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## **The Role of Knowledge-based Networks in Sustainable Tourism Development – A Conceptual Framework**

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### **Abstract**

In practice, tourism organisations tend to be more serious towards their financial viability and therefore undermine long-term socio-cultural and environmental consequences. In so doing they impede their own ability and that of the destination to develop in a sustainable way. This may lead to 'strategic drift' where, organisation's existing strategy gradually, if imperceptibly, moves away from addressing the forces at work in its environment. The paper argues the role of effective knowledge management (production, use and distribution of knowledge) as a possible resolution to the problem. Essentially, any tourism experience can be seen as an amalgamation of a wide range of products and services. A diversified group of both tourism and non-tourism organisations provide the ultimate tourism experience through their networks of relationships. In that sense, combining the concepts of tourism networks with the insights provided by knowledge management may merit new managerial and theoretical endeavours to ensure the sharing and adaptation of tourism knowledge across tourism networks. In other words, learning tourism networks, characterised by processes of mutually reinforcing interactions and collaborations of knowledge creation and flow among tourism organisations, is the future imperative for sustainable tourism development and may be a possible resolution to avoid strategic drift. A conceptual framework and a set of research propositions are discussed in the paper. The conceptual framework of the paper depicts the nature of sustainable tourism practices of a tourism destination (micro and macro) and aims to address how network-based knowledge management process can effectively enhance the sustainability-related practice and avoid strategic drift.

Keywords: Sustainable Tourism, Strategic Drift, Knowledge Management, Tourism Networks

### **Introduction**

'*Sustainable tourism*' is a well-accepted concept in the contemporary tourism literature and practice. This can be indicated in part by the extent to which '*sustainability-related concepts*' have been officially recognised by a broad array of international, national, and regional organisations both internal and external to tourism (Weaver, 2006, Halme, 2001). In practice, the concept of

'*sustainable development*' is increasingly discussed as tourism activities continue to impact economically, socio-culturally and environmentally on more and more places on earth. In addition, several positive initiatives regarding *sustainable development*, for example, self enlightened ethical consideration, rapid growth in green consumerism, the potential profitability of sustainability related measures as well as the propensity of larger corporations to affirm their 'environmental awareness'(Weaver & Lawton, 2006; Dwyer, 2005) have acted to justify the concern with *sustainable development* across the entire tourism industry.

However, apart from few exceptions, the practical penetration of *sustainable development* at the organisation level in general and subsequently at the industry level does not appear to extend much beyond a fashionable concept (Weaver, 2006; Cooper, 2007; Dwyer, 2005; Mowforth and Munt 1998; Frazier, 1997; MacLellan, 1997; Wheeler, 1993). In other words, the concept of sustainable development (i.e., the equal emphasis of economic, socio-cultural, and environmental dimensions in tourism decision making process) is more or less ignored in the tourism industry. In spite of the growing interest and positive anticipations of *sustainable tourism*, it should nevertheless be pointed out that tourism firms at large are facing difficulties to adapt *sustainability-related measures*. It appears that, in practice, discrete tourism stakeholders may be unaware of the range of *sustainability-related concepts* or aware but have failed to initiate appropriate measures to gain significant benefit from it.

The lack of appropriate knowledge of sustainability-related measures may be pointed out as one of the major barriers to adapt sustainability-related practice across the tourism industry (Dwyer, 2005; Weaver, 2006; Cooper & Baggio, 2010). In essence, this paper argues effective knowledge management (production, use and distribution of knowledge) as an imperative factor for the tourism organisations attempting to develop in a sustainable way. Nevertheless, this forces a greater concern with issues such as how to develop organisational knowledge stock, and how this knowledge stock can be made available across the tourism industry to articulate sustainable tourism development. This paper considers the studies on network of tourism organisations as a possible resolution to the problem. Indeed, network analyses on tourism organisations may provide an alternative method for simplifying organisational relationship structures (Wasserman & Faust, 1994; Newman, 2003; Scott et al., 2008) such as how tourism organisations are connected (or not connected), what are the different types of relationships taking place within a network of tourism organisations (e.g. key players, brokers etc.), what are the effective focal points within the tourism industry to articulate (or not to articulate) knowledge and information etc. Using these principles and techniques, tourism organisations may examine alternative ways to enhance the overall collaborative behaviour and knowledge management process across the tourism networks. In this

sense, the analogy of knowledge-based network management within the tourism industry may be considered as effective way to adapt sustainable tourism development.

This paper is based upon the view of tourism industry as complex network systems with many levels of interactions among a wide range of tourism and non-tourism organisations. In concert, the paper conceptualises the process of knowledge management among a regionally bounded network of tourism organisations and their overall contributions towards the sustainable development of that region. The paper first provides a brief overview of the theoretical contexts and their persistence in tourism management. In relation to that, the analogy of core theoretical issues such as sustainable development, strategic management, knowledge management, and network studies are examined to construct the conceptual argument of the paper. Secondly, in light of the theoretical discussions made in the paper, a conceptual frame work is presented and discussed in brief. Thirdly, a set of possible propositions is presented in the paper for further analysis and studies. Finally, the expected contributions of the concepts presented in the paper are discussed.

### **Sustainable tourism development and corresponding barriers**

According to the conceptual definition established by the World Tourism Organisation (WTO), “*sustainable tourism development* meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future. It is envisaged as leading to the management of all resources in such a way that economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems” (WTO 1995). In concert, *sustainable development* for business can be described as a managerial philosophy of “adopting business strategies and activities that meet the needs of the enterprise and its stakeholder today while protecting, sustaining, and enhancing the human and natural resources that will be needed in the future” (International Institute for Sustainable Development, 1994). Essentially, the three dimensions of *sustainability-related concept* (environmental, socio-cultural, and economic) are equally important for the overall business health and to ensure the quality of tourist experience.

