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# The impact of managerial cognitions on the structure-conduct-performance (SCP) paradigm

## A strategic group perspective

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Impact of managerial cognitions

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### Abstract

**Purpose** – The structure-conduct-performance (SCP) paradigm was devised over half a century ago in an effort to contextualise and explain industry dynamics. However, the framework suffers from a number of shortcomings and, consequently, it has been criticised over the years. Yet, despite its weaknesses, it has survived its criticisms and is still used in industrial organisations (IOs) for the purposes of competitive analysis. In time, the framework has also been adopted by strategic management, and in the area of strategic groups it holds a prominent position in the literature. This study aims to address this issue.

**Design/methodology/approach** – The study is cross-sectional and is based on primary research. It involves face-to-face semi-structured interviews and the sample size is near to the sampling frame of the research.

**Findings** – The paper develops a cognitive dimension and, based on the findings of primary research, extends the framework in a manner that provides a better insight into competitive dynamics.

**Originality/value** – This article views the SCP paradigm from a strategic perspective and discusses its limitations.

**Keywords** Strategic management, Strategic groups, Dynamics, Competitive analysis

**Paper type** Research paper

### Introduction

It is evident that one of the most enduring efforts in the literature of the industrial organisation (IO) and strategic management has been, and still is, to develop a framework that contextualises the essence of industries and markets and explains the factors that define competitive landscapes. In economics, such an endeavour can be traced back to the eighteenth century to the founder of modern-day economics, Adam Smith, and his book *The Wealth of Nations* (Smith, 2000). Within IO, ongoing efforts have been clear from the early introduction of the theory (e.g. Chamberlin, 1933; Sweezy, 1939; Mason, 1949; Bain, 1956) and can be mapped thereafter throughout the years (e.g. March and Simon, 1958; Cyert and March, 1963; Simon, 1979; Williamson, 1985; North, 1990). In strategic management, although it is a young discipline in relation to economics and was initially a by-product of IO, the same attempts have been evident since the late fifties and early sixties (e.g. Selznick, 1957; Chandler, 1962), and systematically after 1980, when Porter (1979), introduced the five-forces model of competition in the field.



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However, the debate is still open, and a consensus is yet to be reached. As time has progressed and academic thought has evolved, scholars from both disciplines have become increasingly dissatisfied with frameworks and theories that do not adequately contextualise and explain these competitive factors. As a result, a number of different schools of thought have emerged, each one promoting their viewpoint whilst criticising the others and emphasising their inadequacies. In economics, Sinclair and Stabler (1997) note that the discipline is characterised by alternative schools of thought, and that the predilection of economists to disagree is almost axiomatic. In strategic management the same process has occurred, since the discipline now comprises ten different schools of thought that form the two main perspectives in the field, namely the prescriptive and the descriptive viewpoints. The former is closely allied with economics, views business environments as being objective, has an outside-in approach to strategy development, and is mostly concerned with "what is". The latter is closely allied with the social and cognitive sciences, views business environments as being subjective, has an inside-out approach to strategy development, and is mostly concerned with "how things are actually done" (Mintzberg *et al.*, 1998).

Despite the common objective of contextualising competitive landscapes and providing a theory that explains such dynamics better, by using the aggregate strengths of the numerous schools of thought in either field, there seems to be a lot of criticism and little integration. Strategic management disapproves the narrow and restrictive assumptions of economics (especially the neoclassical perspective) and complains that economics is too prescriptive and, at large, divorced from the real issues that define industries and markets. Economics criticises strategic management for being too descriptive and lacking methods for measuring the impact and effect of such processes and factors in industry. However, if the essence of IO is to interpret and explain the economic behaviour and development of the firm and the essence of strategic management to explain the strategic interaction and competitive behaviour of the firm, are the two not interrelated?

In their attempts to explain such issues, scholars from both disciplines ran into similar considerations. Early theories saw the industry as the right level of analysis and ignored other variables (Hunt, 1972; Newman, 1978). After that, the firm was considered to be the right level of analysis (Hatten and Schendel, 1977; Hatten and Hatten, 1987). Then, the importance of the individual decision maker gained momentum as the right level of analysis (Ireland *et al.*, 1987; Porac and Thomas, 1990; Reger and Huff, 1993). Currently a number of scholars argue the need to integrate these diverse perspectives in order to develop better frameworks for contextualising competitive landscapes (Boone and van Witteloostuijn, 1995; Feigenbaum and Thomas, 1995; Sinclair and Stabler, 1997; Molinski, 1999; Lubatkin *et al.*, 2001; Santos Alvarez, 2002; Daniels *et al.*, 2002). In IO, it is evident that such reflections evolved incrementally from the viewpoint of the neoclassical economics, to institutional economics, to behavioural economics, to evolutionary economics. In strategic management a similar evolution of thought has taken place over the years between the prescriptive and descriptive approaches.

### **The structure-conduct-performance (SCP) framework**

In IO, the SCP framework (Mason, 1949; Bain, 1951, 1956) was devised in an attempt to analyse and contextualise the competitive conditions of industries by examining how

the underlying structure (the factors that determine market competitiveness) of an industry is related to, and affects the conduct (the behaviour) and performance ("track-record" or success in the industry/market) of firms (Lipczynski and Wilson, 2004). The framework also considers public policy as having an impact on, and consequently, affecting firms' structures and behaviour and regards the basic conditions of supply and demand in any given industry as influencing that industry's structure. In time, the framework has also been adopted by strategic management and in the area of strategic groups it enjoys widespread application, since strategic groups are investigated, at large, on their SCP variables (Panagiotou, 2005).

