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Sommaire

Knowledge Transfer as the Transformation of Context

Page 5

par Ali Yakhlef et Laurent Sié

Etude empirique de l'internationalisation des PME : Le cas de l'entreprise familiale Française CANCE

Page 21

par Jean-Michel Quentier et Jeanine Billet

Predictors of Multidimensional Well-Being in Women Entrepreneurs in France and the US: Family Business Demands and Sense of Coherence

Page 41

par William Nelson et Anne Nelson

Toward an understanding of relevant strategic organizations: a fuzzy logic approach

Page 57

par Jean-Michel Quentier

Knowledge Transfer as the Transformation of Context

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Abstract

The significance of context has not escaped the attention of knowledge transfer theorists. Assuming that the more distant the source unit's knowledge from the recipient's institutional context is, the more difficult the transfer process will be, some researchers have suggested adaptation to the recipient's context as a means of reducing knowledge transfer stickiness. Adopting a social constructionist approach, the paper argues that the context and content of knowledge are intrinsically-bound up. Rather than adaptation to the recipient's context, it is contended that the transfer of knowledge from one context to another entails the transformation of context, rather than adaptation to that context. Implications of this study are discussed.

Key words

Knowledge transfer context; knowledge content; social interaction; translation; participatory and reificative transfer mechanisms.

1. Introduction

Although researchers within the area of organizational knowledge transfer seem to converge onto the idea that adaptation to the recipient's context is a necessary mechanism for increasing acceptance of products, policies and practices by modifying them so as to benefit local requirements (Szulanski 1996; Bartlett and Ghoshal 1998; Almeida and Grant 1998; Gupta and Govindrajana 2000; Damanpour 2002), they differ as to what is meant by 'context'. For some, it involves the narrowly defined, cognitive circumstances defining the transmitter's and/or receiver's dispositional motivation (Szulanski 1996; Gupta and Govindrajana 2000: 475-476), the capacity to absorb new knowledge (Kogut and Zander 1993; Lane et al 2001) at the individual and/or organizational level (Inkpen and Dinur 1998), and the features of knowledge itself (such as its tacitness, stickiness, causal ambiguity) (Kogut and Zander 1993; Szulanski 1996). For others, the notion of context goes beyond the narrowly restricted locale of the work place or the organization to include the larger, macro, cultural, institutional setting of the organization (Badaracco 1991; Lyles and Salk 1996; Mowery et al 1996; Kostova 1999; Simonin 1999; Jensen and Szulanski 2004).

While the institutional turn in knowledge transfer theory emphasizes the significance of contextual factors, such as culture and regulation, for the success or failure of knowledge transfer, there is no consensus on the notion of context and on how contextual factors impact upon the transfer process. For instance, Kostova (1999) suggests that institutional differences between the recipient unit and the parent may lead to difficulties in transferring a practice or to its failure. On this view, contextual, institutional compatibility tends to increase cognitive and normative legitimacy, thereby enhancing the recipient's motivation to appropriate and embrace the new knowledge practice. Motivation is understood as a factor that reduces the stickiness of a practice (Szulanski 1996; Gupta and Govindrajana 2000). The general insight from most such literature seems to be that the more features the source and recipient units share the more successful the knowledge transfer endeavour is likely to be (Lyles and Salk 1996; Bartlett and Ghoshal 1997; Inkpen and Dinur 1998; Kostova 1999; Damanpour 2002). However, recently, Jensen and Szulanski (2004) find in their study that adaptation to the recipient's institutional setting increases, rather than decreases knowledge stickiness. In other terms, distance increases acceptability of practices.

Given the significance of context in knowledge transfer (Szulanski 1996; Inkpen and Dinur 1998), on the one hand, and the diverging results concerning its effects on knowledge transfer, on the other, it is necessary to enquire more closely into its nature and meaning. Is the individual, organisational or social, cultural setting the appropriate context to focus on when studying the knowledge transfer process? What is the relationship between knowledge (as a cognitive content) and the context (the material, social and political setting)? Are cognitive elements different from contextual ones in the sense that it is possible to transfer knowledge from one context to another without changing the target context? Can the dominant communication-based view of knowledge transfer be an adequate representation?