Typically, tourism industry in general comprises a large number of small and medium enterprises (SMEs). Most of these SMEs are small family oriented businesses and run their day to day business operations within limited resources and capacities (Carlos et al., 2008; Gammack *et al.*, 2004; Pavlovich, 2001; Braun & Hollick, 2006; Halme, 2001). Arguably, adapting *sustainability-related measures* might not be an easy endeavour for these organisations. In a recent study (Dwyer, 2005) several reasons to the barriers of the adaptation of *sustainable initiatives* by SMEs

have been pointed out as: lack of awareness, lack of understanding on the codes of sustainable practices and corresponding documents, size of the organisations, and on going operational pressures and business agendas. Moreover, there has been a relative neglect of the reasons why individual businesses should consider their environmental and social performance rather than their financial priorities, or, indeed, the role that individual businesses can play in achieving *sustainable tourism development* (Dwyer 2005). Tourism industry managers often concentrate on increasing profit through cost saving (Ladki, 1998). Arguably, emphasis on the financial interest of this nature is short-term and can frustrate long-term environmental and socio-cultural viability of the tourism activities, for example, misuse of resources, inappropriate purchasing practice, poor management practice, inappropriate pricing structure etc (Dwyer, 2005). In this regard, tourism firms typically try to minimise the extent to which they are faced with immediate ambiguity and uncertainty, by looking for that what they can understand and cope with in terms of existing strategies which are familiar to them (Johnson & Scholes, 2008). Quinn (1980a, 1980b) has pointed out business strategies of this nature as ‘incrementalism’ where managers or firms often look for strategies which are familiar to them. Nevertheless, this may involve improving the ways in which firms operate, but only piecemeal (Dwyer & Edwards, 2009).

### **Sustainable development and strategic drift in tourism**

Incremental change can be seen as an adaptive process to a continually changing environment, and in this sense it corresponds to what is referred to as the ‘*fit*’ concept of strategic management (Johnson & Scholes, 2008; Dwyer & Edwards, 2009). Theoretically, strategic ‘*fit*’ is about identifying opportunities in the environment and building strategy by matching resource capabilities to those opportunities (Johnson & Scholes, 2008). Apparently, accumulation of strategic ‘*fit*’, developed stepwise from a series of strategic moves each of which makes sense in terms of previous steps, which can gradually lead to quite significant strategic shift. In that sense, nevertheless, inconsistent strategic fit, over time, may as well give rise to a quite significant frustration. Theoretically, this can be defined as ‘strategic drift’ where, organisation’s existing strategy gradually, if imperceptibly, moves away from addressing the forces at work in its environment (Johnson & Scholes, 2008).

For tourism firms, unsustainable tourism practice may warrant inevitable consequences towards enhancing strategic drift. Arguably, the continuing stereotype attitude towards short-term economic gain may degrade the environmental and socio-cultural viability, and therefore, initiate a new set of challenges for the organisations to deal with. In response to that, organisations might come up with

subsequent adaptation strategy (or fit approach such as cost minimisation or price reduction), however, in doing so, it may give rise to even higher frustrations in the environmental and socio-cultural dimensions, and therefore, enhance strategic drift further. This might expedite a spiral of experiencing higher strategic drift with the end of every cycle and the organisation may become out of line with the external operating environment and reaching a point of crisis. Not only may this imply lower sales, reduced profits and market share of businesses but another important consequence is that the firm may gradually become more unsustainable and will be unable to develop its operations in a sustainable way in future (Dwyer et al., 2008; Dwyer and Edward, 2009).

Conceptually, strategic drift at the organisation level can be summarised and reflected at the destination level. Tourism destinations in general comprise a wide range of organisations directly and indirectly related to tourism. Apparently, any comprehensive tourism experience can be conceptualised as the assemblage of different product and service components made available by this wide range of diversified organisations. In essence, every organisation within the tourism destination is relevant and plays a complementary role towards the overall success or failure of that destination. In other words, the performance or competitiveness of a destination (Dwyer and Kim, 2003) can be seen as an accumulated contribution coming from its embedded elements and corresponding activities. Logically, organisations experiencing strategic drift will therefore imply negative consequences at a destination level. In practice and as discussed earlier, a large number of SMEs within a destination are facing difficulties to integrate sustainable measures into their day to day operations and thus becoming more vulnerable to experience strategic drift. In that sense, the dominance of SMEs might be a probable cause for the destinations to experience strategic drift and become unsustainable. Arguably, the accumulation of these discrete difficulties present at the organisation level gives rise to strategic drift at the destination level and thus impedes overall sustainable development for the destination. As a consequence, the destination might experience lower competitiveness (Dwyer & Kim, 2003) resulting in negative consequences, such as loss of market share, less expenditure by the tourists, decline in total visitor number etc. Therefore, the notion of strategic drift as a destination perspective is logical and can be used to conceptualise sustainable development at the destination level.

### **Theory of complexity and network studies in tourism**

Typically, unsustainable tourism practice and subsequent strategic drift at a destination level is a composite phenomenon emerging from its discrete elements behaving as a whole. It refers to the

idea that the level of sustainability-related practice at a destination level is a '*complex*' behaviour of the whole tourism system, and what it corresponds to can be referred as the '*theory of complexity*'.

'*Complexity*' is increasingly considered to be a key characteristic of the world we live in and of the way we perceive it. Although no common definition of *complexity* exists, it is possible to state that a system is complex when its properties cannot be derived as a simple composition of those characterising its components (Pavard & Dugdale, 2000). In other words, '*complex systems*' are those in which local interactions among many elements give rise to '*complex behaviour*' at the level of the whole system (Scott et al. 2008a). One of the main conclusions of *complex system* thinking is that different behaviours strongly influence a system, and its performance is largely unpredictable. In this type of system, the parts 'interact' with each other according to sets of rules that require them to examine and respond to each other's behaviour in order to improve their behaviour and thus the behaviour of the system they comprise (Stacey, 1996:10).

