Understanding Complexity Leadership Behaviour In SMEs: Lessons From A Turbulent Business Environment

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Abstract

This paper seeks to analyze complexity leadership behavior in Small and Medium Enterprises (SMEs) that operate in a turbulent business environment such as this one in South-Eastern Europe. Exploratory research in four case-studies has been conducted. The investigation was based on the analysis of both primary and secondary data. The former gathered through in-depth face-to-face interviews with managers while the latter refers to documentation analysis regarding regulations and procedures. Findings indicate that loose organic structures, job rotations, intra organizational relationships, and allowance of self-organization are the most prevalent management behaviors that can enhance business effectiveness. In addition, the lack of role clarity, internal mess, ambiguity, and lack of strategic vision have negative consequences on organizational performance. The contribution of this study lies in the fact that expands our knowledge on complexity view of organizations by exploring managerial attitude in SMEs within a complex business environment as well as by identifying appropriate complex leadership styles nurturing organizational effectiveness. In this respect it attempts to provide a systematic view of the impact of different Complexity Leadership behavior exhibited on the organizational performance.

Introduction

In the last decade there is a growing group of management literature suggesting a quite different view of leadership and management behavior within organizations. This literature is based on arguments adopted from positive sciences and they are well-known as chaos and complexity theories (Anderson, 1999; Zhichang, 2007; Kaufmann, 1993; Stacey, 2004; Tsoukas & Hatch, 2001). Chaos theory implies that systems continuously evolve over time as they are sensitive to initial conditions and whole system engages in a constant yet unpredictable pattern of fluctuations (Cilliers, 2000). Similarly, the complexity theory considers organizations as complex adaptive systems comprised of numerous autonomous agents which engage in a non-linear, unpredictable and constantly emergent behavior. They have the innate capability to self-organize since their relationships are guided by feedback loops (Kaufmann, 1993; Stacey, 2004). These two approaches influenced a lot of empirical studies developed to identify new explanations of organizational phenomena. However, the greatest amount of this literature emphasized on the application of complexity principles in large organizations mainly operating in more developed business environments. The main argument is that large organizations are even more complex and therefore, they offer a useful ground of exploration (Anderson, 1999; Zhichang, 2007; Kaufmann, 1993; Stacey, 2004; Tsoukas & Hatch, 2001). Thus, less attention has been given to the investigation of Small and Medium Enterprises (SMEs) as complex systems and especially those operating in more turbulent business environments.

In physics, turbulence refers to the random fluctuation of fluids in a nonlinear and unsystematic fashion as molecules and atoms, provided with an external energy, engage in a constant chaotic flux. Consequently, unpredictable and unstable patterns are created which amount to the instability of the whole system they comprise. Metaphorically in the business world, ongoing turbulence of the socio-economic, cultural and political factors corresponds to the environment within which organizations operate. Changing customer needs, lack of control, disintegration and confusion, competitors’ emergence and complex decisions above all, invoice turbulence of the chaotic business setting, imposing considerable constraint on organizations’ performance and their sustainable value delivery. In order to sustain their survival along this instability, organizations that operate in such environments are keen to adopt more sophisticated and structured management practices (Psychogios & Szamosi, 2007; Koufopoulos & Chryssochoidis, 2000). Nevertheless, organizations are still unable to adapt to the turbulence and complexity of the environment within they operate, so that value delivery remains secured. A turbulent business environment and the complexity it imposes on decision making, implies that conventional management approaches lack the capacity to provide the appropriate organizational flexibility, cohesiveness and adaptability.

In this respect, it is significant to explore in more details the complex nature of leadership behavior and its impact on organizational performance in turbulent environments. As pointed by Ashmos et al., (2002), internally complex organizations considerably do better than the less complex ones. The main research question that arises then is whether complexity leadership behaviors in SMEs are closely related to more or less successful organizational performance. In other words, it is important to investigate manager’s role in allowing their organizations to operate on the edge of chaos. This means that there need to be neither too strict nor to loose control over human behavior so they are capable to adjust and respond to the changing...
environment (Kaufmann, 1993). Therefore, this paper seeks to explore the patterns of leadership behavior in SMEs that operate within an unstable business environment, by adopting complexity theories perspective. In particular it attempts to expand our knowledge concerning the link between successful organizational performance and complexity leadership behavior. A prime example of a turbulent business environment is this South Eastern Europe (SEE) periphery.

