

Marketing Information Systems in Tourism and Hospitality Small- and Medium-sized Enterprises: a Study of Internet use for Market Intelligence

Emma Wood*

Centre for the Study of Small Tourism and Hospitality Firms, School of Tourism and Hospitality Management, Leeds Metropolitan University, Calverley Street, Leeds LS1 3HE, UK

ABSTRACT

This study investigates the nature of marketing information systems (MkIS) within small- and medium-sized enterprises (SMEs) and focuses on the importance of external information and market intelligence. The sources of market intelligence are investigated with particular emphasis on understanding the usefulness of the Internet for external information gathering. The empirical research to support the study uses survey methods to investigate marketing information systems, market intelligence and Internet use within hospitality and tourism SMEs in the Yorkshire and Humber region.

The findings indicate that SMEs in this sector make use of informal marketing information systems which mainly concentrate on internal and immediate operating environment data. Important wider market intelligence is underutilised owing mainly to the resource constraints of these smaller businesses. The Internet has not yet been recognised as an important source for market intelligence despite having the benefits of providing much of the necessary data more quickly and at a lower cost than many other sources. Copyright © 2001 John Wiley & Sons, Ltd.

Received 22 November 1999; Accepted 14 July 2000

* Correspondence to: Emma Wood, Centre for the Study of Small Tourism & Hospitality Firms, School of Tourism & Hospitality Management, Leeds Metropolitan University, Leeds LS1 3HE.

Keywords: tourism; hospitality; Internet; market intelligence; information systems.

INTRODUCTION

According to a number of studies summarised by Brown *et al.* (1994) the service sector tends to be less marketing orientated with less use of external information than the manufacturing sector. Sisodia (1992, p. 51) drew the same conclusion, 'While many packaged goods companies have realised the benefits of formal marketing information systems, most service organisations have not initiated systematic efforts in this direction'. A later empirical study by Li in 1997 also showed that service organisations are less likely to possess a marketing information system.

The majority of marketing information systems utilise mainly internal data because this is easy to obtain, but research has shown that managers require mainly external information on which to base long-term decisions. Internal data usually is only of operational importance, whereas strategic decisions require information on market trends, competitor strategies and economic and political fluctuations (Xu and Kaye, 1995).

The Internet potentially is a cheap and fast way to access useful external environmental data to improve marketing decision-making, but for this data to be used to its best advantage it needs to be incorporated into a marketing information system (MkIS). The

Internet, as a source, should then complement existing sources of internal and external data, providing a fuller picture on which to base decisions.

There are increasingly fewer companies who do not have Internet access and over the past five years there has been exponential growth in Internet usage for marketing communications (Hoffman and Novak, 1998). This area of Internet use has been well documented and has provided clear and measurable benefits to those companies using this new medium for promotion and distribution. The usefulness of the Internet as a source of marketing intelligence has not received as much attention, however, particularly in the context of SMEs in the tourism and hospitality sectors (Friel, 1999). Brabston and McNamara (1998) considered the Internet as a 'competitive knowledge tool' but, other than this research, has been limited mainly to the areas of library and information management, such as Swash's (1998) article 'UK Business Information on the Internet'.

This paper examines marketing information systems and the use of the Internet for obtaining marketing intelligence by SMEs in the tourism sector. The focus on SMEs is considered appropriate because, as others have argued (e.g. Thomas, (1998), their behaviour and engagement with the business environment is likely to be significantly different to larger organisations in the same sector. He highlights the importance of the small firm in the hospitality and tourism sector and states that 'there are sufficient grounds for examining such organisations as a separate analytical category from both small firms in general and other, larger, tourism and hospitality firms.' Thomas (1998, p. 5).

Consideration was given to the various definitions of smaller businesses within this sector before concluding that a combination of characteristics was needed. The Department of Trade and Industry (DTI) classes businesses with less than 50 employees as small and those with more than 50 but less than 250 as medium-sized. This maximum number of full-time equivalent employees (less than 250) was used for the research combined with the size of business based on room number for the accommodation sector. Fewer than 100 rooms

was selected in order to screen out larger hotel chains. Only independently run businesses were surveyed, e.g. excluding National Trust owned tourist attractions. The objective was to screen out those who may have access to the marketing information system of a larger organisation.

This paper begins by reviewing existing research on three related issues: marketing information systems, market intelligence and business use of the Internet. The purpose of this review is to ascertain the importance of market intelligence and its use within the MkIS and to identify how the Internet is being used and how it could be used to support the MkIS of small tourism organisations.

The findings of a postal survey of small tourism firms in the Yorkshire Tourist Board region are then reported.

The aims of the study were to:

- (1) identify the current form of MkIS used within small- to medium-sized service firms and to measure the awareness within this sector of the information available via the Internet;
- (2) determine if and how these firms use the Internet for obtaining marketing intelligence;
- (3) gather the opinions of information users within the target group on the usefulness of the Internet for market intelligence gathering and to discover what problems have been encountered or are anticipated with Internet use for market intelligence.

The paper concludes by developing a 'best practice' model for incorporating Internet usage into the MkIS of tourism SMEs.

Marketing information systems

The MkIS of an organisation is a system used for storing, analysing and collating information in order to support marketing decision-making. In the last decade, most MkIS have made use of information technology (IT) and this use of IT has allowed the sharing of information throughout the organisation. More recently with the increasing availability of on-line information the IT aspect of the system has been extended so that data can be sourced and accessed via an Internet link.

Cost of Error	High	FORMAL INVESTIGATION		REGULAR REPORTS
			INFORMAL INVESTIGATION	
Low		NO NEED FOR INFORMATION		ROUTINE ENCOUNTERS
		Low		High
			Volatility	

Figure 1. Information gathering matrix (Source: adapted from Wright and Ashill (1998, p. 132); reproduced by permission of MCBUP Ltd)

The use of IT within MkIS has become a key factor in an organisation's achievement of competitive advantage. As Talvinen, (1994, p. 8) has argued, 'Managing marketing information by means of IT has become one of the most vital elements of effective marketing'.