The concept of the tourism destination as a '*system*' is widespread in the tourism literature and is based on the idea of multilayered interactions among the different parts of the '*tourism system*' (Becken, 2004; Pavlovich & Kearins, 2004; Laws, 2003; Pavlovich, 2003, 2001; Carlson, 1999; Leiper, 1989). A tourism destination, as host to sets of economic activities therefore shares many of the characteristics that are used to define a *complex system* (Scott et al., 2008b; Farrell and Twining-Ward, 2004; Leiper, 2000b; McKercher, 1999; Faulkner & Russell, 1997). Researchers on the tourism and travel industry (e.g., Cohen, 1984; Cooper et al., 2005; McIntosh and Goeldner, 1990) have described the *tourism system* as an industry with indefinite boundaries. Typically, tourism brings together segments from a number of different activities with a wide variety of products and services exhibiting little homogeneity and with different technologies used in the production process (Cooper and Hall, 2008; Leiper, 2000b). Evidently, in this sense, the product and services offered by a destination (e.g., tourism experiences), or the rules and regulations that govern its performance (e.g., carbon offset program) can be seen as a set of complex interactions orchestrated by a wide range of tourism and non-tourism organisations. In summary, any tourism outcome at the destination level (in this case sustainable development) is a complex phenomenon based on the amalgamation of several industrial and non-industrial activities (Halme et al., 2000).

A number of tools have been developed in recent years to analyse complex systems. In their review, Amaral and Ottino (2004) identify three main classes of tools belonging to areas well known to physicists and mathematicians: '*Non linear dynamics*', '*Statistical physics*', and '*network theory*'. Among these, the techniques belonging to what is called 'network science' are probably the most promising series of methods that can be used to model a complex system (Watts, 2004). Many complex systems such as tourism can be described in terms of networks of interacting



elements. Indeed, network studies complement the complex behaviour of tourism systems and therefore enhance our ability to better understand any complex phenomenon, for example, destination sustainable development.

Typically, a network can be described as a set of items, called vertices, with connections between them called edges (Newman, 2003; Wasserman & Faust, 1994). A set of vertices linked, or partly linked, by a set of edges can be presented as one kind of graphical display called 'graph' (Mitchell, 1969) or 'sociogram' (Moreno, 1934) in network studies.

Transferred to tourism studies, a network of tourism organisations can be understood as a set of formal and informal (social) relationships that shape collaborative actions between government, the tourism industry and the general public (Atkinson & Coleman, 1992; Dredge, 2006b). Scott et al. (2008) have described tourism networks as loosely articulated groups of independent suppliers linked to deliver an overall product, and in this sense, destinations might be described as collaborating networks of complementary business enterprises (Gunn, 1977).

Typically, the network concept is based upon relationships between entities such as organisations or people (termed nodes), and in this sense the properties of networks studied by researchers relate to the structure of these relationships (Lacobucci, 1996; Wasserman & Faust, 1994). Thus, network analysis (or social network analysis) is an analytical approach and set of techniques used to study the exchange of resources among actors such as individuals, groups, or organisations (Haythornthwaite, 1996). As pointed out by Wellman (1988), network analysis possesses a number of paradigmatic characteristics focusing on structural and relational properties of the network components (or actors). In concert, Pavlovich (2008, 2003, 2001) extended the premises of network analysis with three elements of network coordination: structural, relational, and embeddedness. The structural aspects investigate the architectural patterns of the network and focus on properties such as the number of components and relationships, density of relationships, number of clusters, structural equivalence, network efficiency etc. The second element, the relational approach, explores the nature of the nodal connection as such and the strength of relationship, direction of relationship, centrality etc. The final element, that of embeddedness, refers to the stockpiling of reciprocal obligations through social relations that act as the glue that binds their interests together in patterns and webs of integration (Pavlovich, 2008; Gulati, 1998; Uzzi, 1998). For instance, a study of network embeddedness may help to explain network formation or how the network components form a collective behaviour or culture over time (Pavlovich, 2008). It is through the analysis of these three elements that we get a sense of how resources are coordinated within networks (Pavlovich, 2008). In other words, tools and techniques available in network analyses can provide predictable properties and valuable insights such as how

destination organisations are connected (or not connected), what are the different types of relationships taking place within the destination (e.g. key players, brokers etc.), who are the effective focal points within the destination to articulate (or not to articulate) knowledge and information etc. Using these principles and techniques, organisations and destinations may enhance the overall collaboration and knowledge management process within the destination network and therefore may articulate and implement sustainability-related practices.

A network approach may be defined as a process that is used to collect and analyse network data. In a network approach, the presence and nature of relationships among the actors is the focus (Knoke and Kuklinski 1991) and the behaviour of actors is seen as a function of their varying positions within a network (Mizruchi, 1994). Using these principles, network analysts can examine the structural, relational and embeddedness properties of networks (Pavlovich, 2008), and therefore develop an understanding of the network under observation.

Network approaches used in social and natural sciences have a long tradition. A wide array of network approaches in these fields has provided important insights for the knowledge of the network structure and has simplified our understanding of many complex systems (e.g. Scott et al., 2008a). In social network analysis, Knoke and Kuklinski (1991) have characterised the network approach in terms of the types of social objects being studied, the transactional content of relationships, the nature of the relationships, and the resultant structural characteristics. Based on the published views of several researchers (e.g. Breiger, 2004; Brinton and Provan, 1998; Burt, 1980; Haythornthwaite, 1996; Knoke and Kuklinski, 1991; Marsden, 1990, 1994; O'Reilly, 1988; Scott, 2000; Wasserman and Faust, 1994; Scott, Cooper, Baggio, 2008a; Wilkinson and March, 2008; Iacobucci, 1996; Pforr, 2006; Albert and Barabasi, 2002; Tichy, Tushman and Fombrum, 1979; Szarka, 1990; Lynch, 2000; Newman, 2003; Cooper, 2006; Cooper and Hall, 2008) a network approach focuses on four interrelated elements:

1. Identifying network members or organisations comprising a tourism destination;
2. Identifying transactional contents of the relationships among the destinations tourism stakeholders;
3. Investigating and analysing the nature of the relationships among small and larger tourism stakeholders;
4. Investigating and analysing the structural characteristics of organisational relationships of destination networks of organisations.



