The impact of extrinsic rewards on nurses' psychological empowerment: the case of Health Care in Greece.

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Abstract

This empirical study explores the influence of four extrinsic rewards, namely relationships with supervisor, relationships with co-workers, job security and financial rewards on nurses' psychological empowerment. The study encompasses 395 nurses from both Greek public and private hospitals. Regression analysis is used to test the research hypotheses. The results of the study have shown that all factors examined here can enhance nurses' psychological empowerment. Relationships with supervisor had the strongest effect on this construct. Limitations and future research are discussed.

Introduction

Contemporary international health care has been described as a problematic sector whose workforce strives to improve both the quantity and the quality of the provided services. This also occurs in nursing occupation which is faced with the challenge of promoting effective patient care while dealing with shortages of financial and human resources. Within this context, a quest for effective management practices is emerged. A management practice that is regarded to be a universal remedy for both manufacturing and service sector is empowerment (Lashley, 1999). Empowerment has received much attention among academic researchers and business practitioners as it is considered as a management tool that can provide employees with autonomy, discretion and self – confidence and can result in greater organizational effectiveness. In the service sector, the implementation of empowering practices is *sine qua non* due to its specific characteristics and mainly the interaction between the frontline employee and the customer,. As such, employees should be given initiatives and autonomy not only to provide customers with service quality (Bowen & Lawer, 1995; Fulford & Enz, 1995) but also to cope with service failures (Gronroos, 1990). In the nursing context as well, empowerment is more and more often discussed and adopted (Kuokkanen et al., 2007). There are several papers with respect to nursing, exploring the notion of empowerment (Laschinger et al., 2000; Laschinger et al., 2001; Laschinger & Finegan, 2005; Greco et al., 2006). However, there is a gap in the relevant literature concerning the effect of extrinsic rewards on nurses' empowerment. Therefore, the purpose of this paper is to address this gap by investigating the effect of a bundle of extrinsic rewards, namely relationships with supervisor, relationships with co-workers, job security and financial rewards, on the psychological empowerment of nurses.

The Conceptual Framework

Although empowerment has been defined in various ways (Wilkinson, 1998), it can be classified into two main approaches: the structural and the psychological approach. The former focuses on the management practices which grant power and authority on employees. For instance, Bowen and Lawer (1992) incorporate four components of structural empowerment: a) information about organizational performance, b) rewards based on organisational performance, c) knowledge that enables to understand and contribute to organisational performance, d) power to make decisions that influence work procedures and organisational direction. Yet, structural empowerment overlooks employees' view towards these management practices. More specifically, it is likely that employees can experience no empowerment even if empowering practices are applied in their workplace. Psychological empowerment is built upon this disadvantage.

This approach emphasizes on the psychological aspect of empowerment. Conger & Kanungo (1988), initially defined empowerment as a psychological state and more specifically as psychological enabling. They view it as "a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal by both formal organizational practices and informal techniques of providing efficacy information" (p. 474). Thomas and Velthouse (1990), extended their approach by defining power as energy; to empower means to energize, and it is related to "changes in cognitive variables. Finally, Spreitzer's (1995) model based on their approach

defined empowerment as intrinsic task motivation manifested in four cognitions: meaning, competence, self-determination and impact.

Meaning is termed as "the value of a work goal or purpose, judged in relation to an individual's own ideals or standards" (Spreitzer, 1995, p. 1443). This assessment refers to the "intrinsic caring about a given task" (Thomas & Velthouse, 1990, p. 672). Competence, or self-efficacy, is "an individual's belief in his or her capability to perform work role activities with skill" (Spreitzer, 1995, p. 1443). According to Bandura (1977), people that experience low personal mastery avoid situations that require the relevant skills and, therefore, this avoidance leads them to prevent from confronting fears and developing competencies (Thomas & Velthouse, 1990). Self-determination is defined as "an individual's sense of having choice in initiating and regulating actions" (Spreitzer, 1995, p. 1443); for this reason, few authors used the term "choice" (Thomas & Velthouse, 1990). Self-determination involves autonomy in the initiation and continuation of behaviors and processes in the workplace including work methods, pace or effort (Spreitzer, 1995). Impact is "the degree to which an individual can influence strategic, administrative or operating outcomes at work" (Spreitzer, 1995, p. 1443). This assessment refers to the "degree to which a behavior is seen as making a difference in terms of accomplishing the purpose of the task, that is, producing intended effects in one's task environment (Thomas & Velthouse, 1990, p. 672).

In recent years, few management tools and practices are employed in the service sector with a view to its becoming more competitive and effective. Particularly, in the health care industry which constitutes an essential service sector, there is a great attempt to improve the service delivery by implementing human resources practices; such a practice is empowerment. Manojlovich (2007) argues that when nurses feel powerless in their workplace, then, they are ineffective and experience job dissatisfaction. Furthermore, it has been found that empowerment significantly improves the health and welfare of patients (Majumdar, 1999). There is a growing research interest in relation to both the antecedents and consequences of empowerment within the context of healthcare and particularly nursing. In the relevant literature, there is a plethora of papers focusing on organisational variables such as trust (Laschinger et al., 2000; Laschinger & Finegan, 2005), leader member exchange quality (Laschinger et al., 2007) job satisfaction (Manojlovich & Laschinger, 2002), job strain (Laschinger et al., 2001), leader behaviour (Greco et al., 2006) and job tension (Laschinger et al., 1999).