The literature on marketing information systems (Sisodia, 1992; Seth *et al.*, 1993; Talvinen and Saarinen, 1995; Li, 1997; Weiber and Kollmann, 1998; Wright and Ashill, 1998) provides evidence that the existence of such systems, whether at a simple operational/transactional level or as a complex decision-support system, leads to improvements in marketing decision-making.

There is some debate as to whether the system should be formal (systematically searching for predetermined sources/types of information on a regular basis) or informal (where data collection is *ad hoc* and more responsive to the needs of the moment). The 'contingency model' suggested by Wright and Ashill (1998) favours more informal systems and is useful for smaller organisations as 'it is accessible to managers who lack the resources of large organisations, sophisticated computer systems or formal market research.' (Wright and Ashill, 1998 p. 140).

It therefore can be based successfully upon 'informal investigations' and 'routine encounters' as shown in Figure 1.

A survey of 153 small companies in the USA by Li (1997) confirms that 'They [small companies] are not fully exploiting the latest information technologies to create competitive

advantages.' The study concludes that '... it is vital to small firms to improve their MkIS usage in the near future.' (Li, 1997, p. 34). The survey covered a wide range of industries in the service and manufacturing sectors and there did appear to be a difference based on industry sector, with service firms making less use of MkIS than manufacturing firms. The findings show that small firms are not collecting environmental data and are not fully utilising computerised systems. Here the emphasis is on generating internal data, customer data and some competitor information mainly from sales call reports. Although the study does not investigate directly the reasons for this underuse of information systems, it is mentioned that smaller firms are comparatively resource poor and computerised systems are not seen as an essential business tool.

It would seem, therefore, that SMEs need a MkIS that is not resource intensive but will still provide the internal and external information needed to make good marketing decisions.

Market intelligence

Generally, the terms 'business intelligence', 'market intelligence' and 'competitor intelligence' are used interchangeably. For the purposes of this study market intelligence is defined as information obtained from external sources that can be used for 'identifying problems, changes and opportunities in the external marketing environment' (Talvinen,

1994, p. 18).

It has been demonstrated that those companies which take into account the performance of competitors and changes in the external environment are considerably more likely to succeed. However, this is only the case if the information gained is accurate and used in an appropriate manner. These factors depend largely on the source of the information and the format of the MkIS (Hewitt-Dundas *et al.*, 1997).

The importance of market intelligence (external data) as a vital component of any successful MkIS has been emphasised in previous research. In particular Xu and Kaye (1995) recommend a shift away from 'internal data management, historical focus to external, future information scanning and reporting'. They suggest that an 80:20 ratio for external:internal intelligence is more useful to top managers. Internal data tends to overload any formal or informal system and this may be particularly true in operations-focused service industries such as tourism. This parallels the findings and recommendations from Li's (1997) research into small businesses.

Folsom (1991) interviewed a sample of small businesses in the service and retail sectors of the USA in order to assess their market intelligence practices. The results suggested that the most common forms of market intelligence undertaken were monitoring competitor advertisements, asking customers about competitors and talking with competitors and their employees. They concluded that small businesses do not aggressively seek market intelligence information. These findings were mirrored by the research done in Northern Ireland by Hewitt-Dundas *et al.* (1997). Their pilot study of small firms identified a weakness in the amount and accuracy of competitor knowledge held. A survey conducted into various aspects of the tourism and hospitality sector by Thomas *et al.* (1997) covered a number of important marketing issues, one of which was the amount and type of marketing research undertaken. The findings showed that the least researched area was the external business environment and the most researched area was customer needs. This result is emphasised by Friel (1998, p. 130), where he discusses the danger of small

tourism and hospitality firms not monitoring the business environment. He argues that in such a competitive and dynamic environment market intelligence is necessary to allow firms to respond to and manage change and to exploit opportunities. Friel goes on to suggest that this lack of external monitoring indicates a form of marketing myopia where a concentration on research into customer needs leads to a neglect of important environmental changes. This again ties in with the findings of Xu and Kaye (1995) and suggests that a switch in emphasis is needed.

The majority of literature reviewed in the area of market intelligence (e.g. Folsom, 1991; Sisodia, 1992; Seth *et al.*, 1993) was published prior to the world-wide adoption of the Internet. These studies do not, therefore, refer to the Internet as a particular source of market intelligence and it may be that the use of market intelligence in smaller companies has grown or will grow as a result of this new method of access.

Business use of the Internet

Several studies have highlighted the amount of valuable business information available on the Internet. For example, McGinty (1998) states that the Internet is a useful aid for the marketing efforts of small businesses owing to the wealth of marketing-related information available at no charge. Brabston and McNamara (1998) list the amount of useful market intelligence data available and make particular reference to how this information can aid in analysing the industry environment and the macroenvironment. Swash (1998) categorises the amount and value of UK business information available on the Internet, concluding that it is a major rather than peripheral information source.

However, the majority of recent research articles and discussion papers relating to marketing and the Internet concentrate on the Internet as a tool for promoting, selling and distributing products and services rather than the value of the Internet as a marketing information source. See, for example, Heinen (1996), Poon and Jevons (1997), Poon and Swatman (1997), O'Connor and Galvin (1997) and O'Connor (1999).

Table 1. Business use of the World Wide Web (source: IMRG (1996), as cited in O'Connor and Galvin (1997, p. 139)

Business use	Per cent
Information gathering	71
Collaborating with other organisations	54
Marketing	46
Customer service	38
Information publishing	33
Selling products and services	33
Purchasing products and services	23

Use of the Internet is surveyed in Thomas *et al.* (1997). The results show that Internet usage is increasing significantly within small firms in the tourism and hospitality sector and that up to one-quarter of these firms are currently using the Internet as a promotional medium. It may be that Internet use for information gathering is also on the increase in this sector. If so this will go some way to addressing the current dearth of business environment monitoring undertaken by these firms, as identified by Main (1999) and Friel (1999).