Based on this perspective, the network concepts and analytical techniques may be used to examine the nature and pattern of relationships of the tourism organisations. In regards to a destination's sustainable development, essentially, a network approach can prompt predictable properties such as how the tourism organisations are connected or how they form linkages. That may greatly underpin a consistent attitude by tourism stakeholders towards sustainability-related practice and may explain a number of processes that may be useful to promote sustainable development and avoid strategic drift. In the preceding discussions, the dominance of SMEs in tourism destinations has been pointed out as one of the major challenges to achieving and maintaining sustainable development. Indeed, the articulation of knowledge on sustainable development among these SMEs may be pointed out as one of the barriers to the overall sustainable development of a destination (Cooper and Hall, 2008; Braun and Hollick, 2006; Halme, 2001). Nevertheless, these small and medium enterprises, possessing limited resources at an individual level, can operate within a network of relationships and learn from each other to transform isolated knowledge into collaborative strength. In this sense, the network approach may enhance the overall tourism knowledge and may be considered to be important to the resolution of the problem of achieving sustainable tourism development.

### **Knowledge management in tourism**

In reference to the aforementioned discussion, organisational knowledge management within the tourism networks may be seen as an effective way to promote sustainable development and avoid strategic drift. In practice, individual tourism organisations develop, utilise, and share knowledge for their day to day business activities and which, in a general sense, address the critical issues for their adaptation, survival and competitiveness (Cooper and Hall, 2008). Effectively, sustainable development for an organisation is a journey rather than a goal (Dwyer, 2005) where continuous production, use and distribution of knowledge is an integral process to the endeavour. In that sense, knowledge that stresses the importance and interdependence of economic, socio-cultural, and environmental dimension of continued development might be a critical consideration for the tourism organisations willing to develop in a sustainable way. The network approach, in this perspective, can investigate and therefore prompt valuable indications on how individual tourism organisation manage and share knowledge with others in the network and how this knowledge sharing process can be improved to promote sustainability-related measures within the tourism networks.

Essentially, the question for knowledge management is therefore how to effectively define, develop and diffuse knowledge through a network of heterogeneous stakeholders to promote sustainable development. Such consideration emphasises the requirement to enhance our understanding on knowledge stock and knowledge transfer (Davidson & Voss, 2002). Here, knowledge stocks are the things that are known or developed and knowledge transfer is the means by which the knowledge is communicated to those who need it, and so how learning across the destination is achieved (Cooper, 2008). Theoretically, in terms of the ability to be codified and therefore communicated, knowledge stocks can be distinguished between two types: tacit knowledge and explicit knowledge (Polanyi, 1966, Nonaka, 1991). Explicit knowledge is usually the focus of an organisation's interest and is found in the form of documents, databases, files, customer directories, etc. and other media. It is easily formulated by means of symbols and can be digitised. It can therefore be transferred and communicated to those who need it. In contrast, tacit knowledge is more implicit, difficult to codify, difficult to communicate and difficult to digitize. A good example of tacit knowledge would be the knowledge that is passed from one generation to another in a winery to produce a classic brand of wine.

In practice, tourism organisations make use of both explicit and tacit knowledge. However, the critical issue that underpins the difficulties of effective knowledge management is the imperative of transfer plus absorption of knowledge among the tourism organisations or destinations. In the late 1990s, the knowledge-based economy based upon the production, distribution and use of knowledge has emerged from the previous information age. In other words, there is a clear recognition that not only was knowledge more than information but also that it was a resource to be valued and managed. In fact, researchers, consultants, the industry and government are constantly generating new tourism knowledge. Yet the tourism industry has been slow to harness that knowledge and in particular, the effective transfer of knowledge to tourism businesses has been slow to develop (Cooper and Hall, 2008). Indeed, it could be argued that tourism, and in particular small tourism businesses, are hostile environments for knowledge management (Braun and Hollick, 2006). As a result, unlike many other economic sectors, tourism has not been subject to a knowledge management approach and businesses are less globally competitive (Cooper, 2008).

Of course, knowledge transfer at the destination can take place informally through spontaneous or unstructured processes, but a destination willing to achieve effective knowledge management practice should not leave it to chance, and therefore should pay attention to develop a structured approach of knowledge transfer. In essence, Scott et al. (2008) have pointed out three elements that need to be considered for the effective knowledge management within a destination:

1. Understanding the adaptation of knowledge management in destination networks of tourism SMEs;
2. Developing strategies to increase the acceptance of knowledge transfer and sharing; and
3. Utilising stakeholder and social network techniques to better understand the flows and adoption of knowledge in the destination.

Hilsop et al. (1997) pointed out that knowledge articulation occurs in networks of organisations attempting to innovate and build upon knowledge. They identify two types of networks: 'Micro-level' networks within organisations where knowledge is created and is dominantly tacit and 'Macro-level' or inter-organisational networks where knowledge is transferred around a network of organisations and therefore tends to be explicit in nature. Indeed, inter-organisational learning can be achieved by transferring existing knowledge from one organisation to another, as well as by creating completely new knowledge or skills through interaction among the organisations (Larsson et al. 1998). Kogut (2000) confirms this, illustrating how compositions of knowledge remain the property of the network, with individual firms not having independent ownership or access to these knowledge bases. Hjalager (2002) argued that the process of effective knowledge management in tourism destination needs to be mapped and understood. She has also pointed out four channels of knowledge transfer in terms of the sectors of tourism systems: technological system, trade system, regulatory system and infrastructure system.

Effectively, destinations can be thought of as loosely articulated networks of enterprises, governments and other organisations. Collectively they have the goal of ensuring both the competitiveness and sustainability of the particular destination. Cooper (2008) has characterised contemporary tourism industry in terms of flatter structures, globalization driving alliances and partnerships, instant communication, flexible specialization and the imperative to collaborate and share resources such as knowledge. This equates to loosely articulated networks of organisations either configured as destinations, or as economic structures. Networks, in this regard, can be seen as organisational frameworks with great potential to facilitate diffusion of information because they strengthen connections among organisations and individuals (Carlos et al., 2008). In that sense, network structures can be acknowledged as the vehicle for effective knowledge creation, use and transformation among the destination members.