The present article is structured in three parts. The first part reviews the existent complexity and leadership literature in order to identify a framework of common leadership approaches and roles in dealing with emergence, unpredictability and quick adjustments to the evolving circumstances. The second part describes a detailed description of the research approach followed. The third part, critically analyses the empirical evidence that this study provides. The paper is completed by specific conclusions suggesting further issues to be considered for investigating complexity leadership behavior in SMEs.

Complexity and Leadership: Roles, Patterns and Managerial Behavior

The mainstream writers on complexity and leadership consider human organizations as living systems capable to respond and adjust to the changing circumstances (Wheatley, 1992; Stacey et al., 2000; Marion & Uhl-Bien 2001; Dotlich et al., 2008; Schneider & Sommers, 2006). This in turn implies that leaders’ past experience may not be appropriate and relevant in dealing with emerging issues and complex business context as diversified set of novel skills, capabilities and above all contradictory roles are to be demonstrated.

The theory of behavioral complexity in leadership argues that a leader should exhibit a wide range of behavioral responses, large behavioral repertoire, in order to effectively respond to the wide range of unpredictable situations (Denison et al., 1995). Simultaneously being a facilitator, negotiator, innovator, coordinator or a problem solver, a leader must often play contradictory and paradoxical roles in order to ensure that organization adjusts to the arising circumstances. Karakas, (2009) expands the “behavioral repertoire” concept by adding that effective leader is a social artist, catalyst of change, community builder or cultural innovator. Here is primarily stressed the importance of leader’s capability for strategic thinking, spirituality, passion, empathy towards others and above all holistic approach to complex decision making (Karakas, 2009). The focus should not be placed on people and work processes only, rather, the organization should be seen from a holistic perspective where different aspects of organizational turbulent environment would be considered in making fast complex decisions.

In a related vein, Dotlich et al. (2008) introduces the concept of whole leadership according to which effective complexity leaders analyze, anticipate and respond to newly emerging situations; see the world from diverse stakeholder’s perspective hence showing empathy and care and above all use the gut and intuition to make tough decisions in the uncertain environment. “Whole leaders” are enacted by explicit job rotations of employees so that their skills are assessed and most promising leader is proliferated.

Despite the ease of understanding of the mainstream literature outlining particular leadership roles, it is being criticized for a lack of comprehensive insight into shaping leadership attitude that would deliver sustainable performance in the complex environment (Lichtenstein et al., 2006). Therefore, the complexity leadership theory has been established which adopts quite complex approach and makes major leap from existing leadership theories.

Complexity Leadership Theory

The complexity leadership theory draws upon the communication and correlation among agents of a complex system and the complex interactions that arise from the need for adapting to the turbulent environment (Lichtenstein et al., 2006). It implies that leadership is considered as complex dynamic process that emerges in the relationships between individuals and does not lie within single individual – the leader. It is a product of interaction, exchange of information and inter-agent tension that occurs in the emergent context. Since identity is being formed during interaction, different individuals could emerge as leaders in different situations. Rather than simply empowering employees, complexity leadership approach encourages all employees to step out and take the lead, to own their leadership within an interaction (Lichtenstein et al., 2006; Hazy, 2006). In this sense leadership is not merely just a skill that is to be possessed or role to be played; rather it emerges through dynamic interactions (Lichtenstein et al., 2006; Hazy, 2006; Osborn et al., 2002). Consequently, complexity leadership shifts from the traditional focus on leader’s role-based nature to contextual relational interactions that occur across organizational boundaries hence the quantum leap from the traditional leadership.

Moreover, it allows for bringing innovation and self-organization on lower hierarchical levels hence making an entity much more responsive to the environment as mutual understanding among employees is amplified during interaction (Kaufmann, 1993; Stacey, 2004; Karakas, 2009; Hazy, 2006; Scott, 2004). Fostering leadership to emerge from interactions goes hand in hand with the emergent unpredictable nature of the complex world which is shaped by constant social interactions among agents.

An associated approach to the complexity leadership theory is the generative approach in leading complex organizations pioneered by Surie and Hazy, (2006). Its essence involves institutionalizing of innovation within organizations by frequently manipulating the organizational design according to which different subunits, teams and larger departments are brought together in performing various tasks, projects and long-term programs. This has also been referred as “patching” in Eisenhardt...
and Brown, (1999) which claim that flexible organizational structures drive the successful organizations in the turbulent business environment. Nevertheless, in order to overcome the over "complexification" of the organization due to the exponentially increased interactions, generative leaders should establish clear rules of communication founded on contextually understandable language that is well understood to all employees (Arranz & Arroyable, 2009). Consequently, even lower level employees could have effect in self-organization and participate in organizational innovation.

The abovementioned theoretical strands have undeniably triggered numerous practical implications for leading organizations within the turbulent business environment, which are systematically summarized in the following few paragraphs.