Poon and Swatman (1997) researched small service sector companies (less than 50 employees) in Australia to determine business use of the Internet. They found that small business use of the Internet is mainly as a communication tool (alongside telephone and fax) and as a promotional tool, although there were also a number who were using it for information gathering purposes. They state that Internet use gives small businesses access to an information infrastructure greater than that owned by any individual large organisation. However, their research does not show that these small companies are taking advantage of that access.

A European survey of 5000 retailers, banks and commercial organisations found that information gathering is by far the most common use of the Internet (Table 1). This suggests that a large number of the businesses surveyed use the Internet as an information source than use it as a marketing tool. This contradicts some of the findings of other research. However, the extent of this use and whether this information is used as market intelligence is not clear.

Research by Katz and Aspden (1997) and Brabston and McNamara (1998) considers the factors that limit Internet usage. Katz and Aspden (1997) investigated 'motivations for and barriers to Internet usage'. They found that the Internet was used by wealthier and more highly educated people and that social and work networks were important in stimulating interest and providing support. The barriers to use were cost and a lack of understanding of how to use the Internet. Their research showed that even experienced IT users had difficulty getting started.

Although this research was carried out amongst the general public rather than organisations, smaller businesses could well be subject to these same factors. In these smaller firms individual personalities and experiences are likely to have a substantial influence on organisational decisions.

Barriers to Internet use are discussed by Brabston and McNamara (1998). Indeed, they provide a valuable summary of factors that are likely to limit business use of the Internet. These factors include older managers not being used to working with a computer at their desk and viewing PCs as support tools to be used by clerical staff. They also identify problems with the Internet itself in that this ungoverned network provides a vast amount of information of variable quality. Accessing useful, reliable data therefore can be frustrating and time consuming.

Despite their discussion of the obstacles to use, Brabston and McNamara (1998, p. 164) conclude that the Internet '... is easy to learn and use, user-friendly, relatively efficient and effective.'

Swash (1998) suggests that in order to overcome some of the problems identified with Internet use perseverance and practice are necessary from the business manager. The main obstacle therefore might be in convincing them that this effort will eventually pay dividends.

From the literature discussed above it can be concluded that a MkIS is desirable and perhaps necessary in order to compete successfully. However, it may not need to be formally structured or resource intensive. A more important factor than the structure appears to be the extent of external informa-

tion gathered compared with internal data. The Internet is undoubtedly a rich source of external information. In order for smaller companies to take advantage of it they need to overcome any initial problems, persevere and to integrate the information found with internal data within a formal or informal MkIS.

METHODOLOGICAL APPROACH AND RESEARCH DESIGN

The primary research method used to meet the objectives of the study was a largely quantitative postal survey. This method was chosen after consideration of general methodological issues (positivist versus phenomenological approaches) and previous research undertaken in similar areas and sectors.

A survey was chosen as the main method of data collection as it is necessary to quantify MkIS, market intelligence and Internet usage within the diverse service sector in order to meet the objectives of the research. It is recognised that in several studies of the service sector survey research has been found to be inappropriate as 'the characteristics of services are predominantly intangible and the aspect of accessibility and timing will be significant in the actual delivery of the service' (Gilmore and Carson, 1996). This suggests that qualitative research would be more appropriate but as this research does not seek to gather data on the service encounter itself but on the use of a marketing tool these findings do not necessarily apply.

The survey population

The type of company selected was to cover two main subgroups of tourist attractions and accommodation. These companies were classified as small or medium sized using the DTI classification of less than 250 employees and were independently run. The accommodation sector was also categorised by number of rooms or sites (fewer than 100).

The Yorkshire and Humber region was chosen owing to the number and variety of suitable SMEs in the sector of interest situated within this region and its accessibility.

Survey sample size and method

Three hundred companies were selected so that with an expected response rate of 20% the survey would result in at least 60 completed questionnaires. This response rate is typical of similar postal surveys within this field, such as Thomas et al (1997) and Seth et al (1993). This would allow for a variety of statistical techniques to be used for analysis of the data and for some separate analysis of the two subgroups if major differences became apparent.

As the research was interested in both the total population and possible comparisons between the two strata a compromise was required between an even split (suitable for comparison) and a proportional split (suitable for population total) (Barnett, 1991). This resulted in the final sample size of 100 companies from the attractions subsector and 200 from the accommodation subsector. Stratified random sampling was used to select the required number of each type of company from the sampling frame.

Data collection strategies

The survey was administered in the form of a postal questionnaire. Personal and telephone interview methods were rejected owing to the geographic range of the sample, cost, the proposed sample size and the limited details provided by the sampling frame.

In order to improve the response rate pre-notification was considered but recent research suggests that this does little more than increase costs (Wright, 1995). The same research does suggest that reminder letters can significantly improve response rates, especially if they include a duplicate questionnaire. These therefore were sent out 15–20 days after the initial questionnaire.

A pilot survey of five companies was undertaken in order to test the appropriateness of the questions, comprehension, relevance, response rates, etc. The respondents in the pilot survey were then contacted by telephone to discuss the questionnaire's shortcomings in more detail and the results used to reformulate and clarify some of the survey questions. Ambiguous wording was made more explicit and clearer instructions including examples

Table 2. Analysis of response/non-response

	Percentage responding	Percentage of usable responses
Attractions	35/100 = 35	29/100 = 29
Accommodation	39/200 = 20	23/200 = 12
Total sample	74/300 = 25	52/300 = 17

added in two sections of the questionnaire.

The pilot study also identified that the main survey should be targeted at the owner/director of the organisation. It was deemed unlikely in organisations of this size and type that functional managers in information systems or marketing would exist.

The survey instrument

The first sections of the questionnaire gathered classification data, which included factors such as company age, respondent's position and time with the company and the perceived dynamics of the business environment. These were some of the factors identified in previous research into information systems and Internet usage by studies such as those undertaken by Seth *et al.* (1993) and Whyte and Bytheway (1996).