### **Knowledge-based networks in sustainable tourism development**

Tourism organisations, willing to adapt sustainability-related practices, need to adopt strategies consistent with the changing environment and provide equal importance to the three dimensions of sustainable development (Weaver, 2006; Dwyer, 2005). The basis for such a managerial approach may be the production, use and distribution of new tourism knowledge of continued development. Arguably, the effective distribution of knowledge may be a critical determinant to develop consistent knowledge stock to adapt sustainability-related measures. In this sense, combining the concepts of a network approach to destination with the insights provided by knowledge management may merit new managerial and theoretical endeavours to ensure the sharing and adaptation of tourism knowledge across tourism networks. This approach may encourage the use of effective knowledge creation and transformation allowing tourism organisations to learn and respond flexibly and quickly to the environmental uncertainties as they develop knowledge stock through collaboration. In other words, learning tourism networks, characterised by processes of mutually reinforcing interactions and collaborations of knowledge among tourism organisations, is the future imperative for sustainable tourism development and may be a possible resolution to avoid strategic drift.

### **A framework for Analysis**

The conceptual framework of the study is depicted in figure 1. Associated with the framework is a set of drivers or indicators generated from the wider literature of sustainable tourism, strategic management, knowledge management, and network studies.

In summary, the conceptual framework of the paper depicts the nature of sustainable tourism practices of a tourism destination (micro and macro) and aims to address how network-based knowledge management process can effectively enhance the sustainability-related practice and avoid strategic drift. In relation to that, the conceptual framework comprises of five major categories:

1. Sustainable tourism at the destination (macro) level
2. Sustainable tourism at the organisational (micro) level
3. Micro-macro interaction of sustainability-related practices and strategic drift
4. Knowledge stock at the destination network
5. Network-based knowledge management

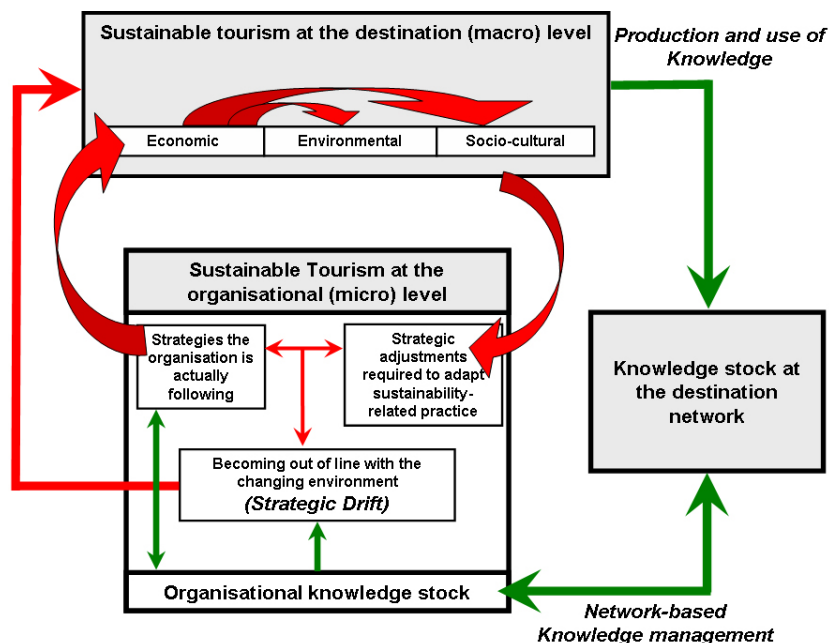


Figure 1: Conceptual framework – Network-based knowledge management to promote sustainable tourism development and avoid strategic drift

### Sustainable tourism at the destination (macro) level

Essentially, sustainable development ‘advocates the wise use and conservation of resources in order to maintain their long-term viability’ (Eber, 1992). In essence, a sustainable approach to tourism is concerned with the appropriate development of the economic, social and physical resources of a region in a manner which conserves the social and physical environments and which promotes the long-term goals of the community (Hall, 2007). According to the conceptual definition established by the World Tourism Organisation, sustainable tourism must:

- Make optimal use of *environmental resources* that constitute a key element in tourism development;
- Respect the *socio-cultural authenticity* of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance;
- Ensure viable, *long-term economic operations*, providing socio-economic benefits that are fairly distributed to all stakeholders, and contributing to poverty alleviation; and

- Maintain a high level of tourism satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices (WTO, 1996).

Indeed, the notion of sustainable tourism development reflects awareness of the importance of developing a tourism destination that delivers economic, social and environmental benefits on both supply and demand side (Dwyer, 2005) and effectively urge an equal importance to these three dimensions of sustainable tourism (environmental, socio-cultural, and economic) (Weaver, 2006).

Nevertheless, in practice, development is usually defined in terms of economic growth 'and is frequently assumed to an economic condition' (Smith 1977:203). For example, in many countries development is measured in such terms as per capita income, gross national product or per capita wealth, although these statistical measures do not indicate the distribution of income or wealth of a given region or the intensity of child labour contributing to the regional economy. Correspondingly, it can be argued that, a pure economic approach to development does not give any appreciation of the environmental and social implications of development or any empirical measure of the quality of life or wellbeing (Hall, 2007). Consequently, sustainable development in tourism cannot be realised solely in economic terms. It is argued that social and environmental developments are interdependent with, and equally important, as economic development for a destination attempting to develop in a sustainable way.

### **Sustainable tourism at the organisational (micro) level**

*Sustainable development* for business organisations can be described as a managerial philosophy of "adopting business strategies and activities that meet the needs of the enterprise and its stakeholder today while protecting, sustaining, and enhancing the human and natural resources that will be needed in the future" (International Institute for Sustainable Development, 1994). Theoretically, 'a sustainable business has interdependent economic, environmental, and social objectives and seeks long-term viability for profit on integrating all three objectives equally in decision-making' (Dwyer, 2005).