Overall, the SCP approach attempts to explain and predict the performance of an industry as a consequence of market structure and conduct, and assumes that there is a stable and causal relationship between the structure of an industry, firm conduct, and market performance. Later studies, however (Phillips, 1976; Clarke, 1985), have disagreed with the narrow perspective of performance flowing from structure and argued that dissatisfaction in firm performance can lead back to changes in firm conduct, and consequently changes to structure.

Within strategic management, the latter has been an on-going argument in the literature of strategic groups, where research has repeatedly indicated that all elements of the SCP framework are interrelated and all influence and impact each other (Lawless *et al.*, 1989; Flavián and Polo, 1999; McNamara *et al.*, 2002; Panagiotou, 2005). Researchers over the years have employed the SCP framework to investigate industry dynamics, the contestability of competitive market structures, structural evolution and strategic change (Porter, 1980; Hatten and Hatten, 1987; Nohria and Garcia-Pont, 1991; McGee *et al.*, 1995; Feigenbaum and Thomas, 1995). Some have used the concept to examine intra-industry variations in the competitive behaviour and performance of firms (McGee and Thomas, 1986; Cool and Schendel, 1988; Feigenbaum and Thomas, 1990, 1995; Smith *et al.*, 1997; Nair and Kotha, 2001). Others have used it to analyse profitability differences (McNamara *et al.*, 2002), mobility barriers (Harrigan, 1985; Sudharshan *et al.*, 1991; Ferguson *et al.*, 2000), and competitive positioning (Feigenbaum and Thomas, 1990).

The strength of the SCP, according to Van Cayseele and Van Den Bergh (1999), is that it consolidated the common themes of the original models of competition such as number and size of suppliers, technological aspects, and buyers' choices over differentiated brands. Consequently, it integrated these elements into a framework that linked these issues with performance indicators in that industry, by also considering, the competitive behaviour of firms in relation to that industry's structure. The aim was to provide a generalised theory that contextualises the dynamics of competitive landscapes with the emphasis being on explaining, and predicting, that the performance of an industry is a result of its structure.

López (2001) concurs and adds that the SCP paradigm's popularity arose from its suggestion that once the structure of an industry is defined, the conduct of the firm can also be defined and thus the performance of an industry can be determined. Given that industries are found on the continuum between the extremes of pure monopoly and perfect competition, industries falling closer to pure monopoly are more concentrated and exhibit higher prices and fewer efficiencies. Indeed, he continues, "the SCP approach yields a central conclusion: the degree to which an industry departs from the model of perfect competition – as measured by industry concentration – determines

the departure from the societal ideal". In other words, he notes, "the theory concludes that there is a negative correlation between industry concentration and the societal welfare produced by that market". He further articulates, "that this was a truly monumental theoretical achievement, as the prediction distilled decades of academic discourse, building upon the intellectual inheritance of two centuries of economic thought, into a single statistic" (p. 360).

Consequently, a number of concentration ratios were devised to measure market competitiveness and performance levels, two of which are the four-firm concentration ratio (CR4), measuring the sum of the market shares of the four largest firms in the industry, and the eight-firm concentration ratio (CR8), focusing on the top eight. Other measures include the Herfindhal-Hirschman index (HHI), which looks at the market shares of all firms in that industry, or the Lerner index, which considers the differences between market price and marginal costs.

Thus, by default, the data required to apply these ratios are secondary, using either published statistics or firms' financial statements. This very fact is central to the SCP's criticisms because secondary data only allows "snapshots" of industries and markets. Consequently, divorcing it from the real issues that have created these "snapshots", since a "snapshot" is the "what is" or the current situation that has been created through a process of competitive enactment (Weick, 1979, 1995), and it is the aftermath of decision making. What should also be of interest, in order to attain a holistic view of competitive landscapes, is the central role that managers have in creating, and changing, such industry dynamics. After all, it is people who think for, and drive organisations, and it is people who take business decisions and make business transactions. It thus makes little sense to ignore the role of decision makers when evaluating competitive dynamics when the two are interrelated, since managers influence market structure through competitive interaction (Stubbart, 1989; Hodgkinson, 1997).

The hard facts derived from scientific analysis can only go so far. From then on, human judgement takes over to interpret findings and determine their relevance. Subjective judgements by planners and managers are a major component in the process of strategic planning (Barnes, 1984). According to Wissema *et al.* (1980), managerial characteristics such as creativity and intuitive-irrational thinking are important, and are being increasingly recognised in the literature of strategic management. Jankowicz (2001) concurs, and adds that many occupations require people to draw on their experience to make decisions based on subjective judgement, as opposed to the rational deductive chain of logic, due to either gaps and/or overload of information as well as time and cost constraints. Such a thought has been acknowledged in IO, and the notion of bounded rationality (March and Simon, 1958; Cyert and March, 1963; Williamson, 1985) clearly recognises managers' limitations. Bounded rationality assumes that although the issue is relatively defined, there is still need for improvement due to various imperfections owing to variables such as cost, time, cognitive abilities and information availability, and thus seeks a "good enough" (satisficing) option, rather than a perfect one.