Primarily, a relationship oriented behavior of the leader that would enable establishment of effective cross organizational networks should be exhibited (Arranz & Arroyable, 2009) This refers to establishment of diversified cross departmental teams or aggregates compounded with people that have different background, opinion and experience since their interaction is critical for the emergence of self organization and adaptability. Extensive interaction is particularly important in the successful execution of complex R&D projects since the transfer of heterogeneous knowledge among project members facilitates establishment of mutual trust and strengthening of relationships (Arranz & Arroyable, 2009).

In addition to the establishment of formal collaborative networks, there should be nurtured informal communication that involves speculation, story telling, imagination and triggers creative thoughts among agents (Stacey, 2004). During informal communication higher potential for misunderstanding exists hence offering greater potential for innovation and unmatchable opportunity for building trust and recognition- a critical prerequisite for stability at the Edge of Chaos (Kaufmann, 1993; Stacey, 2004).

Furthermore, explicit job rotation among different departments should be propagated in order to enable employees to gain wider portfolio of skills, knowledge and experience (Simms, 2003; Marion & Uhl-Bien, 2001). In view of that, the prospective for whole leaders' proliferation shall be assessed. As explained in the metaphor approach above, leader should set the proper internal organizational context in response to the environment so that employees are empowered, allowed to thrive and to self organize (Simms, 2003).

In conclusion, nurturing extensive collaboration and interaction, intra organizational flexibility, employee empowerment and above all a holistic perspective in leading organizations is considered to be the “suitable” leadership behavior guiding responsive organizations to the complex business environment. These implications shall be cautiously considered during the execution of the research.

Critical Issues in Complexity Leadership Theory

For the most part, complexity theory application on organization is being criticized for a semantic incoherence due to an absence of link between reality and well defined model structures for its application on the organizational setting (McKelvey, 1999). This call for establishment of well defined and easy to understand model for application in fact reflects the systematic cognition of mainstream management writers which require that precisely defined scheme for application of theory stemming from natural sciences on social phenomena is developed. In a similar vein, there has been noted the absence of specific methodologies that would determine the means by which organization can be brought on the Edge of chaos (Ortegon-Monroy, 2003). Namely, complexity science offers perspectives and aspects of propitiating the context for reaching the Edge of Chaos, rather than pointing to a problem solving approach. The complexity theory on the one hand draws upon emergence, self-organization and autonomy and on the other it stresses the importance of the individual/manager to establish the proper conditions for this evolvement, thus an inconsistency within the approach itself (Stacey, 2004).

Rationale of the Study

Despite of the few misconceptions outlined above, complexity theory identifies novel horizons for managing organizations. It is true though that the complexity discipline is emerging from several natural sciences and as it is applied in management studies, it is still in its infancy. Therefore, more empirical evidence is needed, in order to start building a more comprehensive complexity driven managerial practices applied in organizations. In this respect, the present study attempts to expand our understanding of complexity leadership behavior by putting two new dimensions. The first one refers to the exploration of complexity principles in SMEs, since these organizations have been neglected from previous studies. The second dimension refers to the business environment that the SMEs operate. More turbulent and chaotic business environments create even more unpredictability and instability patterns which influence the complexity of SMEs operate underneath them.

Research Objectives and Methodology

In the line of the above argument, the overall aim of this study is to identify and explore complex leadership styles nurturing SMEs' performance in turbulent business environment. In this respect, there are four specific research objectives:
1. Identification of different complex behavior among SMEs;
2. Exploration of how complexity can improve the organizational performance within the turbulent environment;
3. Identification of the appropriate leadership behavior that nurtures complexity and complex approach to problem solving, and;
4. Identification of potential disadvantages of the complex management attitude.

The qualitative approach has been followed as most suitable in exploring the issues related to complexity management and particularly the Edge of Chaos. The issue of the Edge of Chaos implies that deeper organizational context should be studied in order to gain insights of which managerial actions bring the organization at this condition. Therefore it is critical to explore the view of the managers and business leaders in order to realize how they accomplish their day to day activities and perform their roles. This can be achieved with many face to face interviews and discussions at which individuals can respond freely and openly.

Qualitative research is employed since it allows engaging deeply into the context and retrieving greater details for the subject under consideration (Blaxter et al., 2001; Gray, 2006). Similarly, Amaratunga, (2002) argues that qualitative research is much more suitable in obtaining behavioral data. The complexity science provides means for deeper understanding of the organizational life which other conventional management approaches are missing. Since the issues of Edge of chaos and complexity are sensitive, the qualitative approach would allow obtaining contextual information which can provide deeper understanding of them.