Tourism organisations, in general sense, formulate business strategies and managerial actions to adapt to the changing circumstances and to remain operational. In other words, organisations constantly need to adapt to changing circumstances to remain competitive (Dwyer & Edwards, 2008). Nevertheless, given the complexity of strategy formulation it is difficult for managers to analyse all aspects of their environment or establish precise objectives (Evans *et al.*, 2003). In relation to organisational strategic capability, Johnson & Scholes (2008) have pointed out three



main factors: the resource available to the organisation; the competence with which the activities of the organisation are undertaken; and the balance of resources, activities and business units in the organisation. Indeed, in this sense, organisational knowledge stock is relevant and tourism organisations in general, develop, utilise, and share knowledge within the organisational culture that 'addresses the critical issues for adaptation, survival and competitiveness' (Cooper and Hall, 2008). Davenport and Prusak (1998) described knowledge as a 'fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information'. Arguably, drawing upon the notion of knowledge, the concept of sustainable tourism development can be seen as a kind of knowledge or understanding that offers potential long-term benefit of continued development for the tourism organisations. However, to realise the effective benefit of sustainable development and corresponding knowledge, tourism organisations need to conceptualise sustainability-related practices into organisational meaningful terms, and in that sense, an appropriate level of knowledge stock is of important use. A recent publication (Awad and Ghaziri, 2004) has described the model of absorptive capability of knowledge transfer and refers to the fact that 'organisations have to respond to inputs and that their ability to do so will depend in part on their existing knowledge; effectively the greater the knowledge stock, the more effective will be the assimilation of new knowledge'. Arguably, the success or failure of the philosophy of continued development or sustainable tourism largely depends on how tourism organisations perceive and process the information on sustainability-related concepts. In other words, the ability of a tourism operation to sustain itself and the environment depends on its ability to understand the type of impacts that it may have (Dwyer, 2005). Arguably, in that sense, organisational knowledge stock may be an important determinant on how organisations will response to the changing environment or formulate strategies to adapt sustainability-related practice.

### **Micro-macro interaction of sustainability-related practices and strategic drift**

In spite of its widespread popularity, *sustainable tourism* appears to be an ill-defined concept at the operational level. In practice, tourism organisations (specifically SMEs) might have a typical tendency to look after the economic benefits and may ignore the environmental and socio-cultural impacts (Dwyer, 2005; Hall, 2008). In doing so, tourism organisations fail to address the changes in the external operating environment and degrade the long-term economic, environmental and socio-cultural dimensions of sustainable development. Theoretically, this nature of strategic formulation is short-term (Dwyer, 2005) and can be conceptualised as inconsistent strategic 'fit' (Johnson and Scholes, 2008). Here, a 'fit' approach is about 'identifying opportunities in the

environment and building strategy by matching resource capabilities to those opportunities' (Johnson and Scholes, 2008). Moreover, iteration to the process may cause further frustrations in the economic, environmental and socio-cultural dimensions at a destination level. This may initiate a greater change in the external operating environment and the tourism organisations may imperceptibly experience higher level of inconsistent strategic 'fit'. Consequently, the accumulation of discrete inconsistent strategic 'fit' over time may well give rise to the sort of 'strategic drift' (Johnson and Scholes, 2008) in which the organisation's strategy may move far away from addressing the forces at work in its environment. Eventually, organisations experiencing strategic drift may become out of line with the changing environment, and may reach a point of crisis to develop in a sustainable way.

The tourism industry is frequently characterised as an amalgamation of wide range of inter-related activities in the literature (Leiper, 1989). Effectively, the ultimate tourism experience within a destination or tourism system comes from the products and services rendered by a diversified group of organisations actively and passively related to tourism. In this sense, everybody within the tourism destination is relevant and plays an important role towards the overall performance of the destination (Weaver, 2006; Scott et al., 2008). Essentially, difficulties at the organisation level will have negative impacts at the destination level. In this way, unsustainable tourism practice and relevant consequences (here inconsistent strategic fit and strategic drift) will play a part to the overall sustainable development and strategic drift of the destination. Therefore, it can be argued that strategic drift at the organisational level and strategic drift at destination level are associated. Arguably, the accumulation of discrete organisational difficulties to adapt sustainability-related practice will imply negative consequences to the overall sustainable development at the destination level.

### **Knowledge stock at the destination network**

Knowledge can be thought of as the use of skills and experience to add intelligence to information in order to make decisions or provide reliable ground for action (Polanyi, 1966). In essence, knowledge management addresses the critical issue of organisational adaptation, survival, and competitiveness in the face of increasingly discontinuous environmental change (Malhotra, 2002). For sustainable tourism development, this environmental change is evident in both the demand and supply environment (Cooper, 2006). Indeed, tourism organisations and destinations are constantly adapting to changing situations by creating and using knowledge and taking necessary measures in response to the changes. In that sense, in a destination, knowledge can be

conceptualised as a resource that addresses managerial process on how all level of tourism (firm, industry, region, country) may respond to the external operating environment.

In practice, all levels of tourism develop and use knowledge in response to the changes taking place in the external operating environment. Arguably, accumulation of this knowledge can be conceptualised as the overall knowledge stock in tourism. Here, knowledge stock can be described as the accumulation of tacit and explicit knowledge that is known or developed (Cooper, 2006). In this sense, knowledge stock of destination's sustainable development may be argued as the knowledge developed and made available to the destination that addresses sustainability-related issues.

Essentially, the possible source of knowledge stocks of sustainable development within a destination network may be identified as: organisational (micro) knowledge stock and destination (macro) knowledge stock. On this topic, Hislop, Newell, Scarborough and Swan (1997) have identified two types of network. First are micro-level ones within organisations where knowledge is created and is dominantly tacit and "in-house". McElroy (2000) sees this as demand- side creation responding to organisational needs. In the second macro-level, inter-organisational network, knowledge is transferred around the network and thus tends to be explicit. McElroy (2000) views this as a supply-side response to the need to distribute and transfer.

