



**A NEW LOOK AT MARKETING INTELLIGENCE:
CONTEMPORARY VIEWS AND DIRECTIONS FOR FUTURE
RESEARCH**

**INAUGURAL LECTURE BY
Prof P Venter**

**GRADUATE SCHOOL OF BUSINESS LEADERSHIP
UNIVERSITY OF SOUTH AFRICA
PO BOX 392
UNISA
0003
PRETORIA
SOUTH AFRICA**

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1. THEORETICAL FOUNDING

The marketing concept, one of the most enduring concepts in marketing theory, states that satisfying customer needs will lead to the attainment of organisational goals, such as profitability. The marketing concept can be described as “*planning and coordinating all company activities around the primary goal of satisfying customer needs [as] the most effective means to attain and sustain competitive advantage and achieve company objectives over time.*” (Walker, Mullins, Boyd & Larréché 2006: 12). There is strong theoretical support for the notion that market orientation is how the marketing concept manifests itself in the organisation, and strong evidence that it leads to superior performance, financially and otherwise (Shoham, Rose & Kropp, 2005). Market orientation is highly dependent on the generation and dissemination of marketing intelligence to marketing decision-makers and influencers, and responses by decision-makers to marketing intelligence. There is a strong theoretical basis for the positive link between marketing intelligence and tactical and strategic marketing decision making. For example, studies have found a positive relationship between marketing intelligence systems and several categories of marketing decision making (Lackman, Saban and Lanasa, 2000). Therefore, perhaps more than any other organisational function, marketing is dependent on the availability of information from the external and internal environment to ensure that customers’ needs are met profitably. The rise of globalisation and global marketing, increasing focus on customer needs and the trend towards non-price competition in an experience economy provide further impetus to the need for marketing information.

However, when examining the theory to understand how marketing decision-makers are supported by information, the lack of convergence in theory is striking. Terms like marketing information systems, marketing decision support systems, competitive intelligence, marketing intelligence and business intelligence are often used to describe similar concepts, suggesting that there is a need for greater convergence in this field of study.

In this address, I will review the current status of research on marketing information systems (MkIS) and marketing intelligence (MI), examine the emergence of new theoretical and practical directions and the challenges it poses to business organisations; and finally propose recommendations for future research.

2. AN OVERVIEW OF MARKETING INFORMATION SYSTEMS (MkIS)

The marketing information system (MkIS) is generally regarded as a subset of management information systems (MIS). Kotler and Armstrong (2008: 97) provide one of the more comprehensive and enduring definitions of MkIS when they propose that MkIS involves “...*people, equipment and procedures to gather, sort, analyze and distribute needed, timely and accurate information to marketing decision-makers*”. This definition alludes to the systemic nature of prevailing views of MkIS. Inputs are obtained, transformed by people, processes or technologies, and output generated in the form of marketing information to support marketing decision making. In a typical system, feedback is provided to the input subsystem to ensure that inputs remain aligned with the required output.

In MkIS, inputs in the form of data are obtained from external and internal sources. Data are then processed by the components of the MkIS. Although not limited to these components, an MkIS is typically developed from data processing activities, marketing research, marketing intelligence activities, marketing decision support systems and Geographic Information Systems. I will briefly discuss each of these components.

Data processing subsystems are the operational systems that generate internal records for use by management. In the context of marketing information systems, enterprise resource planning (ERP) systems, customer relationship management (CRM) systems and online transaction processing systems (OLTP) are examples of systems that are of particular importance to the marketing function. ERP systems such as SAP focus on the key elements of the value chain (inbound logistics, operations and outbound logistics) and financial and human resources. Given the importance of value chain activities and accounting systems to the marketing function, ERP systems are an important source

system to MkIS. CRM systems contain information on customers and the interaction of the organisation with customers, while online transaction processing (OLTP) refers to those systems that facilitate and manage transaction-oriented applications, such as a bank's automated teller machines (ATMs). Analysing transactional data provided by OLTP systems is important from a marketing perspective. Given the rapid developments in information technology, the proliferation of systems and applications means that this aspect of MkIS has become increasingly sophisticated.

Marketing research is the oldest form of formal marketing information gathering from the external environment. It is typically an information gathering activity focused on a specific issue or problem, and typically relies on a scientific research design. Many marketing decision-makers make use of marketing research such as customer satisfaction surveys and product concept testing.

Marketing intelligence involves the informal and formal environmental scanning activities of the organisation. For example, by reading newspapers and trade magazines, attending trade shows and talking with customers and suppliers marketing decision-makers can identify current and future events that will affect their business.