Therefore, the ways in which managers analyse and make sense of their environments (Weick, 1995), perceive and categorise their competitors (Porac and Thomas, 1990), and take decisions about competitive strategies (Simons and Thompson, 1998), have real implications when attempting to understand,

contextualise, and explain competitive landscapes. Thus, viewing the SCP framework from a strategic perspective, a number of contributions can be made to broaden the paradigm, by adding a set of variables that complement the approach in an effort to bridge its structural flaws and make it more dynamic and attainable. In doing so, managerial cognitions are considered as the framework's innermost element. After all, it has long been recognised that managers formulate and modify firms' competitive behaviour in the light of competitive challenges.

As López (2001) states, statistical application without theoretical justification is not valid enough. To that end, the SCP approach provides no explanations into the reasons of how industries have evolved into their current state and how firms' competitive behaviour affects future changes in that industry's structure (Lipczynski and Wilson, 2004), despite the fact that this aspect has been recognised by institutional economics (Sinclair and Stabler, 1997). Thus, managers must be the driving force in competitive landscapes in creating and recreating specific structure-conduct-performance characteristics (Reger and Huff, 1993; Costa and Teare, 2000). Contemporary and well-established theories and models of oligopolistic competition and cognition complement each other. What the cognitive viewpoint does is bring out the psychological details of the less argued aspects of competitive environments (Porac *et al.*, 1989) in an attempt to bridge genuinely different perspectives in the literature in order to build a framework that is more structured in its methodology and more inclusive in its nature (de Chernatony *et al.*, 1993; Paton and Wilson, 2001). This notion is built in the SCP framework, but it is implicit in the process. In the new IO, such ideas are fundamental in the literature. Hence, by making explicit, and integrating a cognitive dimension in the framework, a better theory can be developed as to "why" and "how" things come to be rather than just investigating the "what is".

### **Aims of the study**

Taking into consideration the arguments in the literature and the need to survey industries and competitors more from a cognitive perspective, the aim of this study is to examine managerial cognitions and evaluate the effect of these on industry dynamics. Equally, the study seeks to investigate the impact of such cognitions on firms' structural aspects, competitive behaviour, and performance and profitability characteristics.

### **Rationale**

In doing so, the study has adopted a descriptive approach within an overall strategic management perspective. These issues are then viewed from a strategic group standpoint to enable a deeper investigation into industry dynamics. Firms may exist in a specific industry but do not actually compete at the industry level. They rather compete in their selected segments. As a result, firms formulate their structures and competitive behaviour to facilitate the prevailing conditions of that industry, and consequently take advantage of opportunities and counteract the competitive challenges of their specific segment, given their positioning strategies. Of course, such structural and behavioural aspects impact on firm performance and profitability.

In particular, the investigation focuses on the individual decision maker, since firms' SCP variables are, in general, the aftermath of individuals' decision making, which in turn are subject to their individual perceptions and competitive beliefs (Weick, 1995).

Such perceptions and beliefs may also be influenced by information available in the public domain of the industry, or through players' interaction, as a result of competitive or cooperative engagements (Reger and Huff, 1993).

Individuals in an industry interact with each other. They go to the same conferences and exhibitions, they read the same industry literature and they recruit staff from the same labour pool (Reger and Huff, 1993). They share the same suppliers in their value chain activities and observe what competitors do through benchmarking (Porac *et al.*, 1989). As a result, shared beliefs about competitive challenges and opportunities are created through the cross-fertilisation of such interaction. Potentially, this may lead to the adoption of similar ideas and practices and thus may hinder differentiation. This is certainly true in strategic groups. Strategic groups are the clusters of companies that operate in the same segment and sell similar products and services, in a similar manner to similar target groups, despite efforts for differentiation. It follows naturally, then, that the SCP attributes of these firms are also characterised mostly by similarities. Thus viewing industries and competitors from a strategic group perspective, it is proposed that:

- P1. Managers' shared beliefs about competitive challenges contribute towards the formation of similarities in their firms' structure and competitive strategies.
- P2. Managers' shared beliefs about changing competitive challenges contribute towards the re-formation of similarities in their firms' structure and competitive strategies.
- P3. Managers' cognitions about competitive challenges directly impact firm performance and profitability.

It is believed that no study in the field has attempted to examine these issues directly. Nair and Kotha (2001) have explored the linkages between managerial cognitions and firm performance and profitability, and Osborne *et al.* (2001) investigated managerial cognitions in relation to all SCP elements in the context of strategic groups. However, the effects of managerial cognitions in re-forming the structural aspects and competitive behaviour of firms have not been investigated. Equally important, these studies have only employed a secondary research method using archival data, and primary research has not been conducted. Thus, this investigation has the potential to increase our understanding of competitive landscapes more since it provides a further insight into management practice.