At the core of the assumption that knowledge is contextual is an understanding shared by social constructivists that knowledge is a "social construction", which means that it is permeated with (social, political, historical) features of the context within which it is produced (Longino 2002: 11). In this understanding, contextual features pervade and weave themselves in the content of knowledge. Content and context of knowledge cannot be disconnected; they are two sides of the same coin. Viewed this way, the context-based view of knowledge poses the challenge of how it can be transferred to a different context and be found to function in an unrelated, alien context? Invoking the notion of adaptation to the recipient's context (be it individual, organizational or institutional), as a number of researchers have suggested, presumes that knowledge content and context are fixed and pre-given. What seems to lie at the heart of this mode of thinking is a communication-based approach that treats a content of knowledge as a piece of information that is encoded as a message and transferred unproblematically from a transmitter to a recipient in a given context.

1.1 - Aim of the paper

The aim of this paper is to argue that the transfer of knowledge from one context to another implies the transformation of both the target context and knowledge content. This transformation takes place through processes of translations, negotiation and bargaining among actors. Rather than merely adapting to the target context, knowledge transfer presupposes the transformation of the target context. And rather than regarding knowledge content as fixed and unaffected by local, contextual changes, it is suggested that knowledge is constantly evolving in rhythm with changes in context. From a “knowledge as socially constructed” view, knowledge and context are co-constitutive of each other; a change in the one triggers off changes in the other. The paper draws on concepts from the sociology of knowledge literature to argue for an interactive, learning approach where knowledge transfer means transformation of context. In section 5 the paper will discuss the suggested framework and its implications for the theory of knowledge transfer.

1.2 - Outline of the paper

Knowledge transfer does not only take place within a social context, but that context itself is part of the content of knowledge. There is, thus, a certain overlap between social components and cognitive components. Viewing content (relating to the cognitive dimension) and context (to the social and material dimension) complicates the issue of knowledge transfer. Section 2 begins with a critical appreciation of how context has been understood in the literature, and goes on to argue for a social constructivist view of knowledge (Knorr Cetina 1981; Latour 1988; Golinski 1998; Longino 2002) that takes the sociality of knowledge seriously. Embracing a view of knowledge as a product of a certain social context entails some epistemological consequences (Section 3). To the extent that context is part and parcel of knowledge content (Knorr Cetina 1981; Latour 1988; Golinski 1998; Longino 2002), neither of them can be held unchanged when knowledge is transferred from one context to another. From this perspective, the transfer of knowledge implies not only its transformation but also that of the context to which it is transferred. This transformation of both knowledge content and context takes place through processes of translation, bargaining and negotiation among individuals in interactions. Section 4 is concerned with the works of translation (in its various senses) (Callon 1986; Latour 1987; Robinson 1999; Jankowicz 2002; 2003), which are identified as significant knowledge transfer facilitators. Section 5 discusses the framework within the context of the case *Transferring managerial practices to Poland* by Hurt and Hurt (2005), arguing that there is ample evidence in the case that speaks for the transformation of context, rather than adaptation to it, as assumed by the authors'. Finally, the paper ends with some concluding remarks.

2. The Context of Knowledge Transfer

Viewing knowledge as the outcome of a specific social, local context, and made with resources of a particular place raises the question of how we understand the context of knowledge and its features that play so important a role in the process of knowledge transfer. These issues are the concern of this section.