The next section was designed to identify the current marketing information system used within the organisation through a mixture of closed and open questions. The final two sections concentrated on Internet use for

market intelligence purposes. These were used to determine if and how these firms use the Internet, to gather opinions on the usefulness of the Internet for market intelligence gathering, and to discover what problems have been encountered or are anticipated with Internet use for market intelligence.

A supplementary section ensured that the opinions of non-Internet users were also obtained. These respondents' opinions were as important in meeting the research objectives as those of Internet users and they were predicted to be a sizeable proportion of the responding organisations.

SURVEY FINDINGS

Response rate

The final number of usable responses received prior to the cut off date was 52 out of 300 (17%). Twenty-one further replies were received but these could not be used for a number of reasons, including the size of the business, the nature of the organisation and non-completion of the main areas of the survey (Table 2).

Due to the topic of the survey it is felt that a larger number of non-respondents were without Internet access. These organisations may view the Internet as less relevant to their own operations, leading to a lower number of responses. The larger amount of non-response within the accommodation sector is partly explained by the larger number of very small owner-managed businesses. Three responding

Table 3. Sample characteristics

Characteristic	Category	Number	Percentage
Company size	Less than 50 employees	38	73
	51 to 250 employees	14	27
Business age	Less than 2 years	6	12
	3 to 10 years	24	46
	More than 10 years	22	22
Industry subsector	Attraction	29	56
	Accommodation	23	44
Internet access	Yes	24	47
	No	27	53
Respondent's position	Owner, Managing Director	18	35
	General Manager	22	42
	Marketing	5	10
	Other	7	13

Table 4. Chi-squared results of difference between industry sectors

Characteristics	Calculated chi-squared	Critical value	Conclusion
Company size	Chi-squared = 1.481	$<\chi^2_{(1,0.05)} = 3.841$	No significant difference
Internet access	Chi-squared = 0.040	$<\chi^2_{(1,0.05)} = 3.841$	No significant difference
Business age	Chi-squared = 16.974	$>\chi^2_{(2,0.05)} = 5.991$	Significant difference
Environment dynamism	Chi-squared = 4.682	$<\chi^2_{(2,0.05)} = 5.991$	No significant difference
External information gathering	Chi-squared = 1.092	$<\chi^2_{(2,0.05)} = 5.991$	No significant difference

(but not usable) accommodation organisations stated a lack of time or personnel as the reason for not completing.

Characteristics of the usable sample

The main characteristics of the organisations providing usable responses are summarised in Table 3. The average responding company was small and established in their business. Respondents had worked for the business for 5–7 years on average and therefore should have a good knowledge of the business and its operating environment. There appeared to be an almost equal number of larger category companies (51 to 250 employees) with Internet access as smaller companies (fewer than 50 employees). This suggests that resource scarcity may not be a factor in obtaining Internet access.

Chi-squared analysis and the Mann Whitney test suggested that the two subsectors vary very little in the areas of importance to this research, i.e. number with Internet access, extent of external information gathering and the operating environment (Tables 4 and 5). It therefore was concluded that it would not be beneficial to conduct a separate analysis of each subsector.

Thomas *et al.* (1997) highlighted some of the general differences within the two subgroups.

Recruitment difficulties were found to be greater in the accommodation sector. Long-term marketing planning was more prevalent in visitor attractions. Promotional methods vary, with discount pricing and national advertising the focus in the accommodation sector and local advertising and sales literature as the main tools in the attractions sector. The attractions sector favours a cost-plus pricing approach whereas the accommodation sector uses prevailing business conditions to set prices (Thomas *et al.*, 1997)

These general variances may suggest that sectoral differences in the areas of this research could have been expected. For example, the accommodation sector's focus on prevailing business conditions would suggest the need for more external information gathering. However, this may be matched by the longer term planning activity of the attractions sector, which also would require external information.

Current form of MkIS

Current marketing information systems primarily focus on gathering information on existing customers. This is undertaken more regularly than in the other information areas. The second key area is local competitors. The areas monitored least frequently or not at all

Table 5. Mann-Whitney test results. The hypothesis tested is, H_0 = no difference between the two subsectors

Characteristic	Result	Conclusion
Number of employees	Cannot reject H_0	No difference between sectors
Business Age	Reject H_0	Some difference between sectors
Dynamic Environment	Cannot reject H_0	No difference between sectors
External information	Cannot reject H_0	No difference between sectors
Job of respondent	Reject H_0	Some difference between sectors

Table 6. External information gathering frequency

Information Area	Most common (modal) frequency of information gathering	Percentage stating this category
Local competitors	<i>Ad hoc</i>	27
National competitors	<i>Ad hoc</i>	31
International competitors	Never	65
Existing customers	Daily	31
Potential customers	<i>Ad hoc</i>	27
Local economy	<i>Ad hoc</i>	27
National economy	Never	29
International economy	Never	47

are international competitors and the international and national economy (see Table 6).

The more dynamic the environment the more often external information is gathered and, similarly, the larger the organisation the more information is gathered. A possible negative relationship was identified between external information gathering and business age and also with the length of time that the Internet has been accessed. Therefore more recently established businesses that are relatively new to the Internet gather external data more frequently. Pearson's correlation coefficient for these relationships are shown in Table 7.

Organisations with Internet access appeared to be more aware of the general sources, types and uses of market intelligence than those without Internet access. For example, 91% of organisations with Internet access listed some sources of data used for local competitor information compared with only 59% of non-Internet users. Thirty-six per cent of Internet users explained how they used international

economic data compared with zero non-Internet users.

The sources of information used are summarised in Table 8, which details the top three responses in each category given as a percentage of total responses for that category.

Awareness of information on the Internet

The Internet as a source is highlighted in Table 8 to give some indication of the awareness and hence use of this medium. Further understanding of the level of awareness is gained from analysing the extent of Internet access within the sample and from the qualitative data provided.