### **Research methodology and field approach**

The investigation is based on primary methodology and the research strategy involves face-to-face interviews with a semi-structured questionnaire. All interviews were conducted at the participants' place of work and a tape recorder was used to record responses. The average time per interview was 45 minutes. In order to achieve a more precise response and ensure a richer level of elicitation that is both qualitative and quantitative, participants were also asked to assign a score on each qualitative question, based on a seven-point scale (1 being "strongly disagree" and 7 being "strongly agree"). The type of the research is cross-sectional, and the aim in terms of the sample size was to achieve census in the sampling frame of the study. The actual

field research took place over five months, from April 2003 to August 2003. The industry investigated is the mainstream UK leisure foreign package holidays industry.

Recent research in the area has suggested that studies on strategic groups need to focus on single industries (Hodgkinson, 1997; Peteraf and Shanley, 1997; Mehra and Floyd, 1998) in order to pursue and develop a richer understanding of the topic rather than investigate companies with a presence in many industries. Ferguson *et al.* (2000) extended this logic and applied their research within one segment of a single industry to be even more specific. This study has adopted the former method and has further focused its approach on two specific, and significantly different strategic groups, in order to "dig" deeper and pursue data in as precise manner as possible. Specifically the two groups under investigation are the large incumbent firms (the "Big Four") and the internet-based new entrants (dotcoms) in the UK leisure mainstream foreign package holiday industry.

When identifying the population, the "Big Four" group did not pose any difficulties since it is easily identifiable in the industry. However, identifying the internet-based new entrants group was a painstaking exercise – in order to ensure that all relevant players were identified and included in the sample – and involved a great deal of secondary research. Given the fact that most companies in the industry have, in time, adopted the internet and began to implement clicks-and-mortar strategies, careful attention was paid when selecting the players in the industry to ensure that they qualify to be included in the frame. To that end, only those companies that have entered the market using the internet as a platform for distribution have been selected, regardless of their nationality or point of origin, or that they may belong to a parent organisation – given that the strategic business unit (SBU) operates in the mainstream UK leisure foreign package holidays industry and has a licence to sell leisure package holidays. A prerequisite was that all firms had to have a transactional website. Those who have entered the industry but later on suspended operations have not been considered, but those who, in the meantime, have been acquired by or merged with others, are included in the frame. All specialist firms who are not in the mainstream leisure package holidays have also been excluded. When the list was deemed to be satisfactory, verification was sought through industry experts, with some minor modifications being carried out, at the pilot stage of this research to ensure effectiveness.

The research was developed with the help of 26 companies, from a total of 33 in the industry (it includes an aggregation of all "Big Four" multiple websites to one SBU per player), which provided 24 participants (some were responsible for more than one SBU in the same company). From the 24 participants, 19 were at director level and five at managerial level, with 12 being from the "Big Four" group and 12 from the dotcom group. The equal representation of respondents was due to coincidence rather than design. All respondents were involved in strategy formulation in their respective companies. An overall response rate of 79 per cent was realised, based on the census approach of this study, which makes it higher than other similar studies in the field (35 per cent for Porac *et al.*, 1989; 77 per cent for Reger and Huff, 1993; 50 per cent for Daniels *et al.*, 1994; 37 per cent for Paton and Wilson, 2001; 75 per cent for Daniels *et al.*, 2002). From the 24 participants in the sample, 23 provided data for the first two propositions and all 24 provided data for the third. The sample size is adequate for the purpose of this investigation, and it is in line with similar studies in the field (16

respondents from Porac *et al.*, 1989; 23 respondents from Reger and Huff, 1993; 24 respondents from Daniels *et al.*, 1994). However, despite the adequacy of the sample, in order to compensate for its small size, the probability level (Bonferroni's adjustment) was set at 0.01 to give a 99 per cent level of confidence in results.

**Analysis and discussion of findings**

*Proposition 1*

The quantitative data collected for this proposition have been analysed through one-way multivariate analysis of variance (MANOVA) using SPSS. The qualitative data collected have been subjected to manual content analysis and summarised in tabulations. The aim was to identify whether managers are influenced by information available in the public domain of their industry when formulating structural and competitive strategies for their firms, and if so, by how much. If they are influenced by such information, a further aim was to ascertain whether they also influence each other through interaction, and to what extent they do so. This would, in turn, indicate if it leads to shared beliefs in managerial perceptions of competitive challenges in their industry, and by how much. Such "quantitative reality" of perceptions is then contrasted against qualitative data in order to impart more in-depth information and thus provide the context of the results. These findings are then viewed against firms' structures and competitive behaviour in order to evaluate the impact of such cognitions on management practice in the industry. The descriptive statistics of MANOVA are presented in Table I, and the results of the test are reported in full.

Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices and multicollinearity, with no violations noted. The results indicated that there was no statistically significant difference between the two strategic groups on the combined dependent variables:  $F(3, 19) = 1.36, p = 0.285$ , Pillai's trace (being more robust in a small sample) = 0.177, partial eta squared = 0.177. The results indicate that all

	Strategic groups	Descriptive statistics			Coefficient of variation <sup>a</sup> (per cent)
		Mean	SD	n	
Influenced by information available in the public domain of the industry about competitive challenges before formulating structural or competitive strategies for the company	Big Four	6.09	1.044	11	17.14
	Dotcoms	5.25	1.913	12	36.43
	Total	5.65	1.584	23	28.03
Shares similar perceptions about competitive challenges in the industry with counterparts in own strategic group	Big Four	5.73	0.786	11	13.71
	Dotcoms	5.42	1.240	12	22.87
	Total	5.57	1.037	23	18.61
Believes that there are commonalities in perceptions about challenges in the industry among similar level executives in similar type of companies	Big Four	6.09	0.701	11	11.51
	Dotcoms	5.08	1.564	12	30.78
	Total	5.57	1.308	23	23.48

**Note:** <sup>a</sup>The coefficients of variation have been added manually because MANOVA does not provide such calculations as part of the analysis

**Table I.** Managerial beliefs of competitive challenges when formulating organisational strategies



managers are influenced to the same extent by available information in the public domain of their industry and that they share similar perceptions with each other. Even when the dependent variables were considered separately there were no differences in the results.