With respect to the Greek health care, nurses are given limited opportunities to participate in decision making (Patistea, 1998). Patiraki – Kourbani argues (2003) that physicians and administrators confine the autonomy of nurses and, moreover, their need for decision – making is not recognised. As Papathanassoglou et al. indicate (2005; p. 161), "the transition to more comprehensive and patient – centred modes of care requires a giant nursing management leap, for which nursing autonomy and empowerment are absolute prerequisites". Therefore, it is necessary to explore the conditions that can foster empowered human resources in the health care industry. However, despite the importance of empowerment in the nursing occupation, there is no much empirical evidence within the Greek health care investigating the notion of empowerment. To address this dearth, this paper attempts to examine the influence of extrinsic rewards on the psychological empowerment of nurses. These extrinsic rewards are discussed below.

Hypotheses Development

Rewards are one of the core human resources management policies aiming at the motivation of employees. Rewards can mainly be separated into two categories: intrinsic and extrinsic. Extrinsic rewards are resulted from the actions of others, such as supervisors, and are controlled by managers; whereas intrinsic are less tangible and emanate from the person or job itself (Beardwell & Holden, 1994). The present study examines the effect of four extrinsic rewards on nurses' psychological empowerment. One of the most crucial relationships developed in the workplace is between supervisor and employees. From Human Relations School era, there was an emphasis on this type of relationship. Positive relationships with their supervisors may lead employees to have positive attitude towards their organisation. Especially, in the tertiary sector, it is claimed that supporting relationships with supervisors and managers can help subordinates reciprocate towards customers (Peccei & Rosenthal, 2001)**.** Regarding psychological empowerment, there are several studies exploring the link between supportive and good relationships with supervisor and psychological empowerment (Sparrowe, 1994; Liden et al, 2000; Peccei & Rosenthal, 2001, Laschinger et al., 2007).

H1: Good relationships with supervisor are positively associated with psychological empowerment.

There is another form of relationship that is of utmost importance as well, namely, the relationship among co – workers. Relationships among co – workers is an central organisational aspect which may influence employees' motivation. Corsun and Enz argued (1999) that peers who help one another may experience psychological empowerment. Moreover, as Quinn and Spreitzer, (1997) illustrated, if employees have strong and supportive relationships, this will increase their sense of psychological empowerment. In the Greek context, Dimitriades and Maroudas (2007) offer empirical evidence regarding the impact of qualitative relationships with co-workers on employees' psychological empowerment.

H2: Good relationships among co-workers are positively associated with psychological empowerment.

Job security has been of growing research interest due to the changes that business environment has undergone. Keen competition which leads organizations to re – construct and be leaner, merges as well as the use of flexible employment conditions are some of the most important changes which enforce employees' experience of job insecurity. Greenhalgh and Rosenblatt (1984) define job insecurity as the "perceived powerlessness to maintain desired community in a threatened job situation". Under these circumstances, job security is argued to be one of the most critical factors that influence employees' motivation (Wiley, 1997; Gould-Williams & Davies, 2005) and other organizational attitudes such as organizational commitment and job satisfaction (Ashford et al., 1989; Borg & Elizur, 1992). Lack of job security can cause employees psychological reactions such as low self –esteem and self – confidence (Wiley, 1997). Additionally, employees may not take responsibilities and initiatives when they feel that, to some extent, they are insecure regarding their job. Yet, despite its salient role in the modern flexible and insecure business environment, there are not many empirical studies examining this link (Bordin et al., 2007).

H3: Job security is positively associated with psychological empowerment.

Financial rewards are concerned with the payment an employee receives by offering labour. They are regarded as very essential rewards that can be offered from the management and with significant effect on employees' working behaviour. In fact,

for many years financial rewards were characterized as the main rewards in the workplace. In order for these rewards to be effective, few conditions must exist. There should be a connection between pay and performance and additionally this link should be made clear to the employee (Kufidou, 2001). The lack of payment methods – systems leads to the decrease of self –efficacy (Conger & Kanungo, 1988). Moreover, Bowen & Lower (1992) stated that payments based on performance contribute to empowerment. Organisations interested in empowering their employees and creating committed workforce should develop a payment system which will reward performance and not the position. In the context of psychological empowerment, financial rewards were one of the first antecedents empirically studied. Authors (Spreitzer, 1995; Melhem, 2004) showed that there is a connection between these two variables, though there is a dearth in the existing empirical studies (Melhem, 2004).

H4: Financial rewards based on performance are positively associated with psychological empowerment.