Summary of current Internet usage within the sample suggests that 53% have Internet access and 37% do not. Table 9 provides further detail on the 53% currently accessing the Internet. Most organisations have gained access to the Internet only recently and have only one terminal connected, therefore the number of employees who can access it is not

Table 7. Correlation of 'external information summary' data with other variables

Variable correlated with external information summary	Pearson's coefficient of correlation	Result
Dynamic environment	0.329	Some positive correlation
Company size	0.296	Some positive correlation
Business age	-0.228	Low negative correlation
Year Internet accessed	-0.239	Low negative correlation
Number of terminals	-0.195	Very low negative correlation
Current Internet Access	0.171	Very low positive correlation
Internet access planned	0.150	Very low positive correlation
Number of employees using	-0.004	No correlation

Table 8. Sources of information used

Area of interest	Sources of information used			
	Non-internet users (%)		Internet users (%)	
Local competitors	Trade association	27	Trade association	25
	Direct from competitor	32	Direct from competitor	19
	Local paper	14	Internet	13
National competitors	Trade press	62	Trade press	25
	Personal contact	15	Internet	18
	Trade association	7	Trade association	14
International competitors	Newspapers/TV	50	Internet	45
	Sales representatives 1	25	Newspapers	18
	Trade press 1	25	Trade press	18
Existing customers	Survey	46	Direct	40
	Direct	38	Survey	32
	Internal records	15	Booking records	12
Potential customers	Research reports	40	Trade association	33
	Personal contacts	20	Research reports	27
	Enquiries	20	Local/national media	13
Local economy	Trade association 6	46	Council	35
	^a		Local media	30
			Local contacts	20
National economy	National media	25	National media	53
	Government reports	25	Internet	13
	^a		Council	13
International economy	National media	33	National media	64
	Teletext 1	33	Internet	18
	Council 1	33	*	

^a Equal responses of small numbers ignored.

surprisingly small. Further analysis concluded that the size, age and external operating conditions of the sample organisations do not appear to determine whether or not they connect to the Internet (Table 10).

clearly only as a supplementary tool alongside other sources. The only area in which it is the major source is international competitor information.

If and how the Internet is used within the MkIS

Table 11 shows that the Internet is used as a source of information in the five key areas but

Internet usefulness and problems

The Internet was found to be of most use for gathering information on local, national and international competitors. The other external information areas (customers and economy)

Table 9. Duration and extent of access

When access was gained (%)		Number of terminals with access (%)		Number of employees with access (%)	
This year	22.7	1	76.2	0	4.6
1 year ago	40.9	2	9.5	1	18.2
2 years ago	22.7	3	4.8	2	40.9
3 or more	13.7	4 or more	9.6	3 or more	22.7

Table 10. Analysis of factors affecting Internet access

Factors		Internet access (%)	No Internet access (%)	Chi-squared statistic
Company size	<50 employees	33	39	0.067 (DF = 1)
	51–250 employees	14	14	
Business age	<2 years	6	6	0.038 (DF = 2)
	3–10 years	22	25	
	>10 years	20	22	
Environment competitiveness	Uncompetitive	2	4	1.210 (DF = 3) ^a
	Zero	4	8	
	Competitive	44	42	
Environment stability	Stable	12	22	2.397 (DF = 4) ^a
	Zero	10	12	
	Unstable	24	16	
Industry growth	Growing	8	8	1.902 (DF = 4) ^a
	Static	14	22	
	Declining	24	24	
Environment dynamism	Low	6	8	0.036 (DF = 2)
	Medium	24	28	
	High	16	18	

^a Chi-squared calculated using ungrouped categories.

scored the minimum possible, suggesting that the Internet was of little use in these areas.

The main benefit of the Internet as an information source was seen as 'ease of access', which scored higher than 'value for money', 'quantity available', 'up-to-date' and 'usefulness', although no criteria scored highly.

Qualitative comments generated by open-ended questions revealed that the benefits of the Internet are seen mainly as a tool for promotional and distribution uses for those currently not having access, whereas current Internet users see mainly information gathering advantages.

Non-users envisage fewer problems than the users actually experience. Non-users foresee

disadvantages as being largely cost based whereas experience has led users to state time wasted, difficulties searching and user expertise as the main problems.

The quantitative data also highlighted the problems associated with Internet use for marketing information gathering. These were analysed and cost of access and time downloading were seen as the most problematic areas. Minor problems were lack of trained employees, technical expertise and online subscription costs.

DISCUSSION OF FINDINGS AND RECOMMENDATIONS

The form of marketing information systems within the sector

The survey suggests that most MkIS within the sectors studied are informal and based largely on internal data with a concentration on the analysis of existing customers. This corresponds to a number of findings from previous research (Sisodia, 1992; Li, 1996; Main, 1999) and supports the view that the sector is more operationally focused than marketing orientated (Friel, 1998). The informality of the systems manifests itself in the reliance on

Table 11. The Internet as a source of information given as a percentage of all Internet user responses

Area of interest	Internet as a source of information (%)
Local competitors	13
National competitors	18
International competitors	45
National economy	13
International economy	18

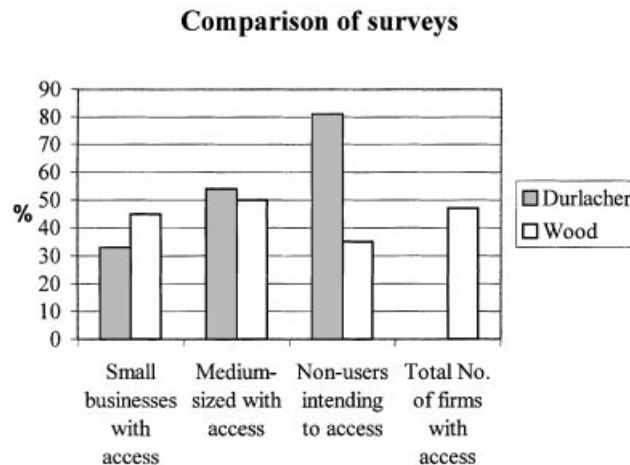


Figure 2. Internet Access — Results comparison with Durlacher Research (1997)

personal contacts and individual manager's experience and knowledge rather than hard facts and quantitative data. The main data in quantitative form appears to be gathered from surveys of existing customers (37% of respondents used this method).