Marketing decision support systems (MDSS) is a class of system that supports marketing decision making by means of model-based analysis, for example to perform "what if" analysis or to make specific marketing decisions (Van Bruggen, Smidt & Wierenga, 1998). MDSS could potentially support many different marketing decisions, but examples of its application are relatively scarce. Some examples include the use of MDSS in developing marketing strategies for new products in the pharmaceutical industry and pricing decisions for new pharmaceutical products, and the evaluation and selection of concepts for new products (Rao, 2000a and 2000b and Gensch, 2001).

Geographic Information Systems (GIS) are of particular importance to marketing and MkIS, given the fact that many aspects of marketing decisions have spatial elements, for example distribution channels, that a GIS addresses comprehensively. Its ability to

present data in a map-based presentation addresses this spatial dimension and provides the data in a format that provides effective decision support. A further strength of GIS is its ability to integrate data from disparate sources. Given these strengths, it is perhaps surprising that GIS is so underutilised as an MkIS technology (Hess, Rubin & West, 2004 and Read, Higgs & Taylor, 2005).

The system components as discussed are used alone or in combination to support marketing decision-makers and marketing departments with the information they require in the format they require it. This forms the output component of the MkIS.

2.1 A CRITIQUE OF PREVAILING VIEWS OF MkIS

In my interactions with marketing decision-makers it has become clear that, despite massive investments in information technology, marketing research and other intelligence systems, many marketing decision-makers feel that they are not able to make substantially better decisions than before, and that the investment in MkIS has not paid off in terms of business success. To use a cliché, marketing decision-makers are often data rich, but information poor. This is borne out by the fact that several studies have found that MkIS are not performing as required by the decision-makers they support. For example, longitudinal studies in the United States found that users are only 'somewhat satisfied' with the performance of their MkIS, indicating that there is room for improving performance and better addressing decision-makers' needs (Li, McLeod & Rogers, 2001). A study among South African marketing decision-makers reported similar results, finding that marketing decision-makers rated the overall quality of marketing intelligence at relatively low levels (Venter, 2000). A study of retail banks in the UK and Australasia concluded that their MkIS were relatively unsophisticated (Colgate, 2000). A study among UK marketing managers showed that MkIS supported operational marketing activities such as direct marketing and sales management far better than it supported strategic marketing activities such as market segmentation and positioning (Xu, 1999). Therefore, it seems that more

traditional views of MkIS in practice are not delivering the results anticipated by the theory. My own critique of the prevailing views of MkIS rests on three arguments discussed below.

Firstly, prevailing views of MkIS by leading proponents such as Philip Kotler have not yet thoroughly considered the latest developments in thinking on competitive intelligence (CI), business intelligence (BI) and knowledge management (KM). These developments affect the fundamental structure and in fact the very existence of marketing information systems as we think of it today. In fact, it could be argued that CI and BI have to a large degree already displaced MkIS in theory and practice.

Secondly, current views of MkIS assume a seamless integration of structured and unstructured data. In reality, this presents a serious stumbling block as most organisations tend to focus their efforts on structured data that is easy and relatively inexpensive to provide to decision-makers. This means that most organisations tend to over-rely on internal data and have a shortage of actionable intelligence from the external environment.

Thirdly, up to this point MkIS research and theory has focused on system components rather than on the people involved in the process. The human aspect is important, as role players in MkIS have their own agendas and directly influence the way that intelligence is gathered, disseminated and used. New developments in strategic and marketing thinking and research increasingly emphasise a nuanced view of the role players in strategic and marketing decision making. While most MkIS models have a marketing manager or marketing department as the client of the system, little focus is given to how and why intelligence is used in the decision making process (Li *et al.*, 2000 and Colgate, 2000). Serpa (2000) thus argues for more actor-focused research, since decisions are made by people influenced by an organisational and socio-political context and cannot necessarily be predicted by current generalisations. There are two

compelling reasons for this view. Firstly, while the validity of variables and system elements are justified, it necessarily excludes other relevant and useful variables and system elements. Secondly, generalisations are constrained by the methodologies and universe that they are generated from. Most generalisations in the field of MkIS and marketing intelligence are generated from positivistic research in medium to large businesses in 'First World' countries. This clearly suggests that there is a need for more contextualised research in this field.

In addressing these criticisms, two areas of study are highlighted. Firstly, I examine some of the latest developments in competitive, marketing and business intelligence and secondly, I examine the emerging field of Strategy-as-Practice and its relevance to MkIS.

3. NEW DEVELOPMENTS AND THEIR INFLUENCE ON MkIS

While there are constant developments in the study of competitive and marketing intelligence, there are three enduring developments that have certain implications for the study and practice of MkIS. Firstly, competitive intelligence has evolved from marketing intelligence to become a multi-disciplinary function and has become a widely-used umbrella term. Secondly, business intelligence systems have largely replaced functional systems such as MkIS, a fact that has not been sufficiently addressed by proponents of MkIS. Lastly, knowledge management has a natural link to competitive intelligence and MkIS, yet this link has likewise not been widely explored by researchers in competitive and marketing intelligence. I will now examine these three concepts and their influence on MkIS.