However, a number of additional points can be observed from Table I. It is clear, by looking at the groups' means, that respondents are influenced similarly by the matters under consideration. This has already been established by the test carried out. What the test did not show, however, is the actual extent of similarities in perceptions. The "Big Four" group means are just above 6 (moderately agree), and the dotcoms group means are between 5 (somewhat agree) and 6 (moderately agree) – all indicating cognitive influences and similarities. However, if these means are viewed in relation to their coefficients of variation, it becomes clear that the "Big Four" group appears to be more cohesive in their perceptions, and arguably even "locked into" their own way of thinking. Their coefficients of variation (17.14 per cent, 13.71 per cent and 11.51 per cent) in relation to the three dependent variables investigated suggest that they have 82.86 per cent, 86.29 per cent and 88.49 per cent similarities in perceptions between them, respectively – a high level of shared beliefs. This phenomenon may not be surprising, given the many years that they have operated (well over 30), the levels of interaction that have taken place between them (conferences, exhibitions and so on), the sharing of workforce (a number of people have worked for more than one of the big players in different periods of their career), and the saturation stage of the industry life-cycle in which they operate (where issues are well known and have been repeatedly communicated by a number of sources). When respondents were asked what had made them have the understanding that they currently have about competitive challenges in their industry, all clearly acknowledged those sources of influences in their perceptions.

Regarding the dotcoms group, despite their relatively young age in the industry (about six years when this research was conducted), and the growth stage of the industry life-cycle in which they operate, they also have large similarities of perceptions to each other, again attributed to similar levels of interaction between them. Their coefficients of variation (36.43 per cent, 22.87 per cent and 30.78 per cent) indicate that they share such beliefs at the levels of 63.57 per cent, 77.13 per cent and 69.22 per cent, respectively. However, in relation to the "Big Four" group, they appear to be more "open minded". This is consistent with their qualitative responses where they have indicated that they are still trying to define their markets, establish their brands, and enter profitable niches. Thus it can be said that managers from different firms of the same strategic group have more homogeneous perceptions with each other about the configuration of competition in their industry, and that these similarities of perceptions are different with managers of firms belonging to another strategic group. Such an observation is in line with Porac *et al.* (1989), Porac and Thomas (1990), and Paton and Wilson (2001), who also found strong in-group, out-group perceptual differences as a result of social interaction and the process of enactment (Weick, 1979).

However, and potentially more important, given that both groups operate in similar market segments, serving similar customer groupings, and having identified each others' positioning advantages there is also a degree of convergence taking place between them. For example, the "Big Four" increasingly seem to be modifying their firms' structures and conduct to incorporate more online business models' attributes.

The dotcoms group, on the other hand, have already started embracing the offline business models by incorporating in their structures some physical outlets, and also adapting their conduct to enable them to compete more effectively with the "Big Four" in the package holidays sector. Both groups are currently re-conceptualising their product offer. For example, the "Big Four" are now also trying to develop dynamic packaging capabilities (an internet-based application that allows mass customisation). As a result, they are also attempting to streamline their operations to achieve greater levels of flexibility as in the dotcom group. The dotcoms group, on the other hand, has now also adopted the "Big Four" acquisitive strategies in order to buy market share in the area of tour operations. However, such convergence is slow because it is subject to mobility barriers with investment requirements to achieve their intentions being the highest barrier for both groups.

When participants were asked if they believe that there are commonalities in perceptions among similar levels of executives in similar type of companies about competitive challenges in their industry, responses included "everyone's sort of in the same pot", "we're all alike", "I think there tends to be consensus with these things", "there are fairly strong and obvious trends", "I'd be surprised if any of the competitors come up with a completely different idea". When they were asked if, how, and why, they are influenced by such information available in the public domain of their industry before formulating structural or competitive strategies for their companies, all again acknowledged the fact that they are influenced by it. Comments included "you can't help it but being influenced", "there is always an element of brain washing in the industry, especially in the media", "there isn't any other way", "yes", "you cannot ignore what is happening in the industry", "we all are".

Regarding other studies, none has directly attempted to investigate such aspects of strategic groups in the field. However, the similarities of managerial perceptions found in this study are in line with de Chernatony *et al.* (1993) and the levels of convergence identified are in agreement with Reger and Huff (1993). The findings of this study concur with Weick's (1979, 1995) concept of competitive enactment, as well as Spender's (1989) industry "recipes". The results are also in accordance with Porac *et al.* (1989) in terms of the ways in which the structure of an industry is determined by and determines managerial perceptions through communications and interaction.

