers' willingness to pay should be combined with cost-benefit analysis. Stabler and Goodall (1996) develop a framework for environmental auditing involving descriptive scenarios of operations and environment. Consultations and surveys are combined with the quantification of environmental effects and impacts. Oppermann (1995) uses multiple methods to investigate travel patterns and Seaton (1997) evaluates an eight day 'Arts fest' in Eastwood using both visitor survey data and unobtrusive observational measures, utilising methodology from mass observation, devised by Madge and Harrison (1939).

Several roles for qualitative and quantitative data within multiple methods of mixing are possible.

- (1) Qualitative data could be considered as shaping the entity to be studied. It acknowledges the human instrument as forming the context and multiple realities within which phenomena operate. The real world is seen as having several realities rather than one unique 'absolute' truth. Such qualitative data would include personal experiences, interviews and the use of, for example, Delphi techniques. This facilitates the drawing of 'coping' boundaries in

Table 1. Design possibilities (based on the work of Miller and Crabtree, 1994)

Design possibility	Explanation
Concurrent	Where quantitative and qualitative data are used simultaneously
Sequential	Where qualitative data is used first in order to develop quantitative instruments
Nested	Where both are used in a conceptual framework to form checks and balances to ensure that the 'wrong problem' is not addressed
Combination	Where qualitative data contextualises situation specific cases

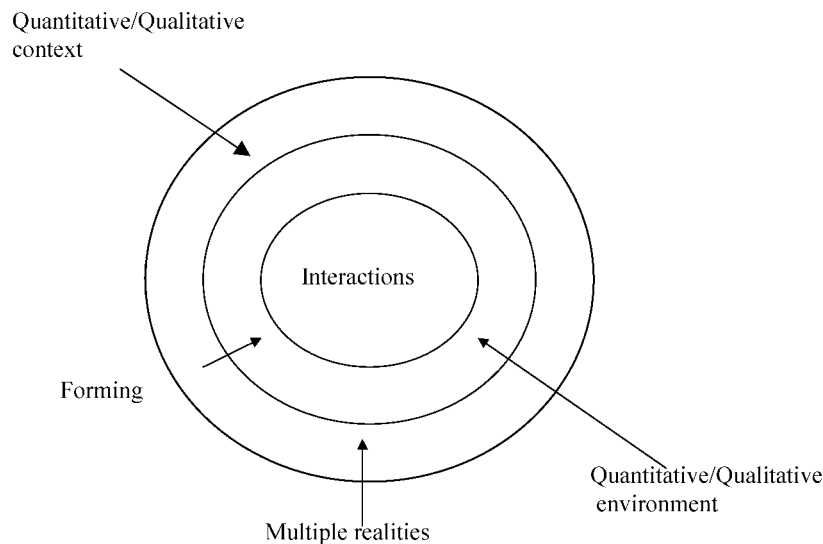


Figure 1. The interaction of qualitative and quantitative contexts and environments

an uncertain world. Just as Mason (1939) examined the role of Harvey Firestone in the USA tyre industry, the views of, say, Roger Heape at British Airways Holidays may enable the drawing of the boundaries within which such organisations operate.

- (2) Quantitative data would allow identification of partial regularities, possibly of the Schmalensee (1989) type, i.e. 'stylised facts', such as the high degree of 'churn', i.e. turnover in numbers and operators in the travel agency business. Alternatively, quantitative data could be considered as delineating the external environment—the shape and nature of competition between leading hotels or tour operators—and the qualitative data give the interactions within that environment.
- (3) Another possibility is to view the context as layers of an onion with several interactions, as in Figure 1.

Whatever the combination, a greater understanding of the phenomenon is needed than that provided by one technique. Synergy between qualitative and quantitative data has a role here. It is possible that one method/theory/mode of analysis could be used to answer one set of questions and others for others in the same market place. Thus, a pluralist approach may be fruitful in improv-

ing understanding of the phenomena. Hence, symbiosis of the scientific tools of positivism and the subjectivity of 'moments of qualitative research' would enable both the verification of facts and the investigation of complex reality undertaken in sympathetic ways. However, an acceptable framework within which paradigms can be integrated is required that unifies the different forms of analysis and evidence.

An integrating framework

Despite the critiques, attempts have been made to integrate the different paradigmatic approaches. Rather than taking data to support a priori assumptions of theories, theory is identified by both the quantitative and qualitative approaches used. An integrating framework of analysis may require some experimental design. There are several possibilities and the following are examples from academic disciplines and tourism studies.