Methodology

Data Sample

The research was conducted on public and private hospitals in Greece. A structured questionnaire was distributed to 700 respondents and a total of 395 (258 from public and 137 from private hospitals) were returned, rendering the total response rate 56.4% per cent. The sample for the analysis reported here consisted of nurses. Of the 395 nurses participated in the study, 71.9% were female, and 28.1% were male. With respect to age. 37.2% ranged from 21 to 30 years old, 33.2% from 31 to 40 years old, and 29.6% were more than 41 years old. The majority (56.5%) of the respondents held a degree from Technological Education Institute (T.E.I.). Regarding family status, 158 of the respondents were not married and 237 were married. Moreover, a large number of the respondents (77.2%) of the sample were working on lifelong employment. Nearly 22.5% of the nurses have worked for less than 3 years, 51.1% less than 10 years and 72.2% less than 20 years. Concerning tenure, 15.7% of the nurses have worked in the present hospital less than 1 year, 42% less than 5 years and 63.5% less than 10 years.

Measures

Psychological empowerment was measured using Spreitzer's (1995) twelve item empowerment scale. These measures comprises four three – item subscales for each of the dimensions of empowerment. Relationships with supervisor were assessed using the items taken from Liden and Maslyn (1998) which address the affective aspect of relationships between supervisor and employees. Six items concerning relationships with co - workers were from Abbey et al (1985). Job security was performed using the instruments from Oldham et al. (1986). This comprises ten items, referring to how secure employees feel in their workplace. Three items were constructed in order to measure financial rewards. Participants will be asked if their payments depend on their performance. In this study, responses were recorded on seven-point Likert type scale (1= Strongly Disagree, 7= Strongly Agree).

Results

Principal component analysis with varimax rotation was performed in order to investigate the multidimensional nature of the empowerment construct. All items loaded satisfactorily, except for two of job security which excluded. The Cronbach alpha reliabilities for the scales used in this study are as follows: a) Psychological

Empowerment (a = 0.849), Meaning (a = 0.905), Competence (a = 0.721), Self – determination (a = 0.882), Impact (a = 0.898), Relationships with supervisor (a = 0.920), Relationships with co-workers (a = 0.917), Job security (a = 0.872) Financial rewards (a = 0.935). The analysis includes multiple regressions to test the research hypotheses. The results of these regression analyses are presented in Table I.

Table I.

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	5.079	0.040		126.223	0,000
Relationships with supervisor	0.294	0.040	0.326	7.290	0,000
Financial rewards	0.212	0.040	0.235	5.255	0,000
Job security	0.167	0.040	0.186	4.156	0,000
Relationships with co-workers	0.144	0.040	0.160	3.578	0,000

Note: Dependent Variable: Empowerment. R^2= 0.221, adjusted R^2= 0.213, F= 27.709, p< 0.01

R^2 for the four variables is 0.221, which means that these four variables explain about 22 percent of the variance in psychological empowerment. The results of the regression analysis reveal that all four extrinsic rewards examined here influence overall psychological empowerment. Relationships with supervisor had the strongest effect of all the extrinsic rewards. More specifically, relationships with supervisor show a significant effect on psychological empowerment ($\beta = 0.326$, $p < 0.01$). Significant effects were found for relationships with co –workers ($\beta = 0.160$, $p < 0.01$). The beta coefficient for job security was significant ($\beta = 0.186$, $p < 0.01$) indicating a direct and positive association between psychological empowerment and job security. Financial rewards also significantly correlated with psychological empowerment ($\beta = 0.235$, $p < 0.01$).

Discussion

The concept of empowerment is of utmost importance, particularly in the tertiary sector due to the latter's unique characteristics. There is a number of studies in the relevant literature exploring the antecedents of psychological empowerment. Yet, there is a dearth regarding the systematic research of a bundle of extrinsic rewards on the specific construct. This study contributes to this gap exploring four extrinsic rewards, such as relationships with supervisor, relationships with co –workers, job

security and financial rewards. The results indicate that extrinsic rewards can enforce employees' experiences of empowerment. More specifically, relationships with supervisor and co - workers show a significant correlation with overall psychological empowerment. These results support the studies that emphasize the importance of interpersonal relationships in the workplace as critical factors creating an empowered workforce (Corsun & Enz, 1999; Dimitriades & Maroudas, 2007; Laschinger et al., 2007; Liden et al, 2000; Peccei & Rosenthal, 2001; Quinn & Spreitzer, 1997; Sparrowe, 1994). As a result, it is necessary for managers to cultivate a friendly and co-operative workplace with mutual respect and open communication. The significant role of job security in the contemporary flexible business environment is illustrated in the present study. As the results indicate, job security is strongly associated with overall psychological empowerment. This means that when employees feel secure in their job, they experience psychological empowerment at a high level. This result is congruent with the work of Bordin (2007) also conducted in a non – Western setting (Bordin, 2007). Another important finding is that financial rewards have a significant positive association with overall psychological empowerment. Despite the fact that there is no much research on the link between this kind of extrinsic rewards and psychological empowerment (Spreitzer, 1995), the current study shows that financial rewards can have a strong effect on this concept. Overall, the present empirical study provides useful insights regarding the psychological empowerment literature by illuminating a range of extrinsic rewards that can create empowered human resources in health care sector.