### *Proposition 2*

The aim of this proposition was to investigate whether managers' shared beliefs of changing competitive challenges in their operating environment contribute towards the re-formulation of similarities in their firms' structures and competitive strategies. Given that this proposition is the continuation of the previous one, the same type of investigation was performed. Consequently, the findings and arguments are also presented in the same manner as before. The descriptive statistics of MANOVA are presented in Table II. The remainder of the analysis, as previously, is reported in full below.

Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no violations noted. The results indicated that there was no statistically significant difference between the two strategic groups on the combined dependent variables:  $F(3, 19) = 1.29$ ,  $p = 0.305$ , Pillai's trace (being more robust in a

	Strategic groups	Descriptive statistics			Coefficient of variation <sup>a</sup> (per cent)
		Mean	SD	n	
Influenced by information available in the public domain of the industry about changing competitive challenges before reformulating structural or competitive strategies for the company	Big Four	6.09	0.831	11	13.64
	Dotcoms	5.67	0.888	12	15.66
	Total	5.87	0.869	23	14.80
Shares similar perceptions about competitive challenges in the industry with counterparts in own strategic group	Big Four	5.73	0.786	11	13.71
	Dotcoms	5.42	1.240	12	22.87
	Total	5.57	1.037	23	18.61
Believes that there are commonalities in perceptions about challenges in the industry among similar level executives in similar type of companies	Big Four	6.09	0.701	11	11.51
	Dotcoms	5.08	1.564	12	30.78
	Total	5.57	1.308	23	23.48

**Note:** <sup>a</sup>The coefficients of variation have been added manually because MANOVA does not provide such calculations as part of the analysis

**Table II.** Managerial beliefs of changing competitive challenges when reformulating organisational strategies

small sample) = 0.170, partial eta squared = 0.170. There were no differences even when the dependent variables were considered separately, indicating that all managers are influenced similarly by available information in the public domain of their industry when re-formulating structural or competitive strategies for their companies, and that they share similar perceptions.

Table II indicates that respondents are highly influenced by information available in their industry when considering re-formulating their firms' structures and competitive strategies. In fact, although the "Big Four" remained equally influenced as before (findings of Proposition 1), the dotcoms group appears to be influenced even more this time round by such factors, when re-formulating their firms' structures and competitive strategies. This is evidenced when their coefficients of variation are compared against the first test (Table I). For example, the "Big Four" group mean remained unchanged in relation to the previous test (6.09), but their coefficient of variation is even closer than before (from 17.14 to 13.64), indicating greater levels of similarities in perceptions. The surprise, however, was in the dotcoms group. Their mean of the previous test was 5.25, with a coefficient of variation of 36.43 per cent. This time, their mean increased to 5.67, suggesting higher levels of influence when re-formulating strategies. The interesting point though is that their coefficient of variation has now decreased from 36.43 per cent to 15.66 per cent, suggesting an 84.34 per cent level of agreement between them in relation to the previous 63.57 per cent – a big increase in beliefs. The total mean of the sample also increased from 5.65 to 5.87, with the total coefficient of variation decreasing from 28.03 per cent to 14.80 per cent, consequently increasing the level of agreement between all participants from 71.97 per cent to 85.20 per cent.

When participants were asked to comment on the factors that influence them to reformulate their strategies all of them again acknowledged the reasons illustrated in

*P1.* However, additional comments included “counteract competition”, “take corrective action”, “depends on what is happening to the world”, “seeing what others do and liked what I’ve seen”. Such a phenomenon is consistent with the evidenced levels of convergence in management practice between the two strategic groups, if one takes into consideration the practice of the “Big Four” before and after the entry of the dotcoms into the market. The same observation can be made if one takes into consideration the initial business model of the dotcoms when they first entered the industry and how much they have changed their positioning strategies since then. As a result, they have also changed their structures to facilitate such changes, and they continue to do so. Consequently, the “Big Four” are also responding in a similar manner (i.e. streamlining their operations to increase flexibility and devising internet-based strategies) in their efforts to defend their market shares. Regarding other studies in the field, none has attempted to investigate such aspects of strategic groups with which the findings of this study can be compared against.

### *Proposition 3*

The quantitative data collected for this hypothesis were subjected to an independent samples one-tail *t*-test in order to ascertain managers’ beliefs about their cognitions on firm performance and profitability. The descriptive statistics of the test are presented in Table III and the remainder of the analysis is reported in full and discussed below.

Thus, an independent-samples one tail *t*-test was conducted comparing respondents’ beliefs about the impact and effect of their cognitions on their firms’ performance and profitability. There was no significant difference in scores from either group (“Big Four”,  $M = 6.50$ ,  $SD = 0.674$ ), (Dotcoms,  $M = 6.50$ ,  $SD = 0.674$ ), ( $t = 0.000$ ,  $p = 1.000$ ). Given that  $t = 0.000$ , the eta square is not computable, indicating a high level of agreement of such an issue between participants.