3.1 THE RISE OF COMPETITIVE INTELLIGENCE

As an externally oriented function, marketing depends on external information about competitors, customers and markets. Traditionally, marketing research was the vehicle to obtain this information, and it is still regarded as an important

subset of the MkIS (Colgate, 1998 and Li *et al.* 2001). Marketing intelligence (MI) developed as a specialist function of marketing research in the 1960s, and later evolved into competitive intelligence (CI) with a multi-disciplinary focus (Walle, 1999). Over time CI, that is often also referred to as business intelligence especially by Scandinavian authors (for example Hannula and Pirttimäki, 2003), developed into a discipline in its own right, with its own set of tools and techniques and useful to the whole organisation, not just the marketing function. However, several studies have found that more than half of CI units or operatives still report to the marketing function or that it still provides exceptionally high levels of support to the marketing function (Wright & Calof, 2006; Viviers, Saayman, Muller & Calof, 2002; Vedder & Guynes, 2000-2001). These findings suggest that CI is still strongly connected to the marketing function.

CI is also often linked explicitly to knowledge management. One definition of CI suggests that it is “... *the art and science of preparing companies for the future by way of a systematic knowledge management process.*” (Wright & Calof, 2006). Other authors argue that CI is part of and critical to knowledge management because so much CI already exists within the firm and much of it is classifiable as knowledge assets (Agarwal, 2006 and McGonagle & Vella, 2002). Most firms are not successfully tapping into the CI inside the firm because of deficiencies in the knowledge management system. This is supported by findings from a South African study, which found that formal adoption of knowledge management systems have been relatively slow (Venter & Tustin, 2006). In a comparison of two separate CI processes in an energy multinational, researchers found that the process using knowledge management tools generated more evidence of success than the process using only the conventional CI process. They concluded that knowledge management and CI should indeed be integrated (April and Bessa, 2006)

A further question that requires examination is whether CI is different to other forms of environmental scanning. One view is that CI is the body of knowledge

on *how* to collect and use intelligence, while environmental scanning considers *when* a firm will collect intelligence to support strategic decision making (Makadok & Barney, 2001). However, some of the later research in this field proposes constant, active environmental scanning as being critical (Day & Schoemaker, 2007). This suggests that the traditional conceptual boundaries between CI and environmental scanning have blurred.

CI and environmental activities should focus on gathering intelligence on customers and distribution channels, competitors and complementors, emerging technologies and scientific developments, influencers and shapers and political, legal and economic forces (Day & Schoemaker, 2007).

Intelligence can be collected from both secondary and primary sources. Secondary sources such as market research organisations, online sources and existing company marketing research reports can be used. In this regard the internet has become a widely used tool for gathering secondary information. However, CI and environmental scanning activities should never rely only on secondary information. Primary intelligence from human sources such as employees, customers and potential customers, distribution channel partners, competitors, complementors, suppliers and opinion leaders are all important sources of CI.

The internet has also presented itself as a tool for primary intelligence gathering. For example, the rapid growth of weblogs (blogs) present an intelligence opportunity while it also presents opportunities for engaging customers and other stakeholders in qualitative and quantitative enquiries online.

From this discussion it seems clear that there is little practical value in separating environmental scanning and CI. At the same time, it would seem that there is similarly little practical value in separating marketing and competitive intelligence, as MI is essentially CI applied in the context of the marketing

function for purposes of marketing decision making (see for example Wright & Calof, 2006: 456). A final conclusion from this section is that competitive and marketing intelligence activities ostensibly create knowledge assets, suggesting that it is clearly linked to the knowledge management systems in the organisation.

3.2 BUSINESS INTELLIGENCE

The MIS concept has been displaced to a large degree by a focus on business intelligence (BI) since the early 1990s. As a result, systems with an explicit functional focus (such as MkIS) have been systematically replaced by systems or processes with a broader focus (such as business intelligence), allowing users to draw from it what they need. It is thus not surprising that research suggests a decline in the stated use of MkIS among marketing managers in the USA (Li *et al.*, 2001). Yet, despite the decline in the use of functionally specific information systems, the use of technology in marketing decision making is pervasive and increasing.

Data on its own has limited value and has to be made available to marketing decision-makers in an integrated and usable format. This involves obtaining data from the various operational systems, extracting, transforming and loading (ETL) data onto storage systems such as Data Warehouses or Data Marts and making it available to decision-makers in the format that they require. Data cleansing, for example to resolve differences between data from disparate sources, is an important part of this process (Cody, Kreulen, Krishna & Spangler, 2002).