Pluralism. In the field of economics, Andrews (1949, 1964) and Cyert and March (1992) attempted a pluralistic approach in their work on pricing decisions and behavioural theories of the firm respectively. Irregularities in empirical research led Andrews (1949, 1964) to criticise the methodology of existing industrial economics and to construct a new theory.

He used responses from interviews with businessmen against, initially, the backcloth of the building industry. Such case study material was to be combined with empirical studies. Cyert and March (1992) observed the decision making process in several industrial case studies. They drew on memoranda, letters, other paper based material, interviews and direct observations of the decision process. From these, they were able to develop decision rules incorporating goals and expectations. Both are prime examples of the role of qualitative data in the construction of scenarios and theory.

Grounded theory. Glaser and Strauss (1967) developed grounded theory to discover the reasons why people behaved in a certain manner under certain circumstances. Starting with an area of study, they used empirical observations to generate responses. These are then analysed and compared with findings from other literature or theories in existence relating to the topic. What is relevant to that area of study is allowed to emerge. Open coding, which involves the tentative discovery of relationships in primary data and categories, and axial coding, the establishment of relationships both within and between categories, becomes the basis of a central core of knowledge. Responses are constantly compared to find similar concepts and are then systematically divided into labelled categories. Each category is studied intensively to identify interrelationships, and refinement continues until the categories are fully exhausted. In this way, theories emerge and are grounded during the selective coding. Further, the abstraction from detailed observations in the formulation of theories avoids pure description. Such an approach has been developed in the work of Finch (1998).

Thus, grounded theory is derived from data, not by deduction from logical assumption. Categories are generated from data together with properties of use for general and specific situations. The categorisations provide the theoretical guidelines to observed actions.

Strategy theory. Modern strategy theory takes a dynamic view of competition based largely on the work of Porter (1985), an industrial

economist, using the industrial organisation (IO) paradigm based on the inductive approach of Bain (1956). His work is an early example of creating an alternative logic of inference by embracing more than one discipline. For him, devising a successful strategy, leading to sustainable competitive advantage over rivals, is of crucial importance. Devising such strategy involves designing a fluid, dynamic framework that utilises a whole range of quantitative and qualitative data.

The work of McWilliams and Smart (1993) also demonstrates the possibilities of creating an alternative logic of inference by embracing the discipline of strategy. At the same time, they also illustrate issues that need addressing when combining differing approaches and disciplines as the consequence of different frames of reference. McWilliams and Smart also believe strategic management has different units of analysis, assumptions and objectives from that of economics. It, therefore, needs 'to avoid the pitfalls associated with adopting a narrow, product-oriented industry definition...(involving homogeneous firms) ...Attention should be directed to the identification of core competencies and their exploitation in different markets.'

The use of fuzzy logic and common sense modelling. Fuzzy theory attempts to take into account the uncertainty of human decision-making. Its methodology is based on vague modelling involving fuzzy logic and qualitative modelling. Vague and sometimes inconsistent knowledge is modelled in the belief that formal models may not always be appropriate. Two examples of this are to be found in recent tourism literature. Airey *et al.* (1997) use 'common-sense' analysis in a theoretical examination of budget hotels and Tsuar *et al.* (1997) evaluate tourist risks using fuzzy logic.

Clustering solutions. This involves a multiparadigmatic methodology when paradigms are not mutually exclusive. Criteria are based on a number of clusters. Discrimination and classification processes are used to evaluate a clustering solution. The construction of classification and discrimination logical models is seen as a complement to quantitative statistical models. Entities subject to clustering are

submitted to the rules proposed by the discriminant process. The resulting classifications are compared with the assignment associated with the clustering solution. Algorithms can be derived for propositional rules and empirical procedures of cross-validation test the conclusions.

The leading work in this area is by Cardoso *et al.* (1999) who use multivariate statistics and machine learning to clarify and interpret different clusters and construct classification rules of individuals who are Portuguese clients of *Pousadas de Portugal* hotels.

INTEGRATING FRAMEWORKS—AN EXAMPLE

In summary, an integrating framework ought to encompass an alternative logic of inference, the changing nature of the business environment, and linking and bridging mechanisms.

So far, the paper has established the following. The development of an alternative logic of inference needs to move away from the equilibrium perspective that assumes the environment is both static and exogenous, to one assuming dynamics and endogeneity. The changing nature of tourism, i.e. that businesses are living organisms creating and responding constantly to dynamic changes in both external and internal influences, needs accommodating. Economic and empirical approaches have helped in the analysis of the external environment and the development of firm strategy. Suggestions have been put forward for creating an alternative logic of inference involving the triangulation of quantitative and qualitative methodologies. Such precursors now facilitate the formation of an integrating framework.