Furthermore, qualitative research enables the researcher to identify new relationships among variables that previously have not been acknowledged (Amaratunga, 2002). In addition, bearing in mind the importance of determining the context for self-organization, it is expected that the qualitative method would allow for revealing particular relationship among patterns of managerial behavior necessary for creating the conditions for the Edge of Chaos to occur. This refers to the significance of determining new variables and attributes of leadership behavior that is closely associated with successful organizational performance in the complex environment, which is difficult to be obtained with other methodological approaches.

Research Method Design

The research plan was based on the following steps:

1. Identification and determination of organizations willing to participate in the research. It is conducted in accordance to a set of five criteria and non probability quota sampling.
2. Evaluation of their business core operations, background and industries within which they compete. Financial and non-financial data, cross industry analysis and future prospects were obtained from each company.
3. Design of semi-structured interview. Questions arose by careful investigation of complexity theory and company’s background.
4. Pilot study is conducted. Initial list of questions were asked to few managers only.
5. Interviews and data collection.
6. Content analysis of the collected data.

The case-studies are chosen according to a set of five criteria: (1) small and medium enterprises; (2) operate in SEE periphery; (3) Indicate a level of good, average and less good performance in terms of financial viability, growth and adaptability within the turbulent SEE conditions; (4) companies from different industry sectors; and (5) enact stricter regulations such as quality management systems (ISO 9001 or HACCP).

Once the criteria was set, it has been followed the method of non probability quota sampling for obtaining the data. This implies that companies have been investigated until all questions and issues are answered quite satisfactorily. As a result four SMEs have been selected. They operate in four different industries and they are placed in four different countries within SEE, namely Serbia, Greece, Bulgaria, and FYR Macedonia. Sample characteristics are summarized in Table 1.

The first is an IT company with 85 employees located in FYR Macedonia. It offers custom made software, system integration,
web hosting and other IT professional services directed mainly to organizational buyers and governmental institutions. It is certified with an ISO 9001:2000. Due to the project nature of the work, cross functional teams are constant occurrence hence creating organic organizational structure.

The second company is a real-estate agency offering sales and rent of houses, buildings and apartments to private individuals and businesses. It is located in Greece. Its 97 employees have enabled the organization to proliferate as the oldest and most prevalent real estate company in the last two decades owing to the great knowledge and insight of the local market. Due to the nature of the work requiring a lot of communication and traveling it does not follow precise organizational structure while its agent network is generally organized in teams.

The third organization is a brick factory located in Serbia. It produces different types of bricks and brick related building materials. Regional construction companies and domestic private individual are its major customers. Despite the political and economic instability that has prevailed in the region, this organization has successfully sustained on the market reaching a respectable 133 employee workforce. It has finance department looking after the finance related issues and manufacturing department responsible for actual product manufacturing.

The final case selected is a meat production manufacturer and fresh meat distributor with 120 employees located in Bulgaria. Being a HACCP certified company and operating under Good Manufacturing Practices (GMP), It has successfully established as an innovative company. It is also a very well-structured organization entailing a finance, manufacturing and R&D department; and is

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<td><strong>Basic Characteristics Of Cases.</strong></td>
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<tr>
<td>IT Company</td>
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<td>Software development, System Integration, Web Hosting, 85 employees</td>
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<tr>
<td>Cross Functional Teams and manipulation of org. design</td>
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<td>Fostering informal communication</td>
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<td>Generative leadership</td>
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characterized by placing great emphasis on continuous employee training and education.

**Data Collection**

Both primary and secondary data has been gathered in order to enhance richness of results (Lambert & Loiselle, 2008). Secondary data referred mainly to documentation regarding regulations and procedures that the chosen SMEs applied in order to reach a level of performance. Primary data are also collected through interviews. In each case eight (8) in-depth face-to-face semi-structured interviews with middle level managers were conducted. In total 32 interviews were conducted with managers in main, but different, fields within SMEs such as logistics-operations, IT, finance, marketing and human resources.