The Data Warehouse has become widely accepted as the 'heart' of the business intelligence system. It is typically a central system where information from diverse sources is combined in order to make it available to marketing and other decision-makers (Daniel *et al.*, 2001: 839). According to most authors BI technology has coalesced around the use of Data Warehousing and Online Analytical Processing (OLAP). Given the overlaps and similarities between

information required for marketing decision making and the general structure of a BI system it could be deduced that BI systems potentially provide a great deal of support to the marketing function.

Marketing intelligence and other categories of information would be of little value to marketing decision-makers if they were not able to extract the information in the format they require and analyse it as an input into decision making and planning processes. BI led to the emergence of a range of associated technologies for supporting management and marketing decision-makers. Three of these technologies are discussed below.

Online Analytical Processing (OLAP) provides a means for users of data to view the data from a data mart in a multidimensional format, for example comparing data on geographical areas, product lines and time. It enables 'slicing and dicing', drilling down and rolling up as means to examine data from many different angles (Cody *et al*, 2002). This ability is potentially of great value to marketing decision-makers, as it allows them to analyse complex data as a means to finding answers to complex problems.

Executive information systems (EIS) refers to operational data presented in the form of charts, tables and reports for the use of managers (Daniel *et al.*, 2001). One particularly useful development in this regard has been the use of management 'dashboards' as a means to presenting layered information in a simple, actionable format.

Data mining is a subset of BI. It is an analytical tool to select, explore and model large quantities of data with the intention of discovering patterns or relationships between different variables that would be useful to decision-makers. Hart (2006: 4). The fact that the outcomes in data mining are largely unknown before the analysis makes it different from other data query or analysis tools. Data Mining is

often used on, for example, CRM data to discover relationships between demographic characteristics and shopping behaviour.

It should also be considered here that specialist functional analysis systems such as Marketing Decision Support Systems can also be used in the context of BI. MDSS will typically draw on a combination of structured data, unstructured data and human input to derive its conclusions and recommendations.

From this part of the discussion it emerges that BI provides support to the marketing function and should logically displace more traditional MkIS over time.

3.3 KNOWLEDGE MANAGEMENT

The concept of Knowledge Management (KM) gained prominence with the notion of knowledge as a basis for competitive advantage (see for example Grant, 1997) and the emergence of the idea of a “learning organisation” that constantly increases its knowledge and, therefore, its competitiveness. Knowledge management is described as the “*systematic process of finding, selecting, organizing, distilling and presenting information that improves an employee’s comprehension in a specific area of interest*” (Herschel & Jones, 2005). From this definition the linkages between CI, BI and KM becomes clear.

CI and BI activities constantly generate new knowledge, both explicit and tacit, and the internalisation of this knowledge by the organisation will ultimately be to its advantage. However, while it is often asserted that eighty per cent of what organisations should know exist inside the organisation in the minds of employees, it is also a commonly acknowledged problem to bring this knowledge to the fore. This is essentially a knowledge management problem.

3.4 THE INTEGRATION OF COMPETITIVE AND BUSINESS INTELLIGENCE AND KNOWLEDGE MANAGEMENT

KM and BI have emerged as the two main technologies used by organisations to improve their management of information as a means of gaining competitive advantage (Cody *et al.*, 2002). Despite the initial promise by BI that it provides a platform to integrate structured and unstructured data, the reality is somewhat different. While the two technologies may merge over time, the major inhibitors of the integration of BI and KM have been the development of different data management systems on different platforms and the immaturity of automated text analysis systems that will assist decision-makers in deriving business value from large amounts of textual data (Cody *et al.*, 2002). While many argue that KM and BI are closely related or even the same thing, this bond has not been clearly realised in practice.

In reality, BI has developed around the use of the organisation's structured, internal data sources, while KM has become associated with the management of largely unstructured external intelligence. This immediately suggests a bond between CI and KM. Integration of BI and KM would be of great value to marketing decision-makers, since most marketing decisions depend on both internal and external data, structured and unstructured.

One approach to integration is the use of technologies or portals. For example, Reicks (2001) suggests that the use of an Enterprise Information Portal (EIP) could provide integrated access to structured and unstructured information without regard to its source. Various technologies allow the integration of structured and unstructured data in a database, but ultimately the main barrier to integration lies in the inability of existing BI technologies to easily integrate and analyse both structured and unstructured data.

This suggests that the integration of BI and KM is essentially a human process, and that new knowledge is created through the interplay between explicit and tacit knowledge. While explicit knowledge is easy to share (for example marketing research reports or structured data), tacit knowledge is much harder to share since it is often difficult to articulate. For example, mental models have often been developed over a long time and are hard to explain. A four-step process of socialisation, articulation, integration and internalisation describes the process of integrating tacit and explicit knowledge, and also serves to describe the integration of BI and KM (Herschel & Jones, 2006). The first step in this process is *socialisation* – sharing with others the experiences, technical skills, mental models and other forms of tacit knowledge through participation. *Articulation* is the next step in the process and involves the process of converting tacit to explicit knowledge. This could involve, for example, the use of different forms of modelling and scenario analysis. *Integration* is the process of recombining different types of explicit knowledge into new patterns and new relationships. When decision-makers use the newly generated patterns and relationships to update their own tacit knowledge, *internalisation* has taken place.