This study, however, has some limitations. The data were obtained from a specific sample (nurses) and a specific industry (health care). Therefore, its findings may not be generalisable to other employees or other industries. Another issue concerns the cross – sectional analysis of the data which cannot directly assess causality. Future research should address the generalisability of our results and adopt a longitudinal design. Furthermore, it can include other rewards both intrinsic and extrinsic that may influence psychological empowerment such as opportunity for training and development, recognition and skill variety. Finally, replication of the present results both within Greece and other countries also needs further research.

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COMPLEXITY IN RETAIL ORGANISATIONS: AN EMPIRICALLY INFORMED DISCUSSION WITH PARTICULAR REFERENCE TO RETAIL LOCATION STRATEGY

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Complexity in retail organisations: an empirically informed discussion with particular reference to retail location strategy

Abstract

This paper presents an innovative approach to the exploration and explanation of retail location strategy formulation based on the premises of complexity theory. We employed a chaos-theoretic approach in order to encapsulate the complex environmental context of retail organisations and discussed the findings of our research in terms and language of chaos literature. We argue that managers understand complexity in an individual way, and therefore they are dealing with complexity based on their own unique understanding of it. We also argue that there are complexity absorbing and complexity adapting retail organisations that follow different approaches to their retail location strategy formulation.

Keywords: Retail location, complexity theory, chaos theory, case study, Greece

Introduction

The formulation of retail location strategy is often supported by sophisticated computer assisted techniques that integrate large quantities of marketing and geographical data. Older approaches based on gut-feeling and simple checklists or analogues have been complemented by statistical models and the application of geographical information systems (GIS) where these are available (Clarke, 1998). However, for reasons of finance, infrastructure or data availability, sophisticated normative techniques have limits because they either cannot be afforded by all retailers (Pioch and Byrom, 2004), and / or there are retailers that operate in places where the raw data for such approaches are simply not available. Moreover, retail location strategy, as part of overall corporate strategy, is influenced by the rapid changes that occur in the environment, and it is debatable whether the linear models that are used in retail location planning are compatible with the non-linear and complex environments in which retail organisations really operate around the world. The exploratory research reported in this paper therefore looks at how retail location strategy is developed in complex environments by retail companies absorbing or adapting to the complexity around them. It is based on case studies of companies in Greece, where the emergence of a modern, corporate retail system in the last twenty years has been very rapid and destructive of the traditional system that preceded it (Bennison, 2003), creating a particularly turbulent environment for both indigenous and international retailers.

Aim and objectives

The aim of the paper is to identify the differences between *complexity absorbing* and *complexity adapting* retail companies, and examine the relationship to the formulation of their retail location strategies.

The objectives of the paper are:

1. To understand how complexity is perceived by retail managers.
2. To examine the differences in strategic location decision-making between complexity absorbing and complexity adapting companies.

Basic theoretical underpinnings

Complexity and organisations

Brown and Eisenhardt (1997) described complex organisations as systems that exhibit complex, adaptive, and emergent behaviours because they are made up of multiple interacting agents. Simon (1957) suggested that there is a limit to the complexity that individuals can handle over a given period of time, which implies that complexity is time dependent. Eisenhardt and Brown (1998) stressed that this time involves not only the time that is needed by individuals to cope with complexity but that it is also related to the timing of involvement in a complex environment. Organisations that fail to change ultimately die, suffering the penalty for not revising their priorities in a timely manner (Boisot 2000).

The study of organisations in the context of the concept of complexity has its roots in the natural sciences. Seen from this perspective, organisations come to dynamic equilibrium with their environments through a ceaseless process of adaptation and change (Morel & Ramanujam 1999). Cilliers (2000, p.24) offers a detailed description of complex systems. The main features are:

1. Complex systems consist of a large number of elements that in themselves can be simple. These elements can be of diverse types - e.g. people, coalitions, organisations, processes etc (Morel & Ramanujam 1999).
2. The elements interact dynamically and their interaction is non-linear.
3. There are feedback loops.
4. Complex systems are open systems, and operate in non-equilibrium conditions.

5. Complex systems have organic properties like memory and history. The behaviour of a complex system is not determined by its elements but by the nature of the interaction among the elements. The interaction of elements produces emergent patterns of behaviour (Morel & Ramanujam 1999). Since the interactions are emerging and dynamic, predictions about the system cannot be made by just inspecting their components.
6. Complex systems are adaptive: they can organise their structure without the intervention of an external actor.

The organisational response to complexity involves either an absorbing behaviour or a adaptine behaviour (Ashmos *et al.* 2000). The view of organisations as complex adaptive systems suggests that organisations gather information about their surroundings, themselves and their own behaviour, and then use this information for adapting to and co-evolving with their environments (Kauffman 1995). When organisations choose managerial responses to complexity that are consistent with the characteristics of complex adaptive systems, the variety and complexity of the environment is absorbed into the organisation (Ashmos *et al.* 2000). In contrast to *complexity absorption*, some organisations are characterised by *complexity reduction*. That is, the organisation tries to simplify and reduce the amount of data and the number of choices available to its members (Ashmos *et al.* 2002). A complexity reduction response is accomplished by emphasising formal role relationships and thereby minimising connections. Some scholars associate complexity reduction in the organisation with organisational stability: Stacey (1992), for example, suggested that managers tend to establish stability and succeed, or experience instability and fail.