The coefficients of variation (10.36 per cent) between the two groups show the extent of agreement, since they indicate an overall 89.6 per cent level of concurrence between participants. It is clear by looking at the results of the test that managerial cognitions drive and impact firm performance and profitability and, as such, they are at the forefront of any strategic dimension. When participants were asked to comment on why they believed that managerial cognitions affect firm performance and profitability, responses included “Because we provide direction and action. So it goes without saying that if we do something good the results will be positive, if we do something wrong, then ...”, “Absolutely. We do get very blasé some times, but we are

	Strategic groups	<i>n</i>	Group statistics			
			Mean	SD	Standard error mean	Coefficient of variation <sup>a</sup> (per cent)
Believes that managerial cognitions directly impact on firm performance and profitability	“Big Four”	12	6.50	0.674	0.195	10.36
	Dotcoms	12	6.50	0.674	0.195	10.36

**Note:** <sup>a</sup>The coefficients of variation have been added manually because they are not given as part of the analysis

**Table III.**  
Impact of managerial cognitions on firm performance and profitability

people ...”, “Because at the end of the day we sit and decide. And, sometimes that can have a detrimental effect, but quite often, if you are doing it right, it can have an effect on the business that it brings in”, “Yes very much so. It is a fundamental precept of the business ... we form our own strategies, we do our own things ...”, “Oh yes. We are very conscious about our decisions because they lead to the bottom line”.

Regarding other studies in the field, none has attempted to investigate such aspects of strategic groups that the findings of this study can be compared against. However, Nair and Kotha (2001) found significant associations between firm membership in the group and firm performance in a somewhat similar study, and Osborne *et al.* (2001) also found commonalities in mental models and subsequent performance in the groupings that they have investigated.

### Further discussion

Overall, the findings of this investigation concur with Weick (1995) that making sense, or “sensemaking”, is what keeps action and cognition together. Interpretation explains how people cope with entities that already exist, whereas sensemaking explains how entities get there in the first place. The word “enactment”, on the other hand, attempts to explain how environments are created. In fact, Weick argues, that in organisational life people often produce part of the environment they face through the process of enactment. When people enact with each other, they take undefined space, time and action and create new dimensions in the environment that did not previously exist. In other words, people act and counteract on each other’s acts and counteracts and, in the process, they create an environment that contains opportunities and constraints. It follows, then, that the environment is created by people, who in the process create a cycle that goes from “subjective” (sensemaking) to “objective” (the given reality as has been constructed) to “subjective” (interpretative) – and so on. Hodgkinson (1997) also agrees, though he argues that this cycle is better illustrated if one sees it as objective-subjective-objective. Nevertheless, in either context, what was before a socially constructed transaction (cognitions) eventually takes the form of an externally specified objective reality (actions) and, in the process, it creates the competitive environment.

Thus going back to the SCP, managerial cognitions can now be placed at the centre of the framework in an attempt to explain the underlying structure of competitive environments more holistically. It has become clear that management practice is subjective and decision-making is based on managers’ cognitive frames and their ability to interpret and make sense of their competitive environments. When managers develop competitive strategies they take into consideration their industry’s key factors for success (KFS), which have been identified from the prevalent basic conditions of that industry and the subsequent legal and regulatory requirements (Gordon and Milne, 1999; Mas Ruiz, 2000). McGee *et al.* (1995) have the same opinion and further point out that such operationalisation seeks to match the key bases of competition in the marketplace with effective strategy development. From a strategic management point of view, the identification and satisfaction of such KFS in the organisation’s competitive environment is of significant importance, since these KFS are common to all competitors in the industry. In fact, the “fit” of competitive strategies can only be evaluated against two key areas; the company’s mission statement and objectives because of the right strategic alignment against desired organisational direction

(Flavián and Polo, 1999), and against industry KFS because of organisational capabilities and overall effectiveness in the marketplace (Hamel and Prahalad, 1994).

Hence to begin with, managers “prescribe” conduct. That is to say, they formulate intended strategies (Mintzberg *et al.*, 1998) in order to achieve their objectives. Consequently, this impacts structural aspects and performance and profitability variables (Nair and Kotha, 2001; McNamara *et al.*, 2002). Thereafter, as environmental changes occur and, in the light of competition and industry events, firms modify their behaviour. That is to say, they take corrective action, and consequently adopt emergent strategies (Mintzberg *et al.*, 1998) that may also lead to changes in structure in order to counteract competitive activities, or adapt to new environmental circumstances. Of course, the latter may be subject to either entry and/or mobility barriers accordingly (Porter, 1980). Nevertheless, the result is that performance and profitability is impacted again. It may also be the case that dissatisfaction in company performance and profitability will also lead to changes in behaviour and thus structure (Clarke, 1985). Therefore, such an interdependent viewpoint introduces a process that is recursive, iterative and dynamic and provides an explanation into the “how” and “why” of competitive dynamics rather than just describing the current situation, which is only the “what”. Figure 1 illustrates the entire process as argued in this article.

### Conclusions

Given the findings of this research, one can reasonably conclude that the social construction of competitive environments and the process of competitive enactment influence managerial perceptions of competition, and form belief similarities about competitive challenges. As such, they affect strategic decisions on resource allocation and competitive strategies, and contribute towards the formation of firms’ SCP characteristics. These, in turn, impact on the structure of the competitive landscape and introduce a new set of opportunities and constrains.

It is therefore clear that by integrating economics and managerial cognitions an all-encompassing theory can be created that not only describes the current situation of industries but also explains why and how they evolve over time. Bogner and Thomas (1993) hold the same opinion, and point out that a simultaneous point of view of two conceptualisations, one based on economic concepts and the other on cognitive concepts, enables the development of a pluralistic framework that is both more complete and accurate.