I will argue that human agents or “liaison devices” play a critical role in the process of ensuring this integration.

4. STRATEGY-AS-PRACTICE AND THE IMPLICATIONS FOR MkIS

Strategy-as-Practice is the emerging stream of research in strategy and marketing (as an emerging field of study named Marketing-as-Practice) that focuses on the study of the role of individuals in shaping business and marketing strategy. What makes S-a-P different is the nuanced focus on human beings as strategists influenced by their background and their environment. Applied in the context of MkIS, S-a-P would mean that the focus of research would be on the individuals shaping the MkIS and how it is used, and not on the system and its components as MkIS literature has almost exclusively done up to now. Given that the roots of marketing lie in both the social and economic

sciences, it is surprising that the marketing discipline has been so comparatively slow to adopt the practice turn we are currently witnessing in the field of strategy.

4.1 STRATEGY-AS-PRACTICE AND ITS APPLICATION TO MkIS

While most generalisations of marketing intelligence systems (see e.g. Kotler & Armstrong, 2008) suggest that marketing intelligence flows from a system (producing unstructured and structured information) to a user (typically a marketing decision-maker), observations of this in practice suggest that more often than not some liaison device intercedes and processes intelligence before it is presented to the decision-maker in a format that they find useful. Even then the process may be one of close collaboration and iteration rather than a one way service delivery process. The role of liaison devices is to encourage mutual adjustment between units where there might be a natural tendency to resist it (Mintzberg, 1987). In the context of marketing intelligence liaison devices would typically be competitive or marketing intelligence managers or marketing intelligence teams (Fleisher, Wright & Allard, 2007) that have formal or informal authority over marketing intelligence. The importance of marketing intelligence liaison devices in the strategic marketing process seems clearly established in theory and the role of marketing intelligence officers as liaison devices and enablers in the strategic marketing decision making and organisational sense making processes has been examined from a conceptual perspective (Trim & Lee, 2006). However, no studies of how these individuals or teams practice their liaison role have been undertaken, which seem essential if we are to improve our understanding of *how* liaison devices influence strategic marketing decisions.

Liaison devices are regarded by Henry Mintzberg as one of the essential parameters of organisational design. Four types of liaison devices were identified. Firstly, there are liaison positions that carry no formal authority and exist primarily to coordinate the work or interactions of two organisational units. Secondly, task forces and standing committees may bring members from different

units together to deal intensively with temporary or more permanent issues. Thirdly, integrating managers have formal authority over something important that links different units, such as information or information systems. Finally, matrix structures of the type used in project organisations can be used to integrate the activities of different organisational units.

Using Mintzberg's definitions, three types of liaison devices in the context of marketing and competitive intelligence were identified.

The use of *multi-disciplinary teams* is an idea that is generally accepted in management, yet research on it in the context of competitive and marketing intelligence in general is not very common. Multi-disciplinary intelligence teams are a useful mechanism to add value to the strategy making process, while marketing insight teams made a positive contribution to strategic marketing decision making in a national mutual company by combining CI, CRM, Data Mining and Marketing Research (Fleisher, Wright and Allard, 2007). Research has shown that learning systems or teams (such as Communities of Practice) had the potential to improve market intelligence and market integration skills (Murray and Carter, 2005).

An *Executive Intelligence Officer* (EIO) provides a means of bridging the 'dysfunctional disconnect' between the strategy-making processes and the intelligence processes that exist in so many organisations. A possible reason for such disconnect is the lack of an intelligence-focused position at the top management level of the organisation (Little & Fahey, 2006). The EIO assumes responsibility for the intelligence that the CEO and executive team need to do their jobs and works as a collaborator and partner to the top management team. The EIO is, therefore, an integrating manager in Mintzberg's terms.

The role of *market intelligence officers* is becoming increasingly important. While these are generally liaison positions, they will increasingly play a more

strategic role in their organisations and will extend their involvement to include counter-intelligence functions, protecting the organisation's valuable intelligence (Trim and Lee, 2006).

In an example of a current study of this nature, researchers (Venter & Wright, 2009) examine the role of one individual as a marketing intelligence "liaison device" in a large South African organisation. The study examines how the individual drew on formal and informal contacts and marketing intelligence to influence the strategic discourse and dominant cognitive strategic framework in his organisation. At the same time, the individual's history, educational and professional background, contacts and professional relationships all played a role in shaping behaviour with relation to marketing intelligence and how it is used and presented in the organisation.