The 'routine encounters' and 'informal investigations' suggested in the model by Wright and Ashill (1998) therefore appear to be prevalent. These are further characterised in the survey by 25% of competitor knowledge sources being gathered directly from competitors and 39% of existing customer information being gathered direct from customers.

Wright and Ashill (1998) suggest that this informality is not necessarily a disadvantage and can be more appropriate for a small business owing to the scarcity of resources. However, others suggest the importance of utilising information technology (Talvinen, 1994), the management of information (Weiber and Kollman, 1998) and the necessity for more extensive external intelligence (Li, 1997; Friel, 1998). This suggests that a better system could be developed for SMEs if resources could be improved or information gathered more easily and cheaply.

The extent of market intelligence activities

The form of MkIS discussed above suggests that the gathering of information from wider

external sources is limited. This is confirmed by the survey findings (49% of respondents were classified as having low external information gathering activity). If the wider external environment is considered the majority of respondents 'never' gather information on the national economy, international economy or international competitors. There is some evidence to suggest that external information gathering increases with the dynamism of the operating environment, which corresponds with the suggestions of Wright and Ashill (1998) who state 'volatility' as a key factor in determining information needs. There is also an increase in activity for larger organisations, which suggests that this activity is linked to resource availability.

Generally, a lack of external data gathering has been identified which corresponds to the findings of Xu and Kaye (1995), Friel (1998), Folsom (1991) and Li (1997). As the importance of external information within MkIS has been emphasised in the literature review, this suggests that this is an area where SMEs in the sector may be failing to achieve competitive advantage. However, the reasons for the focus on internal data may be hard to overcome, especially as they are likely to be due to a lack of financial, IT, personnel and time resources. This perhaps is where the Internet as a cheaper and potentially more easily accessible source of information could be utilised.

Internet access within the sector

Of the organisations surveyed 47% currently have Internet access. These findings are similar to those of Durlacher Research (1997), where 33% of small companies and 54% of medium-sized companies were found to have access (Figure 2). However, the sector surveyed shows different characteristics. The Durlacher survey found that 81% of non-users were intending to access it within 5 years, whereas of those without Internet access in this survey only 35% were intending to gain it within the next 3 years. The remaining 65% had no plans to gain access. These differences may be due to the sector studied or could be as a result of the different survey instruments used.

The Internet and external information gathering activity

There was some evidence to suggest that companies who were newer to the Internet undertook a higher level of external information activity and a slight link between Internet access and external information activity although this was very low. Those companies currently without access but planning to gain it also showed a higher level of external information activity. This suggests that those currently aware of the value of external information view the Internet as a useful additional tool.

Those with Internet access gathered more information and listed a greater number of sources than those without. Internet users were more aware of the sources, types and uses of external information available generally. The Internet was listed as a 'top three' source in the categories of local competitor, national competitor, international competitor and international economy and was most used for international competitor information. Although this suggests some usefulness, other sources were often of greater importance including direct contacts, trade associations and printed media.

When questioned directly on the usefulness of the Internet for each category of information the survey respondents gave the highest score to local and national competitors. Therefore, although the Internet was often the main

source of international competitor information it was found to be of most use for local and national competitor information. This is likely to be due to the low importance of international matters generally to these smaller businesses rather than a fault of the Internet as a source.

Benefits and problems

No particular aspect of using the Internet appeared more beneficial than others although ease of access received the highest score. The comments given on benefits suggest that it is seen as a valuable supplementary source of information and that it is improving in usefulness.

From the comments obtained in the survey the Internet is still viewed primarily as a promotional/distribution tool. This was also found in the research by Poon and Swatman (1997). However, there does seem to be evidence that information gathering is also becoming a major use and it is cited several times in the survey comments on the benefits of the Internet and in the IMRG findings (O'Connor and Galvin, 1997).

The main obstacles to Internet use identified from the survey were varied. The quantitative analysis suggested that cost, time downloading and lack of trained employees were the main problems. However, separate analysis of Internet and non-Internet users suggests that the actual problems encountered are different from those anticipated. Internet users found the main problems to be time related and linked to problems with searching whereas non-Internet users identified cost as the main obstacle. The cost factor may be exaggerated for non-Internet users because a lack of existing IT facilities within these smaller companies increases the start-up cost of Internet access. Technical expertise does not appear to be a critical factor.

Some of these issues are borne out by previous research. Katz and Aspden (1997) cited the background of the user, the cost and lack of understanding as determinants of Internet use and also suggested that even experienced IT users had difficulty getting started. This last point may explain the relatively low use of the Internet for market