### Implications

The findings of this research highlight a key observation that from an organisational perspective introduces further implications. If managerial cognitions drive organisations, and if such cognitions through social interaction and competitive enactment lead to similarities in perceptions and convergence of mental models, then such cognitive similarities eventually create more organisational imitation than differentiation. This is especially true in companies of the same strategic group. Consequently, if there is less differentiation and more imitation, the only way to compete is on price. This, of course, intensifies rivalry, creates numerous problems for organisations, and firm performance and profitability is impacted even more.

It is thus logical for companies, in order to counteract these undesirable effects and potentially compensate for such “stale” thinking, to maintain diverse management

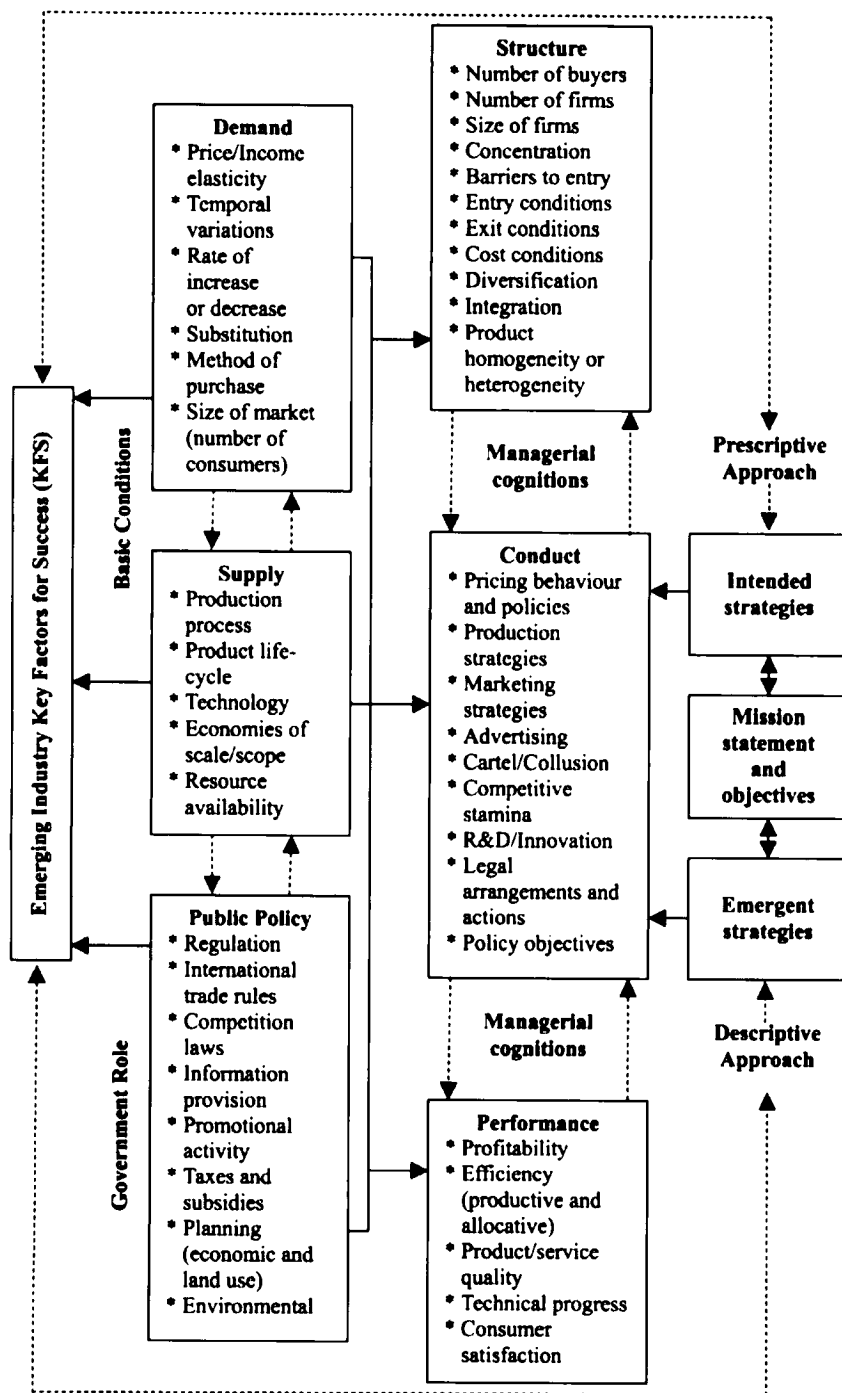


Figure 1. The SCP paradigm: a strategic perspective

teams and support them with recruits from other groupings and/or industries to ensure cross-fertilisation and creative thinking.

#### *Limitations and further research*

This study has attempted to explore the impact and effect of managerial cognitions on organisational SCP characteristics. It is believed that all dimensions have been examined adequately from a cognitive perspective. However, it is recognised that the linkage of managerial perceptions with company performance and profitability need further investigation. This study only addressed managerial beliefs on the issue and did not compare these against specific company financial statements to actually measure the material realities that they have created over a period of time. Thus, new research in the area could address this aspect in the future. Replicating this research in other industries would also be beneficial in order to accumulate findings and achieve better generalisation of results.

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