4.2 MARKETING DECISION-MAKERS IN CONTEXT

The discussion up to now suggests that the perceived usefulness of marketing intelligence and the decision process will be influenced by the context in which the decision-maker operates. Context could be determined by a number of aspects, including personal characteristics (White & McCardle, 2001 and Ashill & Jobber, 1999), the competitive environment, organisation structure, organisation culture, the relationship between the primary providers and users of CI (Arnett, Menon & Wilcox, 2000) and the decision process itself (Van Bruggen, Smidts & Wierenga, 1998). While many of these aspects have been studied broadly in the context of competitive intelligence, relatively few studies focus on marketing intelligence specifically.

4.2.1 Personal characteristics

In a study of marketing managers in US hospitals, research found that older and female managers tended to use more information than younger and male managers respectively in their decision making (White and McCardle, 2001).

Other research conceptually deduced that four decision-maker characteristics affect the design of MkIS, namely the experience of the decision-maker, the variety of the experience, the locus of control and the level of tolerance of ambiguity (Ashill and Jobber, 1999). While this aspect warrants further investigation, the evidence seems to suggest that personal characteristics could indeed play a role in the way that marketing decision-makers perceive and use marketing intelligence.

4.2.2 Work environment

The type of decisions and the nature of the task are key factors in the work environment that should play a role in MkIS design. The type of decision, the importance of the decision and the decision arrival time, in other words the time between the recognition that a decision has to be made and the time by when the decision should be made, are all decision-related aspects that have a bearing on the perception and use of marketing intelligence. In the same way, the difficulty and variability of the task should influence MkIS design (Ashill & Jobber, 1999).

4.2.3 Competitive environment

The nature and intensity of the competition that the organisation and decision-makers are exposed to also affects the use of intelligence. For example, the more uncertain and turbulent market conditions are the more decision-makers are likely to make use of competitive and marketing intelligence (Arnett *et al.*, 2000 and Ashill & Jobber, 2001). There are three particular types of environmental uncertainty that affect the usage of marketing intelligence. Firstly, *state uncertainty* occurs when decision-makers feel that the organisation's environment is unpredictable. Secondly, *effect uncertainty* exists when the decision-maker is unable to predict the nature of the effect of a future environmental event on the organisation. Lastly, *response uncertainty* occurs when the decision-maker feels unable to predict what effect a response choice would have on the environment (Ashill & Jobber, 1999 and 2001).

4.2.4 Organisational context

The climate in the organisation and the way that the intelligence function is structured clearly influences the use of intelligence in decision making. Aspects that could play a role include the attitude towards the role of competitive and marketing intelligence in the organisation, strategies for gathering intelligence, what data is used and what it is used for and where the intelligence function is located in the organisation (Wright, Pickton and Callow, 2002). Other research suggests, for example, that centralisation impacts negatively on intelligence usage, as it decreases the level of involvement of users in intelligence projects. Somewhat paradoxically, formalisation positively impacted CI usage, as it might allow users to focus on their roles and increases their involvement in intelligence projects. Culture impacts positively on CI usage by affecting the extent to which users are involved in CI projects and the intensity of communication between project participants (Arnett *et al.*, 2000). The larger the organisation, the more marketing managers felt that they could control the situation, and this led to higher usage of information and made these managers more likely to perceive a situation as an opportunity rather than a threat (White and McCardle, 2001). In an empirical study among business owners in Singapore, researchers found that the more entrepreneurially oriented the business owners were, the more likely they were to obtain and utilise marketing information. Despite these positive findings it could not be confirmed that information acquisition and utilisation had a positive relationship with SME performance (Keh, Nguyen and Ng, 2006). It seems clear that organisational context and culture plays a key role in the perception and use of marketing intelligence.

4.2.5 The relationship between CI provider and user

In a study of the relationship between competitive intelligence users and providers, it was found that intelligence usage was positively affected by the perceived usefulness of intelligence, the credibility of the intelligence project and the perceived trustworthiness of the primary intelligence provider. Credibility of the intelligence project was in turn affected by the perceived trustworthiness of

the intelligence provider and the level of involvement of the intelligence user. Perceived trustworthiness of the intelligence provider was affected by the intensity of communication among key participants in the project (Arnett *et al.*, 2000). This aspect suggests that the management of intelligence user perceptions and involvement is critical to the success of marketing intelligence in the organisation.

5. **LIMITATIONS**

The work reported here necessarily relies on generalisations of complex phenomena. Thus, there are potentially many more influences and directions of thought and research that might have a bearing on the findings. For purposes of practicality I focused on the most enduring and prominent related influences, while Strategy-as-Practice or Marketing-as-Practice will allow more nuanced views of individual case studies to emerge over time.

6. **SUMMARY AND CONCLUSIONS**

This address considered and combined the existing research on marketing information systems with four broad theoretical directions, namely competitive intelligence, business intelligence, knowledge management and Strategy-as-Practice.