### **Network-based knowledge management**

Essentially, changes taking place in the external operating environment is a continuous process and therefore, organisational (tourism) knowledge stock has to be consistent with the changes taking place in the external operating environment. Essentially, the question arises as how to develop a significant amount of knowledge stock that in turn addresses critical resolutions to the adaptation of sustainable tourism development.

According to Sanchez (2001) learning is an incremental approach to strategy making, where the strategic actors, while experimenting and discovering, learn by doing. In that sense, organisations can learn and develop knowledge through effective collaboration and relationships. Larsson et al (1998) discussed on integrative approach of organisations and pointed out that inter-organisational learning can be achieved by transferring existing knowledge from one organisation to another, as well as by creating completely new knowledge or skills through interaction among the organisations. In practice, organisations can learn from each other to develop a significant knowledge stock and in that sense the process of knowledge transfer is critical. In concert, Nonaka (1991) describes four ways of knowledge transfer in terms of the interaction of individual and

groups: one, tacit to tacit, achieved through a process of socialisation via meetings and team discussions; two, tacit to explicit, externalised through brainstorming and the use of developers, which is a priority for tourism; three, explicit to explicit, by moving knowledge around a network from one organization to another, which is relevant for destinations; and four, explicit to tacit, taking explicit knowledge such as a report and generating new ideas.

Effective value delivery in tourism seldom depends on the performance of a discrete tourism provider (Li and Petrick, 2008, Prahalad and Ramaswamy, 2004; Archol, 1991; Leiper, 2000; Mill and Morrison, 1992; Nordin, 2003). Here, in tourism, everyone is relevant and plays a complementary role towards destination competitiveness and sustainable development. Arguably, sustainable tourism development is a comprehensive outcome actively and passively orchestrated by all elements (tourism and non-tourism organisations, local community, regional industry associations, government organisations) of tourism (Weaver, 2006; Scott et al. 2008, Dwyer & Kim, 2005, Dwyer & Edwards, 2009). World Tourism Organisation (WTO, 1995) emphasized the role of knowledge transfer for sustainable development at a destination level, and pointed out:

“Tourism planning requires an understanding of the meaning of sustainable development and the guiding values for promoting sustainable tourism. It requires that communities be made sufficiently aware of, and to understand, the tourism industry and its impacts as well as the various processes to integrate and engage in participatory planning, consensus building, and conflict resolution among all stakeholders.”

As stated by UNEP (2001), “tourism businesses have a responsibility to raise awareness of the principles of “best practice” in sustainable tourism by promoting the exchange of information between stakeholders (UNEP, 2001)”. These can provide information, guidance training, and ready made packages for small to medium size operators to take advantage of (Dwyer, 2005).

Effectively, from the foregoing discussion it can be argued that, transfer of knowledge can play an important role in establishing networks for dialogue on implementation of the principles of sustainable development and to promote a broader understanding and awareness (knowledge) to help strengthen attitudes, values, and actions that are compatible with sustainable tourism operations (Dwyer, 2005).

However, in tourism, effective knowledge transfer and therefore effective knowledge management process is difficult. Cooper (2006) has described tourism industry as a hostile environment for knowledge management. Indeed, the complex nature of the industry, and the often poorly defined linkages among its components, are major barriers to the integrative strategic planning that is a prerequisite for sustainable development (Hall, 2007). Moreover, tourism development is often fragmented and poorly coordinated – ideal preconditions for what Odum (1982) has identified as

the 'tyranny of the small decision'. Arguably, the net effect of such small decisions is contrary to the objectives of sustainable development. In this perspective, organisational relationship management is critical to promote effective knowledge transfer that may, in turn, build a significant knowledge stock to complement sustainable development.

Of course knowledge transfer at the destination network can take place informally through spontaneous and unstructured process, but a destination, really serious about effective knowledge management to achieve sustainable development, should not leave it to chance and therefore, needs to identify a structured approach of knowledge transfer.

A possible resolution to articulate effective knowledge transfer may be to enhance our understanding on organisational relationship structure and nature. In other words, understanding on how organisations are connected to each other and the nature of these linkages may provide meaningful managerial insights to articulate an effective knowledge transfer process. Weick and Westley (1996) recommend that organisational learning should focus on how organisations or similar groups acquire knowledge as they gain experience, how this knowledge is embedded and the effects of changes in knowledge on later performances. Indeed, the literature suggests that networks and clusters can help in the innovation process of tourism SMEs (see Ahuja, 2000; Fukugawa, 2006; Haga, 2005; Holbrook & Wolfe, 2005; Liyanage, 1995; Matteo et al., 2005; Perryman & Combs, 2005). Novelli et al.(2006) demonstrated that there is correlation between competitiveness produced by clusters and the ability of members to improve their services and products through inter-firm linkages and innovative business approaches.

Synthesising from the social network analysis, a network can be defined as a specific set of linkages among a defined set of entities (here tourism organisations), with the additional property that the characteristics of these linkages as a whole may be used to interpret the complex behaviour of the entities involved (Mitchell, 1969). Effectively, network analysis delivers a number of useful outcomes. It provides a means of visualising complex sets of relationships and simplifying them and is therefore useful in promoting effective collaboration within a group, supporting critical junctures in networks that cross functional, hierarchical, or geographic boundaries; and ensuring integration within groups following strategic restructuring initiatives (Cross et al., 2002). In recent times these analysis methods have been applied to the tourism sector and have provided interesting insights (Baggio, 2007; da Fontoura Costa & Baggio et al., 2008a; Scott et al., 2008a; Scott et al., 2008b).