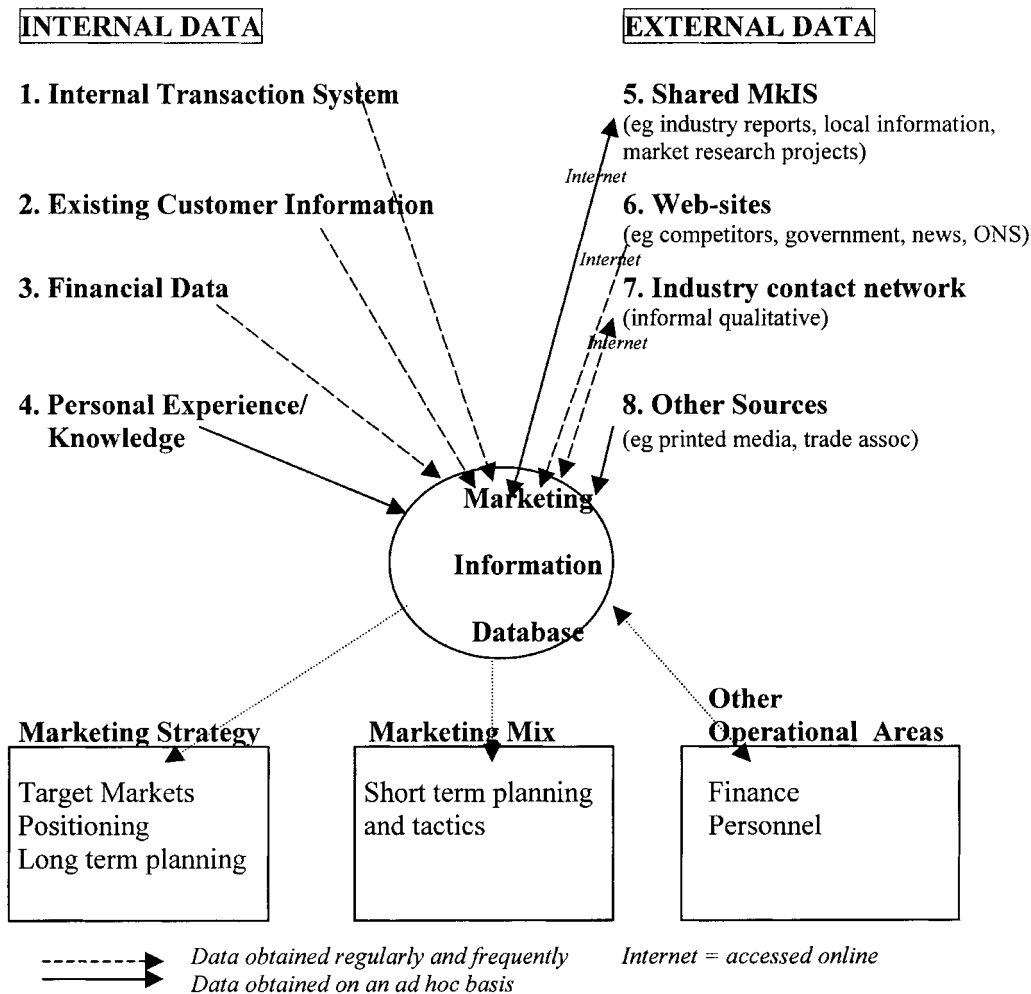


Figure 3. Recommended model for a MkIS within the smaller business

intelligence. This low use within connected SMEs is one of the issues identified by the Strathclyde and South Bank survey undertaken in 1998 and corroborated from this survey. Therefore, despite technical expertise not being seen as a problem and the user being IT competent they may still require training and practice on efficient Internet usage. It is perhaps assumed that IT skills generally are transferable to Internet use, whereas the skills needed are more likely to be similar to those used for research and information management. This highlights the need for perseverance and practice, one of the recommendations made by Swash (1998).

A MkIS model for tourism SMEs

The findings of this research suggest that there is a need within smaller organisations for a MkIS which incorporates both internal and external data from a variety of sources and which is not resource intensive. These two criteria are often mutually exclusive as the cost and time needed to collect, analyse and use such information is prohibitive. The system needs to ensure that quantitative data gathered from the existing transaction system and from customer data bases is combined with valuable information on the immediate external environment gained through informal research,

personal contacts and experience. This information then needs to be analysed and assessed within the context of the wider operating environment. To achieve this and be cost effective the MkIS will need to make use of any means which makes the information easier to obtain and analyse. This therefore will require information technology in some form although this need only be a personal computer for key personnel. This should be adequate for the smaller business as long as the software allows for the setting up and maintenance of data bases, some statistical analysis and connection to the Internet as a source of information and as a method of communication. Most SMEs will already have the hardware in place because it will have been used for the internal transaction system and financial management and therefore will not require much capital outlay. However, this still leaves the second major resource constraint, which is the time available to maintain the system owing to the limited number of personnel within the organisation. To overcome this it is suggested that SMEs take advantage of the existing support organisations (Trade Associations, Local Authority Departments, Tourist Boards, etc.) in order to pool and share information. It may be possible for these organisations to provide much of the external data required and make it available regularly and rapidly via online connections. Main (1999) is researching the possibility of a shared destination MkIS for a tourist region.

The Internet allows smaller companies to communicate and share information more readily than ever before and if approached correctly can be simply an extension of existing personal contacts. This initial support from trade groups and strategic alliances also can provide the sharing of expertise and advice that will better enable the SME to take advantage of the benefits offered by the Internet as a market intelligence source. The formation of such a MkIS would create a system on a par with much larger organisations. This would improve the strategic focus and market orientation of the SME and hence increase their overall competitiveness.

Based on the research findings and the discussion above a model for a MkIS within smaller businesses has been developed (Figure

3). The model aims to improve the balance of external to internal data by making external data more accessible. This can be achieved through use of a shared MkIS for certain data types and use of the Internet as the main source of other external data.

The Internet also will be the method of communication with the shared MkIS and contact network. These measures should reduce some of the cost and time intensive elements of the MkIS. It would not be difficult or costly to collect and analyse internal data from sources 1, 2 and 3 using IT and this would enable the easier integration of the external and internal data.

It also must be ensured that the less formal, less regular, qualitative information gained from sources 4, 7 and 8 is incorporated within the system because this information is as important for marketing decision making.

The model describes a practical system with the low start-up and running costs essential to many SMEs. Once in place it should provide the necessary external intelligence, store and analyse internal information while allowing informal sources to be incorporated.

CONCLUSIONS

The current form of marketing information systems used within small to medium sized tourism firms is based largely on internal data supplemented by customer surveys and informal investigations into local competitors. The external data tend to focus on personal contacts and irregular monitoring of a variety of sources including a reliance on trade associations and similar support bodies. Information technology is not greatly utilised to aid information gathering, analysis and management.

Although almost half of the organisations of this size are online their use of the Internet for market intelligence is limited. This suggests a lack of awareness of some of the valuable, reliable and free to access sites that now exist.

Despite a number of positive comments on the usefulness of the Internet for market intelligence the majority of SMEs remain unconvinced and prefer other sources. This appears to be due to a lack of understanding of what is available and the need for training/

practice in using the Internet efficiently. This need for information research training is possibly not recognised by the users themselves, especially if they are technically competent and IT experienced.