In the first instance, the examination of competitive intelligence, business intelligence and knowledge management suggests that a reconfiguration of the traditional view of the marketing information system has not fully incorporated these developments, and that an update of these views are required to include these concepts. In that sense it is an advancement of existing theory.

The study also showed that the increasing focus on strategy and marketing as human activities provides a new perspective on the study of MkIS, and that liaison devices play

an important role in the MkIS. This is an element that has not been addressed in any depth in MkIS or marketing intelligence research up to this point.

In essence, it could be concluded that from the perspective advocated here MkIS consists of three subsystems. The *knowledge management system* incorporates marketing research and competitive intelligence, and essentially deals with unstructured data and tacit knowledge. The *business intelligence system* essentially handles the input, archiving and output of structured data to its generic analysis and reporting systems such as Executive Information Systems. The *marketing decision support system* consists of the human element in the form of marketing intelligence liaison devices and technology in the form of MDSS technology. Jointly, these subsystems produce actionable marketing information systems for the purposes of marketing decision making. Liaison devices play a critical role in supporting marketing decision-makers by integrating and framing structured and unstructured data and explicit and tacit knowledge generated by these systems. At the same time, it should also be recognised that the context that marketing decision-makers operate in play a critical role in shaping their perception and use of marketing information.

7. **FUTURE RESEARCH RECOMMENDATIONS**

The study generated three main areas of interest to researchers. Firstly, the study of MkIS is a field that is ripe for actor-based research, especially with regards to critical system elements such as liaison devices and marketing decision-makers and how they interact with each other and with information technology and systems. In this regard the emerging field of study of Marketing-as-Practice is of particular interest.

Secondly, the integration of business intelligence and knowledge management practices and systems presents an opportunity to study how this integration takes place in the organisation. It is also the view of authors in this field that these two streams will, over time, merge. This in itself presents a research opportunity.

The advancement of a new theoretical approach to MkIS needs to be tested empirically in different contexts. In particular, the South African and developing country context is an important one.

8. REFERENCES

- Agarwal, K.N. 2006. Competitive intelligence in business decisions - an overview. *Competition Forum*, 4(2): 309-314.
- April, K. & Bessa, J. 2006. A critique of the strategic competitive intelligence process within a global energy multinational. *Problems and Perspectives in Management*, 4(2): 86-99.
- Arnett, D.B., Menon, A. & Wilcox, J.B. 2000. Using competitive intelligence: antecedents and consequences. *Competitive Intelligence Review*, 11(3): 16-27.
- Ashill, N.J. & Jobber, D. 1999. The impact of environmental uncertainty perceptions, decision-maker characteristics and work environment characteristics on the perceived usefulness of marketing information systems (MkIS): a conceptual framework. *Journal of Marketing Management*, 15: 519-540.
- Ashill, N.J. & Jobber, D. 2001. Defining the domain of perceived environmental uncertainty: an exploratory study of senior marketing executives. *Journal of Marketing Management*, 17: 543-558.
- Cody, W.F., Kreulen, J.T.; Krishna, V. & Spangler, W.S. 2002. The integration of business intelligence and knowledge management. *IBM Systems Journal*, 41(4): 697-713.
- Colgate, M. 1998. Creating sustainable competitive advantage through marketing information system technology: a triangulation methodology within the banking industry. *International Journal of Bank Marketing*, 16(2): 80-89.

Colgate, M. 2000. Marketing and marketing information system sophistication in retail banking. *The Services Industries Journal*, 20(1): 139-152.

Daniel, E., Wilson, H. & McDonald, M. 2001. Towards a map of marketing information systems: An inductive study. *European Journal of Marketing*, 37(5/6): 821-847.

Day, G.S. & Schoemaker, P.J.H. 2007. Seeing sooner. *Marketing Management*, November/ December: 20-27.

Fleisher, C.S., Wright, S. & Allard, H.T. 2007. The role of insight teams in integrating diverse marketing information management techniques. *European Journal of Marketing*, 42(7/8): 836-851.

Gensch, D. 2001. A marketing-decision-support model for evaluating and selecting concepts for new products. *Interfaces*, 31(3): S166-S183.

Grant, R.M. 1997. The knowledge-based view of the firm: implications for management practice. *Long Range Planning*, 30(3): 450-454.

Hess, R.L., Rubin, R.S. & West, L.A. 2003. Geographic information systems as a marketing information system technology. *Decision Support Systems*, 38: 197-212.

Hannula, M. & Pirttimäki, V. 2003. Business Intelligence: empirical study on the top 50 Finnish companies. *Journal of American Academy of Business*, 2(2): 593-599.

Hart, M. 2006. Progress of organisational data mining in South Africa. *ARIMA/ SACJ Joint Special issue: 'Advances in end-user data-mining techniques'*, 36: 4-15.