An integrating framework is a necessary condition but is not, of itself, a sufficient one. There also needs to be an interrelationship between the measures. Pearce (2001) sees it as a broad research design with diverse methodologies, multiple data sources combined in innovative ways with interpretation through '...a variety of lenses.' It is not simply building a bridge between quantitative and qualitative techniques. Oppermann (1995) also sees that measures need to be interrelated and not just a multi-methodological approach that has

limited cross-validation of results. Thus, triangulation needs cross-linkages between and systematic planning of collection methods. This is discussed, with the aid of a practical application, below.

Strategy theory regularly utilises an integrative framework. One commonly used by directors of companies throughout the world is the Boston Consulting Group Matrix. The Matrix is an attempt to classify business groups in relation to market growth and relative firm market shares. These classifications are then used in order to present strategic options based on creating competitive advantages for analysis. Relative market share and the rate of growth of the market are key variables for the following reasons. Relative market share is related to the notion that size dictates market advantage and, in the view of Jacobsen and Aaker (1985), to other differences in business—to firm-specific effects. Market growth is considered important for the sales opportunities it offers as compared with stealing shares from competitors.

Mintzberg (1990) has led criticism of this approach. He suggests the outcome is the result of prescriptive strategies based on, what he terms, 'dangerous assumptions' about how organisations operate. The assumptions may not hold because, for example, the market may change and employees may not like solutions, even delaying implementation. Despite this, the framework is flexible and has led to the development of emergent strategy recognising the previously denied possibilities of business environmental change.

The Boston Competitive Advantage Matrix is currently a favoured avenue to explore for the following reasons. It has novelty in that triangulation of the matrix with quantitative research in tourism has not yet been investigated. The matrix is used extensively in business practice as a means of tackling the changing nature of business and the business environment. Finally, the matrix also provides a framework for identifying not only interaction within the business environment, but also firm-specific effects. Product sets can be identified—usually referred to as stars, cash cows, dogs and question marks. The competencies approach of McWilliams and Smart (1993) can also be incorporated.

The Boston Consulting Group has identified inductively four types of industries with particular characteristics.

- (1) The volume industry with few opportunities for comparative advantage and profitability correlated to size and market share. This may be the case in the different segments of the hotel industry.
- (2) The stalemate industry where opportunities for comparative advantage are again small with difficulty in differentiating products and profitability unrelated to market share. This may well characterise the package tour industry in relation to products in the saturated markets of Spain, Greece and Turkey.
- (3) The fragmented industry with many opportunities for differentiation but on a small scale in terms of size. Here, profitability is not a function of size. Many highly specialised activities in tourism would fall into this category. Examples include a whole range of specialised weekend breaks at hotels, such as painting, and special interest holidays such as 'butterfly walks' in Spain.
- (4) The specialised industry with high profit and differentiation opportunities. Profitability is related to market share, but not size. Such specialisation may involve niche players at the exclusive end of package holidays involving companies such as Jules Verne and Cox and King.

On the basis of product sets, the competitive advantage matrix is constructed allowing classification in relation to market growth and relative market share (Figure 2). The overall relationship of the matrix to the quantitative environment is demonstrated in Figure 3. The knowledge gained may facilitate/improve the use of the Boston Competitive Advantage Matrix. For the matrix to be effective, the need is for a test of market share, dominance and market growth in order to provide the boundary of experience and competition within which strategic planning and firm-specific effects can be operated.

The relationships concerning market power help the understanding of the quantitative environment. In terms of the tour operator/travel agent industry, the all inclusive tours to

		Market share	
Market Growth		High	Low
	High	stars	question marks
Low	Low	cash cows	dogs

Figure 2. The competitive advantage matrix

Spain and Turkey at the low end of the market can be considered as the cash cows, having high market shares in a low market growth. The strategic decision becomes to take cash from them and to invest or diversify into new products. Alternatively, these types of holidays may also be dogs in that they are cash neutral, experiencing low growth in business. They often require the most difficult of strategic decisions. Should they be sold off or repositioned?