The face-to-face in-depth interviews imply that personal interaction with the respondent is being made which allows for eliciting highly contextual information. These interviews entail previously prepared open-ended questions enabling the respondent to freely express his/her thoughts. This in turn triggers interviewer to engage in extensive probing, follow-ups and make immediate cognitive conclusions (Yin, 2003; Kruger, 2003; Taylor & Bogdan, 1998). Ambiguities over specific issues could be overcome and close relationships based on mutual understanding can be made thus allowing for gaining better insight of the highly sensitive complex issues. Nevertheless, this openness and interaction with the respondent could be counterproductive since respondent might feel uncomfortable and biased in presenting his/her opinion in the presence of the interviewer (Hall & Rist, 1999).
Moreover, exploration and investigation of interviewees' stories has been enacted. Each interview started with introducing the problem matter along with an explanation of particular aspects of complexity attitude for the purpose of triggering manager's thoughts while additional indirect questions were used as well. Interviews were scheduled to last around 1½ hours and occurred in manager's offices. Inductive mode of thinking has been utilized for drawing the conclusions. For the purpose of efficient data administration and analysis, particular matrix/factsheet has been designed which combines the research objectives on the one hand and list of companies on the other.

**Findings And Analysis**

This section presents the findings obtained from the particular research study. The Table 2 (data matrix) below encapsulates the findings of each company in accordance to the research objectives investigated. Managers' responses are being analyzed and discussed vis-a-vis each research objective.

**Complex Managerial Behavior Exhibited**

The first research objective is related to the identification of different complex behavior among SMEs. Specific complexity related behaviours have been identified, associated with organizational structures, innovation, self-organisation, teams, adaptability, inter-organisational communication, etc. Primarily, a conscious manipulation of organizational design is conducted by the CEO of the IT Company in accordance to the project nature of the work as it is able to properly shape its structure and sustain the efficiency and focus of its resources on effective project deployment. In particular the CEO of the IT Company he stated that

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<th>Diverse teams/subunits usually consisting of five specialists in a specific IT area are shifted in different software development projects in response to an order placed by the customer hence surpassing the formal hierarchy specified within the ISO documentation.</th>
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This project-based, organic approach is compatible with the notion of patching. Comparably, other managers in other organizations of our sample foster a flat organic structure without vertical and horizontal differentiation.

Additionally, a frequent job rotation enriching employees' vocational skills and improving organizational flexibility was identified. This enables an employee to exhibit a non-ordinary behavior, and as such, an explicit job rotation contributes to the overall 'complexification' of the organization. The owner of the brick factory, it was stated that for example:

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<th>The engineer specialized in mixing the concrete ingredients is shifted on loading and setting-up the transport ribbon as well; so he can replace the latter employee once he is absent from work.</th>
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</table>

Since internally complex organizations are more successful in dealing with the environmental complexity as noted in Ashmoset al., (2002), job rotation as a complex managerial behavior does enable an effective handling of the turbulence and uncertainty.

At the meat factory though, clear goals are set on a period basis so employees know in advance what is to be accomplished. The owner/manager of Unitemp noted that:

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<th>There are well differentiated job positions and specialties, the latter being necessitated by HACCP as well.</th>
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High organizational formality and job differentiation increase the organizational complexity due to the existence of numerous diverse specialized skills (Damanpour, 1995). Consequently, the organization has the knowledge and resources of undertaking extensive innovation, an endeavor considered critical in dealing with unpredictability and adaptability to the environment. Alternatively, determination of well designated objectives could denote the establishment of visionary/leadership framework within which employees are encouraged to perform (Zhichang, 2007; Fontana & Ballati, 1999). The framework is such to facilitate innovation, as it is reflected into emergence of numerous innovation initiatives and new product lines coupled with frequent games and simulations stimulating innovative thinking. As the owner/manager of Unitemp noted:

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<th>Employees are encouraged to initiate innovative NPD ideas through these games.</th>
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Moreover, the research identified self-organizing patterns too. Self organization occurs on a team level. When new project arrives employees are empowered through challenge and self organization consequently emerges. In a personal interview with the owner and CEO of the IT Company it was noted that:

*This self organization is mainly reflected in informal discussions about the scope, scale and resources needed for the project completion.*

Intra organizational interaction and communication is continuously fostered on both formal and informal basis which aids the self organization process. Similarly, real estate agents self organize in autopoiteic teams due to the nature of the real estate work requiring fast response and strong network relationships. As the CEO and owner of Astoria noted:

*Agents quickly interact one with another and self-organize in teams for the purpose of fulfilling arising customer request or closing a deal, events requiring immediate reaction.*

Autopoises as noted in Kaufmann, (1993) implies that agents autonomously emerge in dissipative structure which ceases to exist once the proper respond to aroused uncertainty is being exhibited.