It can be argued that the information and knowledge flows in a destination network are relevant mechanisms for the general behavior of the system such as sustainable development of a tourism

destination. Network analysis and corresponding topologies, in this perspective, can provide a wide range of paradigmatic characteristics (Wasserman & Faust, 1994; Iacobucci, 1996; Scott et al., 2008; Marsden, 2001; Baggio and Cooper, 2010) addressing the nature, pattern, and embeddedness (Wellman, 1998, Pavlovich, 2001, 2003) of relationship among the network members. Production, use and transfer of knowledge are strongly presented by these processes, and in a way which can possibly determine the speed by which individual actors perform and plan their future actions at the destination. In other words, network analytical tool, indicated in the literature, may allow the identification of focal points or organisations (nodes) and corresponding relationships (pattern, nature, and embeddedness) of destination organisations and may thus enhance our understanding on how to articulate (or not to articulate) effective knowledge management process of continued development across the destination network.

**Research propositions**

In relation to the aforementioned discussion and conceptual framework this paper proposes a set of propositions that may be examined and tested. Figure 2 depicts the conceptual framework and associated research propositions of this paper.

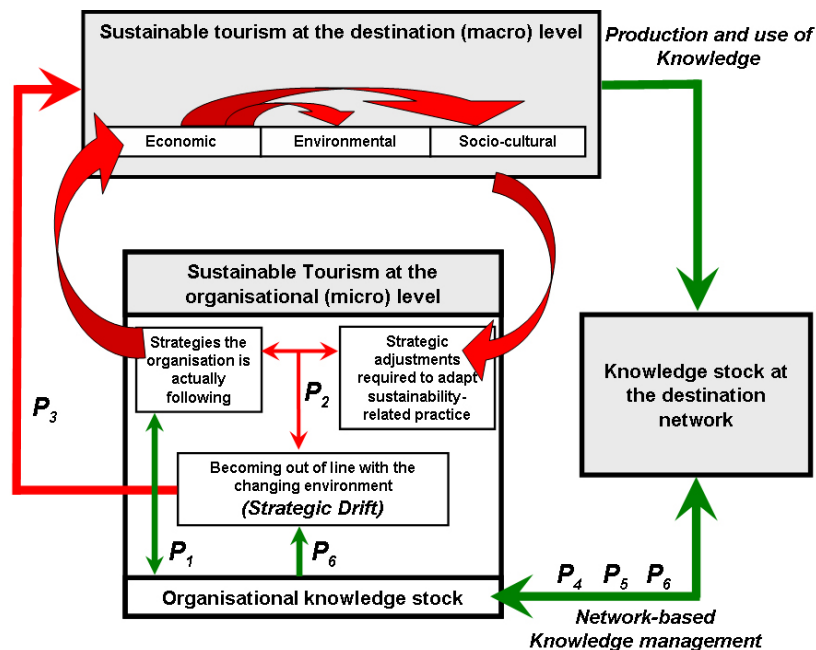


Figure 2: Conceptual framework and corresponding propositions



***Proposition 1:***

The adaptation of sustainability-related measures at the organisational level depends on the overall knowledge stock of that organisation. The greater the knowledge stock the greater the adaptation capability.

***Proposition 2:***

Unsustainable tourism practice may initiate strategic drift for the tourism organisations.

***Proposition 3:***

The greater the amount of unsustainable tourism practices at the organisation level, the greater the amount of unsustainable tourism practices and strategic drift at the destination level.

***Proposition 4:***

Organisational knowledge stocks of sustainability-related measures are positively associated with the effective knowledge transfer process.

***Proposition 5:***

Effective knowledge transfer process depends on the structure and nature of destination network

***Proposition 6:***

Destination network analyses can identify the nature and structure of relationships among the destination tourism organisations and therefore complements effective knowledge transfer process within the destination network to promote sustainability-related practice and avoid strategic drift.

**Expected contribution and conclusion**

The key issue addressed in the paper is the adaptation failure of sustainability-related practices in tourism. In relation to that, the paper argues the process of knowledge management as a possible resolution to the problem. The paper also presented a conceptual framework and provided a discussion on 'how to enhance effective knowledge management process and promote sustainability-related practices within a regionally bounded destination network.

The lack of appropriate knowledge of sustainable development across the tourism industry is one of the major barriers for sustainability-related tourism practices. It was argued that enhancing organisational knowledge stock is an imperative to the sustainable tourism development. Essentially, this forces a greater concern with issues such as how to develop organisational knowledge stock, and how this knowledge stock can be made available across the tourism industry to promote sustainable tourism development. Here, organisational network studies are considered as possible resolutions to the problem.

Recent research has acknowledged that the network structure may be considered as the vehicle for effective knowledge creation and transfer process. Indeed, destination network analyses provide an alternative method for simplifying organisational relationship structures and thus can be useful in promoting effective collaboration within the destinations. In other words, tools and techniques available in network analyses can provide predictable properties and valuable insights such as how destination organisations are connected (or not connected), what are the different types of relationships taking place within the destination (e.g. key players, brokers etc.), who are the effective focal points within the destination to articulate (or not to articulate) knowledge and information etc. Using these principles and techniques, organisations and destinations may enhance the overall collaboration and knowledge management process within the destination network and therefore may articulate sustainability-related practices.

The paper may also highlight the importance of understanding the pattern and nature of relationships and corresponding behaviour of the destination network organisations. It may explain how destination organisations may enhance the collaborative behaviour and may improve the overall knowledge management process to adapt sustainable development. It may well be that development of a cohesive group of destination operators may be enhanced through examination of organisational collaborative issues and network analysis. This may in turn clarify the applicability of the effective knowledge management process to promote sustainable development.

In practice, tourism destinations comprise a large number of small and medium enterprises (SMEs). These SMEs have limited resources and in general are more concerned about short-term economic viability of their businesses rather than long-term socio-cultural and environmental dimension of sustainable development. Indeed, these small and medium enterprises can share, collaborate and learn from each other to transform isolated knowledge into collaborative strength. This paper has identified possible resolution to enhance effective collaboration among these SMEs. The propositions highlighted can be used to improve connectivity by intervening to mend broken links, or reconfiguring the network to be more efficient. Destination managers can take the benefit of these concepts to enhance the level of collaboration within the destination's network. In this sense, the notion of knowledge-based networks proposed in the paper may provide managerial insights to promote sustainability-related measures within the destination.

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