In explaining the success or failure of the transfer of best practices (or of knowledge) researchers have turned their attention to the concept of context (Badaracco 1991; Lyles and Salk 1996; Mowery et al 1996; Almeida and Grant 1998; Kostova 1999; Simonin 1999; Jensen and Szulanski 2004). Some researchers focused on the more narrowly-defined knowledge transfer context consisting of individual-

level factors, such as awareness, mindsets, allegiances, behaviours, and personal accountability (Beyer et al 1997). Another group of researchers has extended the notion of context, beyond organizational-level explanations, including macro, social, institutional and cultural settings (Mowery *et al* 1996; Kostova 1999; Simonin 1999; Jensen and Szulanski 2004). The general understanding is that institutional, contextual factors play an important role in the success or failure of knowledge transfer initiatives. To the extent that cultural differences between the source and the recipient of knowledge have come to be regarded as crucial determinants in the knowledge transfer process, researchers have regarded adaptation of knowledge to the recipient's context as a remedy (Lyles and Salk 1996; Barlett and Goshal 1997; Inkpen and Denur 1998; Kostova 1999; Damanpour 2002).

Knowledge transfer, or what is often referred to as "best practice transfer", is defined by Szulanski (1996: 28) as "replication of an internal practice that is performed in a superior way in some part of the organization and is deemed superior to internal alternate practices and known alternatives outside the company", and where 'practice' is taken to be a routine use of knowledge (Nelson and Winter, 1982). Although issues of knowledge transfer are very much en vogue today, they are not new to the corporate world. Teece (1977) was among the founders of this trend; he was concerned with the transfer of technological know-how. Nelson and Winter (1982) were interested in the replication of organizational routines.

Whereas Kogut and Zander (1993) focus on the characteristics of knowledge that impede its transfer, Szulanski (1996) investigates not only the characteristics of the knowledge being transferred, but also the context of transfer. For him context consists of factors that influence the "stickiness" of knowledge, or the difficulty in transferring it. The factors that are crucial for knowledge transfer, according to Szulanski (1996), are mainly associated with the recipient's situation: "lack of motivation" and "lack of absorptive capacity". Szulanski's (1996) attempt to enlarge the context does not go beyond the psychological, cognitive features of individuals, remaining therefore too narrow and micro-oriented.

Inkpen and Dinur (1998) suggest an approach to context that is richer. In addressing the question concerning the role played by the similarity between the source and the recipient contexts in explaining transfer difficulty they suggest a model that uses the concept of "knowledge spectrum" consisting of "the total knowledge an organization may be able to utilize [including] both the feasible and actual organizational knowledge: what is actually used by the firm and what could potentially be used" (p. 4). The authors argue that "five contextual dimensions shape the spectrum and define it: environmental, cultural, strategic, decision-making, and technological" (p. 4). Context, according to them (1998: 9) shapes "a firm's ability to recognize, to utilize it, and to derive competitive advantage from it". In these terms, context is part of the background, but not that of the knowledge content.

Kostova (1999) adopts an embeddedness perspective that pays attention to three types of context: social, organizational and relational. In these terms, the factors that affect individuals' cognitive ability to be motivated and to engage in the process of transfer consist of a) the social (institutional – regulatory, cognitive, and normative) distance between home and recipient; b) the organizational (cultural, learning disposition and compatibility of the practice) context, and c) the relational context (such as employees' attitude) (p. 313).

An implication of Kostova's framework is that if a practice is "perceived by the employees at a recipient unit to be in conflict with the regulatory institutions in their country, it is highly unlikely they will engage in transferring and implementing it" (1999: 315). Hence, it could be surmised that the greater the differences are between the institutional profiles of the home country of the practice and the recipient country, the greater the likelihood that the transfer will run into difficulties or fail altogether. For Kostova (1999: 316), the success of transfer of strategic organizational practices is "negatively associated with the institutional distance between the countries of the parent and the recipient unit" (p. 316). On an organizational level, the success of a practice will be "positively associated with the degree to which the unit's organizational culture is generally supportive of learning, change and innovation" (Kostova 1999:

317). Finally, on the relational level, the role of the coalition serving as a bridge between the recipient unit and parent company is crucial. The success of a transfer is positively associated with the commitment of the coalition, its identity with the parent's values, and its trust in the parent (p. 319). However, according to the author, the perceived dependence of the recipient on the parent may be positively associated with the implementation of a practice but not necessarily with its internalisation.