Furthermore, the most indicative complex behavior this research identified entails the cultivation of extensive formal and informal communication. In particular, formal cross project communication for the purpose of transferring heterogeneous

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**Table 2**

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<tr>
<th>IT Company</th>
<th>Complex Managerial Behavior Exhibited</th>
<th>Effect On Organizational Performance</th>
<th>Leadership Style Nurturing Complexity</th>
<th>Drawbacks Of Attitude Towards Complexity</th>
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<tr>
<td></td>
<td>Manipulation of organizational design; Allowance of Self organization through challenge; Fostering informal communication; Nurture of intra industry collaboration (partners, suppliers, competitors).</td>
<td>Increased capacity to make quick decisions and respond to environment; Respectable tacit knowledge base; Transfer of learning; Cohesiveness.</td>
<td>Generative Leadership (patching); Yet lack of communication rules; Effective Leadership stems from the informality and manager's accessibility.</td>
<td>Lack of role clarity; Ambiguity in customer relationships; Budget and schedule constraints on projects due to absence of formal planning.</td>
</tr>
<tr>
<td>Brick Manufacturer</td>
<td>Intensifying cross organizational relationships; Loose control over hierarchy differentiation; Explicit job rotation.</td>
<td>Adaptation to customer requests; Greater production costs.</td>
<td>Tight Interpersonal relationships based on mutual trust.</td>
<td>Mess in internal documentation; Lack of clear strategic vision; Personal Conflicts As a consequence of emergence and willingness to be the &quot;boss&quot;.</td>
</tr>
<tr>
<td>Meat Factory</td>
<td>Cross Project Communication so heterogeneous knowledge is being transferred; Playing games that stimulate innovative thinking; NPD; Well established goals (allowed to thrive within the visionary framework only – metaphor approach).</td>
<td>Innovation occurrence (numerous R&amp;D projects emerged through years, yet several failed); Lack of significant flexibility to externally changing circumstances; Well established organizational knowledge (depth, variety) and specialization in skills (Extensive org. learning); Strong Shared Values (identification with the leader).</td>
<td>Strong and well established guiding vision (set the context for self-organization).</td>
<td>Lack of environmental responses of the employees; Many failed NPD projects due to absence of having a sense to the external environment.</td>
</tr>
<tr>
<td>Real Estate Agency</td>
<td>Probing and experimenting with different customer segments (small changes); Diversified teams; autopoietic/emergent structures; Employee Autonomy exhibited stimulated by pay benefits.</td>
<td>In-depth knowledge of the market; Self organization in response to customer requests as team dissipates its structure (stories).</td>
<td>Leadership through agent’s interaction.</td>
<td>Lack of vision results in great uncertainty and employee psychological apprehension; Inability to engage in greater projects (consulting).</td>
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*Emergence: Complexity and Organization*
knowledge among team members participating in diverse MPD teams has been identified. In particular the owner of Unitemp stated that:

Same employees are systematically shifted between different projects for new pork or beef products as these goods require different approach in processing.

This behavior is consistent with the argument that keeping the same personnel during projects enables the transfer of both explicit and tacit knowledge (Kim & Willemon, 2007). Also, there were identified intra-industry collaboration with partners, suppliers and even competitors. These meetings are place where people discuss about current trends in industry, future opportunities and joint collaboration. Informal communications through informal meetings prevail also. Happy hours, pizza parties and out of work gatherings are frequent occurrences.

To sum up, the research identified manipulation of organizational structures, existence of leadership contextual frameworks, enactment of cross organizational relationships and communication and above all self-organizing patterns do portray the managerial approaches in dealing with the omnipresent turbulence of the SEE region. Still, the effect of these behaviors on organizational performance is analyzed in the subsequent section.

**Effects On The Organizational Performance**

This section explores how complexity can improve the organizational performance within the turbulent environment. Initially, greater adjustability and response to environmental circumstances is portrayed via increased capability to make quick decisions in response to the assigned project. Adjustability is a consequence of the organic structure that is enacted and by the constant probing with different products. Small changes frequently occur so employees are engaged in constant non-routine problem solving, which allow for better environmental perception and adaptability (Kelly & Allison, 1999; Harthan, 2006).

The most obvious manifestation of innovation occurrence is exemplified by the numerous product lines that have appeared through ages as a consequence of the formal cross-project communication and employee rotation among diverse projects which facilitate transfer of diverse knowledge, considered essential for stimulating critical thinking and innovation (Kim & Willemon, 2007). Additional impact has leader’s strong determination to innovation and the systematic innovation games played on periodic basis. Nevertheless, numerous innovation attempts and NPD initiatives failed to commercialize and reach the end customer. The rational behind this fallacy could be the strong leader’s framework fostering strict obedience of hierarchy, HACCP requirements and formality. The regular meetings and discussions with company’s stakeholders facilitate transfer of knowledge that can not be explicitly captured which is reflected in establishment of respectable tacit knowledge base. At meat manufacturer though, high in-depth knowledge base has been established and is exemplified via high skill specialization ad differentiation. According to Damanpour, (1995) organizational complexity stemming from high functional and occupational differentiation is reflected into increased depth and variety of the inherent knowledge base. The outcome is initiation of numerous innovation attempts and NPD projects.