For smaller scale niche market players specialised packages, such as Peruvian treks around Maccu Pichu, may be more akin to stars requiring a different decision. If the quantitative/qualitative environment can be established then this facilitates the relevant strategic decision. This may explain Thomson's recent move to position itself up market; i.e. to increase exposure to stars with the potential for high market shares in a high growth area. At the moment, such product sets may appear to be question marks. They may be cash users, which have low market shares in a high growth area. The actual position may be made clearer by the establishing of the business environment. What is known in the industry at the moment is that there has been a significant movement of demand away from the traditional all inclusive tour and that there is a growing trend of 'money rich, time poor' consumers. The possibility is that demand is moving towards stars. The lesson is that analysis should be applied to the bundle of products/services and associated market segments, not the whole market and industry.

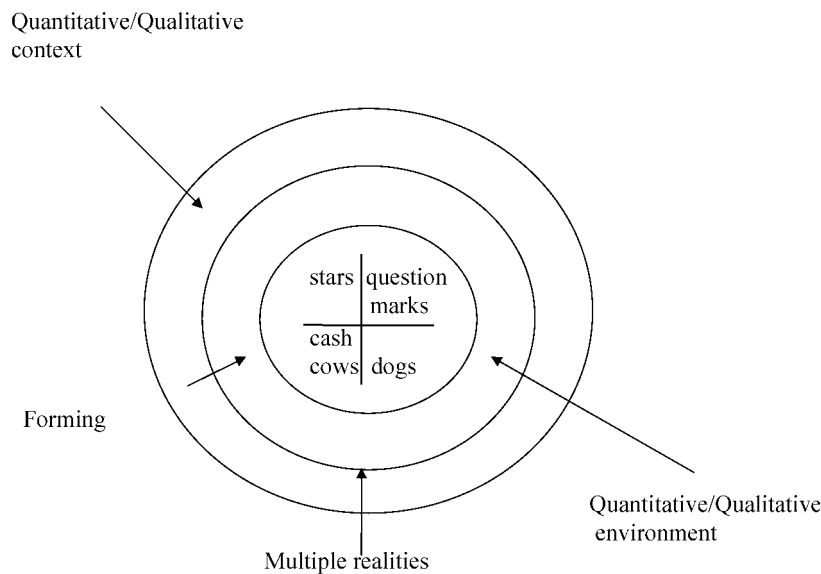


Figure 3. The relationship of the matrix to the quantitative environment

Recent changes in the nature of the tourism business can be built in to create a dynamic analysis. Current developments may all be modelled within such triangulation. These include:

- (1) the growth of large firm entry into previously considered small operators' niche markets;
- (2) the development of horizontal integration in the tour operator/travel agency business by the acquisition of overseas operators, and vice-versa;
- (3) changes in ownership of many sectors of tourism and within the hotel industry, involving banks and travel agencies, and hotels, the brewing industry and leisure conglomerates;
- (4) moves to e-commerce by, for example, Thomson tour operators, and the formation of companies such as Online Travel Corporation—all are responses to the changing nature of demand as more people use the internet to 'build' their own package holidays at the expense of 'off-the-shelf' packages.

Once this work is developed it may present opportunities for management to recognise organisational boundaries and to select appro-

priate strategies. For example, the organisational boundary of the tour operator/travel agency industry may suggest network development between firms rather than myopic behaviour. This would help shape part of the 'strategic fit' in terms of matching activities to the environment. Such quantitative discoveries should lead to reflection on qualitative decision taking and a better understanding of the ideas in the heads of economic actors and the models they use. McWilliams and Smart's (1993) approach of competencies could then be combined with the design of strategic architecture incorporating resources, processes and skills that yield competitive advantages.

CONCLUSION

This paper has begun an investigation into areas of methodology and epistemology concerned with generating a framework that embraces both quantitative and qualitative research. It has been concerned with the construction of integrating frameworks that embrace an alternative logic of inference and the context of the tourism business environment. This requires refinements of existing approaches together with a broader research

methodology. Only by establishing such frameworks will an improved understanding of the tourism industry be achieved.

The suggested framework presented here, with particular reference to industrial organisation and strategic decision making by tourism suppliers, is not offered as a panacea. For future work, the validity and choice of framework rest squarely on how the world and 'truth' are viewed. However, within this, the contribution of triangulated quantitative and qualitative research should be to help understanding:

(to) ... study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (Denzin and Lincoln, 1994, p. 168).

This should lead to a 'truer analysis' of business behaviour and hence a more purposeful investigation of hotels, tour operators, travel agents and the business of tourism in general. It is in seeking to produce this 'truer analysis' that future research activities need to concentrate.

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