In organisational theory complexity is treated as a structural variable that characterises both organisations and environments (Anderson 1999). Complexity as a concept is perceived in different ways by academics and practitioners (Cilliers 2000) and raises implications about chaotic situations, even though scholars see signs of chaos everywhere (Levy 1994).

Chaos theory and strategy development

In order to understand the relevance of chaos theory to strategy we need to see organisations as complex and dynamic systems (Levy, 1994). Organisations interact with each other, but also interact with the other parts of their environments, such as consumers, suppliers, labour, the political authorities, banks and other financial institutions. The interconnection of these parts creates a complex environment, defined by the number of actors and their interconnections. Bechtold (1997) suggested that a chaos theory approach to strategy development requires a dynamic view of the process. Strategy is developed with respect to the *scale* that the environmental context is viewed by the participants in the decision-making process. Strategy development as a vital activity of organisations is planned and implemented in a different way by *complexity adapting* and *complexity absorbing* organisations in terms of the flexibility and the length of their strategic plan, their understanding of environmental stability, their resistance to change, and their development of mechanisms that support them at times of uncertainty. Strategy is not developed as a long term plan but rather emerges spontaneously from chaos through a process of adaptation, real-time learning and political negotiations (Stacey 1993). There is, therefore, as Stacey (1993) noted, a distinction between companies that have adopted or try to adopt a chaos-theory approach to strategy development, and those that follow the normative view of strategy development.

Retail location strategy

Successful retail location strategies involve not only an understanding of the contemporary marketing environment but also the anticipation of possible changes in competitors and demographics (Ghosh & Craig 1983). The emergence of an international competitive environment for retailers and the subsequent complexity that has occurred through it has led retail organisations to invest in and develop routines or tools that allow them to process data from multiple sources, replacing or complementing the more traditional approaches. For example, instinct and traditional rules of thumb used for the selection of a retail property have been gradually supplemented by mathematical and statistical tools (Hernandez and Bennison, 2000). Even small independent retailers have been noted issuing loyalty cards, and using the

data they collect from them to plan their locational expansion (Wood & Browne 2007). Considering that retail location decisions are of high importance for the organisation because they engage capital for the long term, and the decision-making process involves a number of stakeholders (Hernandez *et al.* 1998), it is to be anticipated that numerous interactions will take place between the actors of the system. This is a sign of the complex environment within which retail organisations operate.

Retail location strategy at the strategic level is embedded within the wider context of the marketing and corporate strategy of the retail organisation (Hernandez *et al.* 1998). It is related to the overall scope of the organisation and reflects the overall vision and objectives of the organisation. However, at a time of rapid change it could be argued that company retail location strategy falls into a context of complexity, and the traditional normative tools that are used to support retail location decisions are inadequate because they are driven by historical data that were collected and analysed in different environmental contexts. Therefore organisations that operate in complex environments may look for alternative ways to support their strategic retail location decisions, and draw on the skills and knowledge that come from within the organisation. In combination with the normative tools that are used, this integration can provide a more dynamic process for collecting and assessing data, and exploiting the emerging opportunities in favour of the company. This way of operating may be the foundation for developing and sustaining a non-replicable competitive advantage over other organisations in the sector, as the advantage derives, in part at least,from the internal attributes of the company (Somers, 2004).

The case-study that follows looks at two companies in Greece that make their strategic retail location decisions in distinctively different ways. The first one follows the normative patterns of decision-making and it relies on the belief that the processes and the tools that are used by the top and middle managers are good enough to support the strategy development process. The second one follows a pattern that acknowledges the complexity in the environment, and uses a dynamic alignment of the employees and the managers in order to keep in touch with the environment, and

therefore understand and deal with the emerging opportunities and threats in a dynamic way.

Methodology

A comparative case-study was employed in order to explore the treatment of complexity by top and middle managers among retail organisations with particular reference to the selection of locations for new stores. A theoretical sample of two retail organisations was selected. The selection was based on discriminating between complexity absorbing and complexity adapting organisations. These companies are part of a larger research project[1] and had been identified and researched as part of that. The first one deals with complex situations ignoring them and continuing the implementation of their strategy, and the second one deals with complexity dynamically by adapting to the complex environment and adjusting its strategy in order to fit with it.

The selection of the case-study method has two key advantages: first, by conducting case-study research it is possible to examine contemporary events in context; and, it is possible to use the multiple sources of data and information that were available to the authors (Quinn *et al.* 2007). Stake's (1995) approach to a case study was followed, involving a series of steps including posing research questions, gathering data, data analysis and interpretation.

For the purposes of this study eight interviews took place, four at each of the companies (referred to as Company A and B) - see Table 1, using a semi-structured questionnaire as the basis for discussion. Company A also gave access to various documents, such as consumer data, real estate agents quotes, and internal memos. Tape-recorded interviews were transcribed and finally all interviews were coded using techniques that focused on the identification of common themes. All of the data collected for this study is in Greek, and it was translated in English by one of the authors in order to achieve the best attribution of the Greek data (Temple & Young

[1] The PhD research of one of the authors.

2004). After writing the case-study report companies were sent summary copies of the findings for review. The final case report was then developed.