In a nutshell, adjustability and flexibility to environment, establishment of organizational knowledge bases (both tacit and explicit) and innovation occurrence are the major effects of the identified complex managerial behavior on the organizational performance. The leadership style nurturing complexity is analyzed in the following section.

**Leadership Style Nurturing Complexity**

The third research objective is related to the Identification of the appropriate leadership behavior that nurtures complexity and complex approach to problem solving. To begin with, the constant manipulation of organizational structure goes hand in hand with the generative leadership style. Moreover, it was determined that manager has established close informal relationships with the employees. As the owner of the IT company stated:

I am available during working hours (open door policy) and non-working hours (accessible to personal mobile phone and e-mail).

Trust is being established in this way which is considered important in dealing with unpredictability and turbulence; the prior being demonstrated through the empowerment of newly formed teams’ members.

Comparably, mutual trust and tight interpersonal relationships was identified to be the leadership approach that nurtures complex behavior inherent at the brick manufacturer. The CEO of the brick manufacturer was revealed that:
As noted in Avolio, (2004) the provision of leader’s trust enables followers to significantly impact their work and exert greater effort in dealing with the allocated task; a behavior considered vital in dealing with the turbulence. Alternatively, leadership style exhibited at meat manufacturer is consistent with the leaders’ strong vision and the corresponding framework nurturing innovation and hierarchy. As such it goes hand in hand with the notion of contextual leadership stating that leader sets the internal context according within which followers should thrive (Osborn et al., 2002).

Other managers though exhibit more entrepreneurial approach in dealing with complexity and this could reflect company's relative small size and regular non-routine problem solving. The leader exhibits an entrepreneurial approach in dealing with complexity which in fact necessitates large behavioral repertoire, as defined in (Schneider & Somers, 2006). Being an innovator, product designer, disturbance handler and catalyst of change, the behavioral leader plays all these roles in order to respond to the complex environment since complex issues can be best dealt with complex behavior (Ashmos et al., 2002; Mason, 2006).

Summing up, generative and contextual leadership, close relationships based on mutual trust and entrepreneurial approach requiring large behavioral repertoire have been identified as different leadership styles nurturing complexity among the respondent managers. In this sense they verify the theory on complexity and leadership as outlined in the literature review section above.

**Drawbacks of Managerial Attitude towards Complexity**

The final research objective is associated with the exploration of potential disadvantages of the complex management attitude. The most prevalent drawbacks of the complex managerial behavior are the lack of role clarity, internal mess and interpersonal conflicts due to unclear procedures and documentation, lack of clear strategic vision, and above all employees’ irresponsiveness to environment owing to a strong leadership contextual framework fostering hierarchy and rules obedience.

For instance, the lack of task clarity followed by an ambiguity in customer relationships is a consequence of the frequent manipulation of organizational design. As well since empowerment implies getting ownership of their jobs, employees might not be always able to self-organize and arrange the different roles, resources and scope for the project they are assigned to. Lack of role clarity as a consequence of the job rotation and lack of directions has been reflected in employee’s deteriorated job satisfaction. As implied by the role conflict theory, psychological tension arises when employees are rotated in multiple jobs that are incompatible with their own perception about the new task variety, task significance and autonomy thus having a negative influence on their overall job satisfaction (Hill & Seo, 2005).

Furthermore, budget and schedule constraints were identified due to the absence of formal planning. In a personal interview with the CEO of the brick manufacturer, it was noted that material and resource planning occurs on an ad-hoc basis. Resources, strategic priorities and governance programs are often neglected which has a direct impact on the overall organizational well being. Moreover, the loose hierarchy control is reflected in overall mess in internal documentation portrayed via absence of well defined manufacturing procedures, projects’ documentation and personal files. There are not any internal procedures capable to absorb the complexity stemming from the identified managerial behavior. In addition, inter-personal conflicts frequently arise during teamwork projects’ executions owing to the employee’s willingness to become the “boss”.