Keh, H.T., Nguyen, T.T.M. & Ng, H.P. 2006. The effects of entrepreneurial orientation and marketing information on the performance of SMEs. *Journal of Business Venturing*, 22(4): 592-611.

Kotler, P. & Armstrong, G. 2008. *Principles of Marketing*. 12th edition. Upper Saddle River, N.J.: Pearson Prentice Hall.

Lackman, C., Saban, K. & Lanasa, J. 2000. The contribution of market intelligence to tactical and strategic decision making. *Marketing Intelligence and Planning*, 18(1): 6-8.

Li, E.Y., McLeod, R. Jr. & Rogers, J.C. 2001. Marketing information systems in Fortune 500 companies: a longitudinal analysis of 1980, 1990 and 2000. *Information & Management*, 38 (2001): 307-322.

Little, M. & Fahey, L. 2006. The model for integrating strategy and intelligence: the Executive Intelligence Officer. *Strategy & Leadership*, 34(6): 4-10.

Makadok, R. & Barney, J.B. 2001. Strategic factor market intelligence: an application of information economics to strategy formulation and competitor intelligence. *Management Science*, 47(12): 1621-1638.

McGonagle, J.J. & Vella, C.M. 2002. A case for competitive intelligence. *The Information Management Journal*, July/August: 35-40.

Mintzberg, H. 1979. Extract from "The Structuring of Organizations". In: Segal-Horn, S. (ed.). *The Strategy Reader*, 2nd edition. Milton Keynes: The Open University.

Murray, P. & Carter, L. 2005. Improving marketing intelligence through learning systems and knowledge communities in not-for-profit workplaces. *Journal of Workplace Learning*, 17 (7/8): 421-435.

- Rao, S.K. 2000a. Marketing decision support systems for strategy-building. *Marketing Health Services*, Summer: 15-18.
- Rao, S.K. 2000b. A marketing decision support system for pricing new pharmaceutical products. *Marketing Research*, Winter: 22-29.
- Read, P., Higgs, G. & Taylor, G. 2005. The potential and barriers to the use of geographical information systems for marketing applications in higher educational institutions. *Marketing Intelligence & Planning*, 23(1): 30-42.
- Reicks, R. 2001. How to ensure that knowledge is power. *Journal of Business Strategy*, 22(4): 32-35.
- Serpa, L.F. 2000. Epistemological assessment of current business intelligence archetypes. *Competitive Intelligence Review*, 11(4): 88-101.
- Shoham, A., Rose, G.M. & Kropp, F. 2005. Market orientation and performance: a meta-analysis. *Marketing Intelligence & Planning*, 23(4/5): 435-454.
- Trim, P. R.J. and Lee, Y. 2006. The role of marketing intelligence officers in strategy formulation and implementation. *Handbook of Business Strategy*, 125-130.
- Van Bruggen, G.H., Smidts, A. & Wierenga, B. 1998. Improving decision making by means of a marketing decision support system. *Management Science*, 44(5): 645-658.
- Vedder, R.G. & Guynes, C.S. 2000/2001. A study of competitive intelligence practices in organisations. *Journal of Computer Information Systems*, 41(2): 36-39.
- Venter, P. 2000. *Developing a marketing information system (MKIS) model for South African service organisations*. Unisa: D.Com (Business Management) thesis, unpublished.

Venter, P & Tustin, D.H. 2006. *Business Intelligence in South Africa*. Pretoria: Bureau of Market Research, Research Report 360.

Venter, P. & Wright, A. 2009. "I think therefore I strategize": One South African middle manager's journey towards becoming a strategist. European Group for Organization Studies 2009 (short paper accepted for annual conference).

Viviers, W., Saayman, A., Muller, M-L. & Calof, J. 2002. Competitive intelligence practices: a South African study. *South African Journal of Business Management*. 33(3): 27-37.

Walker, O.C. Jr., Mullins, J.W., Boyd, H.W. Jr. & Larréché, J-C. 2006. *Marketing strategy: a decision-focused approach*. 5th edition, New York, NY: McGraw-Hill Irwin.

Walle, A.H. 1999. From marketing research to competitive intelligence: useful generalisation or loss of focus? *Management Decision*, 37(6): 519-525.

White, J.C. & McCardle, M. 2001. Interpretation of marketing information: individual and organisational antecedents. *American Marketing Association: Conference Proceedings*. P. 12.

Wright, S., Pickton, D.W. & Callow, J. 2002. Competitive intelligence in UK firms: a typology. *Marketing Intelligence & Planning*, 20(6): 349-360.

Wright, S. & Calof, J.L. 2006. The quest for competitive, business and marketing intelligence: a country comparison of current practices. *European Journal of Marketing*, 40(5/6): 453-465.

Xu, X.M. 1999. The strategic orientation of marketing information systems – an empirical study. *Marketing Intelligence and Planning*, 17(6): 262-271.