Company A	Interviewee 1	Marketing director
	Interviewee 2	Head of accounting division
	Interviewee 3	Head of business development unit
	Interviewee 4	Area manager
Company B	Interviewee 1	Owner – CEO
	Interviewee 2	Marketing director
	Interviewee 3	Head of accounting and finance division
	Interviewee 4	Store development manager

Table 1: Job description of the interviewees

The case studies

Introduction to the case context

Company A and Company B are two of the major electrical retailers in Greece. The total sales of the sector amounted to £1.3bn in 2006, having registered a growth of 12% on the previous year (ICAP, 2007). The leader of the sector is *Kotsovolos* (owned by DSGi) with a market share of about 24%. Company A has a market share of about 10% (Total Sales 2006: £126M/Gross Profits: £7.3M), and Company B a share of 4% (Total Sales 2006: £34M/Gross Profits: £395K). The market is highly fragmented because local traditional independent retailers still have a leading position in consumers' choice: for example, *Makrakis* is the local market leader in Crete, where it competes against all the other national retailers (ICAP, 2007).

The study is focused on the operations of the companies in the Greater Thessaloniki area, the second largest urban area in Greece (2001 population – c763,000). Company A has four out of its fifty one stores located there, which account for 13% of its total retail sales. Company B has five stores located in the same area, out of a

nine store network developed solely in Northern Greece. These stores account for 65% of the total retail sales of the company, and it is the local market leader with a market share of about 30%. Company A is third by sales with a market share of about 18%.

Both companies have a store in the centre of Thessaloniki, and their others are located around the city in either planned or unplanned shopping centres. Both companies have been exploring the possibility of opening another new store in Thessaloniki. The interviews focused on the understanding of this process, taking into consideration managers' perceptions of complexity.

Understanding complexity

Complexity science approaches matters holistically and views the system and its agent as an integrated entity (Marion & Uhl-Bien 2001). Therefore, before discussing anything else we should see how these organisations perceive their complex environment. A basic distinction is found in that the interviewees of Company A do not see their internal environment as part of the bigger picture of complexity. For example, Interviewee 2 of Company A[2] (A2) said:

> *"Our competitors, and our consumers, and all the potential customers, even our suppliers and the government make the system complex.... [but] we have the means to deal with them...."*

While A4 stated that:

> *"There are so many people working for the company or not and authorities involved in my work that make it unbearably complex. I have to keep in touch with people here, in Athens, in Thessaloniki,*

[2] A1 = Company A/ Interviewee 1; B1 = Company B/ Interviewee 1and so on.

in Crete, abroad, sometimes I e-mail people that I haven't even seen in my life."

Company A is a much larger company than company B, and therefore has relationships with more individuals and organisations than B. This offers a potentially much wider range of data and information to the company to support the strategy development process. The plethora of data and information sources are a potential source of strategic opportunities for Company A that although it has a management information system in place, it is not yet exploited. A1 said:

> *"... I don't have enough time to deal with all this data I receive. There are hidden treasures in here* [points to a pile of papers]*, but it is practically impossible to read each and every one of these memos and reports. It's a real pity that so many opportunities are wasted and so many threats that could have been foreseen were unobserved."*

Company B on the other hand is structured around the owner-CEO and the marketing manager, so the complexity of the environment concerns only them. B2 mentioned:

> "*Yorgos* [first name of the company owner] *and I deal with everyone. We want it to be this way. We hear things and we are always listening to our employees, our customers, and our suppliers but we figure out the bigger picture and decide where we can and where we want to get involved."*

A common element for both Company A and Company B is the appreciation of time as a key component of complexity. A1 and A2 agreed that the time they can spend in reviewing data and information is related to the level of complexity they perceive at the present time and also their ability to reduce complexity in the future. A1 said:

> "*I think that the data and information I have access to are enough to predict the future. But it would take ages to review all these*

information and by the time I will finish something new would have emerged. "

A2 added:

"I usually believe that if I had a piece of information just a little earlier than the time it came to my hands I could do things different. I would have a clearer view of the environment and I could plan a better future for the company."

B1 observed:

"You know how it is here... It's just me and [B2]. And on the other side there are employees, suppliers, customers, consultants that work for us, the banks, the government, all these people... I cannot stay in touch with all of them all the time. Too many people, too little time..."

Dealing with a strategic location decision

Both companies use similar types of store formats, mainly two-storey units of about 1,000sqm, located in the city centre. Company B operates one two-storey store in a planned shopping centre. The interviews revealed two differences in the way that the decision-makers of the two companies understood and dealt with a strategic location decision. The first involved the motivation to make a strategic location decision.
In Company A the approach was to follow the previously articulated strategy:

"We are planning our expansion. We follow a strategic plan and build new stores based on this plan. We follow our competitors, we want to be where our competitors are..". (A1)

While A2 added:

> *"The timing is not good right now, but we are going to follow our plan. It is more expensive to borrow money, and it is going to cost us more than we calculated but it is important for us to show that we are strong."*

Underlining the dedicated pursuit of the strategy by the company leadership, a lower ranking manager (A4) commented:

> *"Sometimes I send memos to the top managers but I think they do not pay any attention to them. I do not think that it is any use to follow our competitors everywhere. It is a bit arrogant to believe that you can have a store everywhere."*

In contrast, a more intuitive approach was used in Company B1:

> *"Sometimes we get information about promising vacant sites. We are always interested in a good vacant site. When we built our first store there were only grocery stores around it but we believed in our decision and we supported it. When you are a businessman you just know that you have to go for it..."*

And B2 added:

> *"I like to spend time with people and listen to them. I like to share ideas and when I hear something interesting I go to [B1] to discuss it. This is how we built our store in City Gate* [a planned shopping centre in east Thessalonki]. *It proved to be a bad decision because this store never became profitable but we know that this store has the potential to become profitable."*

While B4 showed his appreciation of this process:

> *"I cannot say that I agree with all the decisions that are made but anyway I can have my own word. And I am happy that someone is listening and replies back to me."*

Two types of retail location strategy formulation were identified from the interviews. The first company (A) has a firmly structured process of retail location development, following a predetermined plan, where the plan comes first, the threats and opportunities that emerge in the environment are absorbed, and the plan is reviewed when it proves to be inadequate. The staff of Company A show a limited understanding of the environmental context as a result of choices being made by the top management of the company. The strategic plan and the formal normative tools that Company A uses are framing the actions of the members of the organisation and drive the way that the organisation deals with the environment.

Company B is more flexible and open to external and internal stimulation. The organisation adjusts its strategy according to the feedback that it receives from the environment and adapts to emerging circumstances. Top management encourages internal communication and feedback from employees, and aims to build on that.

The second difference between the companies is related to the way that they organise themselves in order to deal with emerging circumstances (opportunities or threats). In Company A, A1 said:

> *"When something urgent comes up it takes us some time to appreciate it. We prefer to plan things and we believe that we can predict things but nonetheless bad things or good things appear in our way ... and then we review the past and try to adjust to this urgent situation."*

While A3 noted:

"Sometimes we see things coming and adjust before they become serious. The company is fairly bureaucratic and it is not easy to make rapid changes but anyway we can skip the hierarchy and at least save some time this way."

And A4 observed:

"I do not believe that I understand all the big changes that are happening. One day I might receive a memo from a top manager asking for an estimate of the cost of closing a store, and the next day they ask me to start looking for vacant sites. I understand that the plans change from time to time, but I cannot understand the direction of the change."

The interviewees of Company B painted a different picture of the way their organisation dealt with an urgent situation. B1 claimed that:

"We are trying to use our small-medium size in our favour. Our size allows me to stay in touch with everybody in the organisation. From the cleaning ladies to the top managers and from our customers to our suppliers... My door is always open for my people and when something comes up they know that I will be there for them... I try to delegate responsibilities to everybody, when someone has an interesting idea I put him in charge of the presentation of the idea and we keep him updated about the progress of the way that we will deal with his idea."

B2 also cited an example:

"A couple of weeks ago a sale assistant send me a video message that was showing a vacant store near the train station. Everybody in this organisation knows that we are

interested in every opportunity that emerges in this area. When I met the property owner this sales assistant was there with me. She is part of this decision now. She lives right next to the train station, she knows the people there; she is not a professional but she has her unique insight about this."

Both companies showed their own distinct approach to the management of emerging circumstances. In Company A structured behaviour, related to rules and the heuristics of the top management, was evident. With respect to retail location strategy Company A is following strict plans that the managers of the company believe are so robust that they can withstand the changes in the environment; or at least when changes happen, they have alternative plans to implement.

In contrast, Company B appeared to be more adaptive to the changes that are happening in the environment because it has nurtured a self-organisation culture that encourage the employees and the managers to format informal workgroups that deal with emerging issues directly when they happen. The company is open to suggestions from everybody who works there and it benefits from employees' willingness to participate in the development of the company. With respect to its location strategy, Company B shows adaptive behaviour, open to feedback from the environment and open to the opportunities that emerge.

Discussion

In this paper, we have explored the phenomenon of retail location strategy formulation under the lens of complexity and chaos theory. We first laid our sight on the understanding of complexity by the managers of the two companies and found evidence that complexity is understood by the individuals in different ways. Wang and Chan (1995) suggested that the perception of a complex environment relies on manager's ability to process information which is complicated, novel or/and dynamic. In our cases we found evidence that the managers of Company A had adopted a simplified heuristic about the complex environment which corresponds to a general understanding of the term business environment whilst the managers of Company B

developed a more structured and synthesised understanding of the business environment that point the difference of the internal and external environment. Boyd and Fulk (1996) argued that it is common for the managers to reduce the time they devote to the environmental scanning when the level of the perceived complexity is high. The findings of our research are supporting this argument because the managers from Company A, which is a complexity absorber, face complexity as a property of the environment that is unreachable by them while managers from Company B, which is a complexity adapter, perceive complexity as a property of the environment that is understandable and worths the spending of time of the top managers. Therefore, it can be assumed that understanding complexity is time dependent but the decision to spend time on understanding complexity is prejudiced by the initial willingness to deal with complexity.