Still, the most pervading problem that has been encountered is the lack of strategic vision. Fuzzy structure, absence of procedures and control mechanisms inhibit growth. Employees are unaware of the future direction due to the constant probing with different customer segments also, which is reflected in overall psychological apprehension and uncertainty. In contrast, the clear hierarchy inherent at the meat producer did enable establishment of valuable knowledge base. However, the organization failed to commercialize many of its NPD initiatives due to the employees’ irresponsiveness to the external environment. According to Chiva-Gomez, (2003) individual’s correlations with the environment and balance between formal and informal structures are the most important factors that facilitate organizational learning and successful innovation deployment.

Hence it might be the strong leadership framework and the corresponding wrong internal context that represents a boundary within which employees act and “innovate”, an isolation skeleton that inhibits their capability to truly perceive and anticipate the external environment and accordingly develop products that customers truly value.

**Conclusions**

Lack of control, disintegration, confusion, unpredictability, complex decisions and the excruciating hypercompetitive business environment, impose considerable constraint on organizations' performance and competitiveness. In this respect, this paper addressed the issue of complex managerial attitude in attempting to investigate the internal conditions for organization’s adaptation in turbulent business environments. It draws upon the complexity theory, according to which organizations are considered as living, complex adaptive systems. Self-organization is considered critical for adapting to the omnipresent...
turbulence, hence the importance of manager's behavior in setting the internal setting for achieving the aforementioned. The emerged research question is whether complex leadership behavior breeds success for the SMEs operating within the complex turbulent South Eastern European region. Striving to gain a better understanding of the complexity issue precise objectives were established: determination of complex managerial behavior, the corresponding effect on the organizational performance, the drawbacks of complex managerial attitude and above all the leadership style nurturing complexity.

The analysis of the findings suggest that manipulation of organizational structures, loose hierarchical control, explicit job rotations, employee empowerment and above all nurture of extensive formal and informal communication are the common managerial behaviors that correspond to the complexity theory as outlined in the chapter above. The effect on organizational performance varies among each different company due to the different nature of the industry yet adaptability, flexibility, innovation occurrence and establishment of diverse knowledge bases commonly prevailed among the respondents. As well strong visionary leadership framework setting an internal context that nurtures rules obedience, innovation occurrence and hierarchy was determined. Self-organizing patterns and emergent/dissipative structures were identified at two target companies only and were mere result of employee empowerment and need for adaptation. The prior consequently confirms the mainstream theory claiming the importance of complex managerial behavior in dealing with complexity since the different organizations sustained their existence within the turbulence. In a similar vein, the exhibited leadership styles of managers demonstrates a behavioral repertoire that constantly change the organizational design, empower people to participate, promote mutual trust, and enhance entrepreneurial approach. These attitudes support the literature on complexity and leadership.

Nevertheless, there have been identified several drawbacks of the complexity attitude such as lack of role clarity and ambiguities due to job rotations and organic structures. Secondly, company-wide mess in internal procedures and documentations occur. Thirdly, lack of strategic vision is inherent at companies that continuously adapt and change to the environmental circumstances. Fourthly, the strong leadership contextual framework nurturing hierarchy and strong rules obedience provided the wrong context due to an absence of employee environmental responsiveness which is portrayed by numerous failed innovation attempts.

It can be concluded then that the identified complex managerial behavior during the research is reflected in increased capacity for faster decision making, fruitful context for innovation and adaptability to customer requests and as such enabled the organizations to adapt to the turbulent SEE environment. However, absence of more encompassing self organizing patterns and emergent structures, the lack of role clarity, personal conflicts and overall ambiguity necessitate the need for greater employee preparedness and cognitive capacity to follow the complex behavior of their managers.

Namely, it has been revealed that employees’ degree of self-consciousness, self-monitoring and meta-cognition might be closely associated with better performing organizations in the turbulent environment. It could be that employees with high degree of self-consciousness are more prone to self-organize and accordingly adapt to the unpredictable business setting. The complexity management in this sense does not depend entirely on manager’s role in setting the internal context, but it also depends on the employees’ cognitive capability for self organization and adaptation.

This paper attempted to provide a systematic view on the link among the complex management behavior and organizational performance. Still a lot of research in this field is required in order to draw solid conclusions upon which complexity theory could be further developed and practical implications for managers dealing with day to day complexity derived. It is suggested that discussion with middle management and unit supervisors as well as more systematic involvement within company’s daily operations could alleviate retrieval of better information about complexity management behavior and its impact on organizational effectiveness. Furthermore it is proposed an establishment of systematic cross industry analysis of multi sample studies where many companies with different industry background and operations are analyzed through the same lenses of complex leadership behavior. Lastly, psychological analysis and observation of employees' behavior itself in face of the unpredictable complex situations should also take place in order to identify their preparedness and draw conclusions about potential training/education programs targeting to develop people in order to deal with complexity.

References