The main problems anticipated by non-Internet users are cost and technical expertise. These obstacles also presumably explain why 65% are not planning future access. The comparative cost of Internet access with other methods and sources of external information is low and is perhaps considered as an additional expense rather than an alternative to present sources. Indeed the non-Internet users tend not to use many sources of external information and therefore do not perhaps recognise the importance of external information generally.

This may suggest a failing on the part of the Internet providers as the cost/time saving benefits of Internet use for SMEs are not being communicated and guidance on efficient use is not being provided. There perhaps has been an overemphasis on marketing the Internet as a medium for promotion and distribution to the detriment of its information gathering benefits.

The Internet although beneficial to SMEs for market intelligence gathering cannot overcome all the resource issues that appear to cause the underutilisation of MkIS generally and external information gathering specifically. However, the Internet can help to alleviate some resource problems. This can be achieved through its efficient use as an information source and through the development of Internet communication with a network of companies and organisations. The sharing of information through regular communication and key web-site scanning should enable SMEs to gain some of the benefits afforded to larger resource-rich organisations. If this is combined with the valuable informal information obtained and integrated with internally generated data then an effective MkIS will emerge. This then will provide the decision makers with the information needed to create much needed strategic advantage in this competitive and dynamic industry sector.

REFERENCES

- Barnett B. 1991. *Sample Survey: Principles and Methods*. Edward Arnold: London.
- Brabston ME, McNamara G. 1998. The Internet as a competitive knowledge tool for top managers. *Industrial Management and Data Systems* **98**(4): 158–164.
- Brown S, Fisk R, Bitner M. 1994. The development of services marketing thought. *International Journal of Service Industry Management* **5**(1): 21–48.
- Durlacher Research. 1997. News release — 81% of UK SMEs. <http://www.durlacher.com/news/newsdetail> [accessed May 1999].
- Folsom D. 1991. Market intelligence in small businesses. *Marketing Intelligence and Planning* **9**(2): 16–19.
- Friel M. 1998. Marketing. In *The Management of Small Tourism and Hospitality Firms*, Thomas R. (ed.). Cassell: London.
- Friel M. 1999. Marketing practice in small tourism and hospitality firms. *International Journal of Tourism Research* **1**(2): 97–109.
- Gilmore A, Carson D. 1996. 'Integrative' qualitative methods in a services context. *Marketing Intelligence and Planning* **14**(6): 21–26.
- Heinen J. 1996. Internet marketing practices. *Information Management and Computer Security* **4**(5): 7–14.
- Hewitt-Dundas N, McFerran B, Roper S. 1997. Competitor knowledge among small firms: a pilot examination of fast growing Northern Ireland companies. *International Small Business Journal* **15**(2): 76–82.
- Hoffman D, Novak T. 1998. A new marketing paradigm for electronic commerce. Special Issue on Electronic Commerce for the Information Society. Project 2000. <http://www.2000.orgsm...marketing.paradigm.html>.
- Katz J, Aspden P. 1997. Motivations and barriers to Internet usage: results of a national public opinion survey. *Internet Research* **7**(3): 170–188.
- Li EY. 1997. Marketing information systems in small companies. *Information Resources Management Journal* **10**(1): 27–35.
- Main H. 1999. Emerging technologies and their role in developing a marketing information system (MKIS) for hospitality products. In *Proceedings of the Hospitality Information Technology Association, World-wide Conference*, Frew AJ (ed.). HITA: Edinburgh; 121–127.
- McGinty RL. 1998. Free advisory services create an entrepreneurial opportunity. *Journal of Consumer Marketing* **15**(1): 55–63.
- O'Connor J, Galvin E. 1997. *Marketing and Information Technology*. Pitman Publishing: London.
- Poon S, Jevons C. 1997. Internet-enabled international marketing: a small business network perspective. *Journal of Marketing Management* **13**(1–3): 29–41.

- Poon S, Swatman P. 1997. Small business use of the Internet: findings from Australian case studies. *International Marketing Review* **14**(5).
- Seth S, Brodie R, Scott D. 1993. The determinants of MKIS usage: an integrated model. In *Information Decision Making in Marketing, ESOMAR Symposium*, Paris, November; 21–48.
- Sisodia R. 1992. Marketing information and decision support systems for services. *Journal of Services Marketing* **6**(1): 51–64.
- Strathclyde University. 1998. Questionnaire <http://business.dis.strath.ac.uk/project/questionnaire> [accessed May 1999].
- Swash G. 1998. UK business information on the Internet. *New Library World* **99**(6): 238–242.
- Talvinen J. 1994. Information systems in marketing. *European Journal of Marketing* **29**(1): 8–26.
- Talvinen J, Saarinen T. 1995. MkIS support for the marketing management process: perceived improvements for marketing management. *Marketing Intelligence and Planning* **13**(1): 18–27.
- Thomas R. 1998. An introduction to the study of small tourism and hospitality firms. In *The Management of Small Tourism and Hospitality Firms*, Thomas R (ed.). Cassell: London. pp. 1–16.
- Thomas R, Church I, Eaglen A, Jameson S, Lincoln G, Parsons D. 1997. *The National Survey of Small Tourism and Hospitality Firms: Annual Report 1996–97*. Centre for the Study of Small Tourism and Hospitality Firms, Leeds Metropolitan University.
- Weiber R, Kollmann T. 1998. Competitive advantages in virtual markets—perspectives of ‘information-based marketing’ in cyberspace. *European Journal of Marketing* **32**(7/8): 603–615.
- Whyte G, Bytheway A. 1996. Factors affecting information systems’ success. *International Journal of Service Industry Management* **7**(1): 74–93.
- Wright M. 1995. The effect of pre-notification on mail survey response rates: an experimental result. *Marketing Bulletin* **6**: 59–64.
- Wright M, Ashill N. 1998. A contingency model of marketing information. *European Journal of Marketing* **33**(1/2): 125–144.
- Xu X, Kaye GR. 1995. Building market intelligence systems for environment scanning. *Logistics Information Management* **8**(2): 22–29.