We also found evidence that there are different ways that companies deal with complexity; in this research project one of companies choose to absorb complexity and continue its operations based on a single plan without any variations, which is consistent with the findings of Ashmos *et al.* (2000). On the other hand, we found that the second one has developed an organisational structure that supports the adaption of the company to the emergent circumstances of the environment in a dynamic way. Stacey (1995) suggested that the organisations that adapt to the environment have the ability to continue their change even when opportunities from the external environment does not exist (*negative feedback*). However, the findings of the research indicate that it is possible that a company may look to engage in a complex environment and use its assets to make advantage of it. McKelvey (1999) suggested that companies might look to achieve competitive advantage against their competitors by introducing multiple innovations: in terms of location strategy this could be new positioning or locational strategies (Hernandez & Bennison 2000). By expanding into a new market or setting up in a new location, the retailer aims to cause turbulence in the environment that will be to its own benefit by gaining a share in a previously unexploited market.

Using the language of chaos theory, a *complexity absorbing* retail organisation, even though it acknowledges the non-linearity of cause-effect relations in the environment,

develops techniques that reduce the uncertainty caused by the complexity, and prepares itself for alternative complex situations. Bechtold (1997) suggested that the abstraction of complexity is achieved by developing alternative scenarios and by preparing the organisation to implement them in response to whatever events occur. On the other hand, a *complexity adaptive* organisation understands non-linearity and seeks for hidden opportunities and threats in seemingly insignificant changes. Complexity absorbing retail organisations separate changes and deal with them as independent circumstances while complexity adaptive retail organisations seek to identify continuums in the change process. The idea of the waves of retail decentralisation (Schiller, 1986; Fernie, 1995), for example, reflects the openness of some retail organisations to changes in the retailing environment. No matter what the reasons were, the exploitation of under-developed low-cost locations gave an advantage to the companies that spearheaded the move out of traditional centres.

When the need for a decision arises (a *bifurcation point* in the language of chaos theory), complexity absorbing retail organisations do not alter their strategy because they take it as given that such situations arise, and such eventualities are planned for. In contrast, complexity adaptive retail organisations understand bifurcation points as an opportunity to evolve. We recognised in our research that when a complexity absorbing and a complexity adaptive retail organisation were at the same bifurcation point, the first one saw it as a planned moment in time while the other one perceived it as an emergent opportunity. They both acknowledged that action was required (development of a new store in an under-developed location), and both indicated that they were going to act similarly but the justification of their action was based on different arguments.

A structural difference between the complexity absorbing and the complexity adaptive organisation was identified in the norms and rules that guided their activities (in the language of chaos theory, these may be seen as the *strange attractors*, the core properties of a system to which it always tends to return regardless of change). The complexity absorbing organisation had a formal nucleus of rules and regulations that were brought forward when a crisis appeared. This is consistent with McMillan's (2004) findings that suggested that strange attractors are a set of routines that define

the life of employees in the organisation. In contrast, the complexity adaptive organisation had human actors that acted as the strange attractor of the organisation. (Parker & Stacey 1994) suggested that when the organisation meets a bifurcation point, the strange attractor is the facilitator of the transition from the previous to the future state. The existence of a person that can make decisions and guide the change process appeared to be an essential part of the organisation during the adaptation.

The complexity absorbing organisation employees had a narrower view of the environmental context than the ones in the complexity adaptive organisation. This is the outcome of a strategic decision for the organisations because it is related to the level of the involvement of the employees in the strategy formation procedure. With respect to location strategy, since it is influenced by both consumer and institutional factors (Brown 1991), having an extended perspective of the environment brings all levels of employees closer, and sharing information is easier because everybody is aware of the strategic requirements of the organisation. When more people are involved in scanning the environment for strategic opportunities or threats, it is likely that these opportunities and threats will be identified and exploited faster. This means that an organisation that encourages the formation of workgroups (formal or informal) for the exploitation of an emerging opportunity could expect a timely response to a crisis, which in turn could lead to the gain of competitive advantage. In terms of retail location strategy, it could be assumed that a retail organisation that has the ability to organise itself for certain purposes, for example allow the formation of a business unit that could survey for a site, can expect that it will become aware and exploit the opportunity of a contested site before another one that it has not, because this kind of organisation would encourage employees to concentrate around a human strange attractor that could organise and manage a self-organised unit.

Limitations and implications for future research

We should stress that our research by no means suggests that complexity absorbing or complexity adaptive retail organisations are better, more profitable or more efficient than each other because this was not the aim of this research. On the contrary, we saw

that two retail organisations operate in very different ways and still manage to be profitable. In terms of retail location strategy specifically, the findings indicate that a complexity adaptive approach could lead to the development and implementation of an innovative strategy in terms of site selection.

An issue that emerged and needs further research is whether organisations have the power to cause crises in order to benefit from the complex environment that will emerge. It was implied by the complexity adaptive organisation that controlling the environment is much better than adapting to it. However it remains unclear how an organisation can control the environment. Therefore this research would benefit from a comparative study of a sector leader with smaller competitors and a study of the way that the sector leader faces complex environments. Finally, it should be re-iterated that this is an exploratory study that was undertaken in a specific sector in Greece so it needs to be replicated in other geographical areas and sectors before it can be generalised.

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