Jensen and Szulanski's (2004) study is based on similar assumptions, but does not find much empirical support for these assumptions. Investigating the effect of adaptation on knowledge stickiness (the difficulty of transferring it), they found that "adaptation significantly increases stickiness" (p. 516), rather than decreasing it. Surprisingly, they also find that "increasing institutional distance decreases, rather than increases, stickiness" (p. 516). As a possible explanation, the authors suggest that when a practice is less cognitively understandable owing to its institutional differences, recipients will tend to adapt (p. 516). On this view, less adaptation across institutional distance does not necessarily lead to increased difficulty in transferring knowledge, thereby challenging the views of a significant number of researchers (Lyles and Salk 1996; Barlett and Ghosal 1997; Inkpen and Denur 1998; Kostova 1999; Damanpour 2002).

The assumption that the more remote an observer of a culture is from it the more rationality, certainty, closure, and realism s/he will tend to attribute to that culture is not new to sociologists of knowledge and philosophers (Fuchs 2001: 329). Fuchs, referring to Collins (1988: 726) and (the philosopher) Reichenbach (1951: 43), says that this observer is watching the front stage rather than the backstage of a culture and its organisation. "Frontstages simplify, condense and abbreviate the processes and outcomes of a culture. They account for its behaviours by means of rational reconstructions and systematic method. Move closer to where culture is being made, to its backstages, and culture appears less orderly, method-driven or clearly defined" (2001: 329). Frontstages "gloss over and repair the many inconsistencies, errors, and contradictions endemic to culture-in-the-making" (Ziman 1978; in Fuch 2001: 329). Hence a distant observer relying exclusively on frontstage versions of a culture tends to attribute more realism to the observed culture. How then to understand the knowledge-transfer-context-in-the-making?

According to Inkpen and Dinur (1998) two models dominated research within the knowledge transfer area: a communication-based and knowledge-creation models. Within the communication-based approach (such as Szulanski 1996; Gupta and Govindrajan 2000), the transfer of knowledge is regarded as a message encoded in a medium by a sender to a recipient in a given context. The second one is based on Nonaka's (1994) framework of knowledge generation. In this view, the transfer of knowledge is seen as the creation of knowledge through four modes of knowledge conversion of explicit and implicit forms of knowledge: *externalisation* (from implicit to explicit), *combination* (from explicit to explicit), *socialisation* (from implicit to implicit) and *internalisation* (from explicit to implicit).

Along similar lines, Jankowicz (1999: 319) describes the process of knowledge transfer as a "mutual knowledge creation" process, as it captures the negotiation of new understanding that emerges in interactions. Likewise Bedward et al (2003: 53) question the appropriateness of the expression "transfer", suggesting instead the concept of "translation" to capture the "collaborative effort of mutual knowledge creation", where each party is trying to influence the other. If we regard knowledge transfer not so different from knowledge creation, then a whole new light is cast over the issue of knowledge transfer context. First, in theorizing the relevant knowledge transfer context we can turn to knowledge creation context as our guide. Second, abandoning the communication approach, and adopting Nonaka's (1994) knowledge-creation approach, we can think of this knowledge context as a dynamic, interactive process of translation and negotiation of meaning between individuals bringing to the table different forms of knowledge and understandings. Finally, if knowledge is created within a specific context of interactions among individuals, then knowledge and context are closely related and cannot be separated. These ideas are developed in the next section where the aim is to build a tentative context-bound framework of knowledge transfer.

3. Framework of knowledge transfer process

From a social constructivist perspective, neither knowledge nor context can be taken for granted; rather they are emergent outcomes of social interactions. Their reality (degree of fit to some structure of the world) is a performance, an accomplishment by social actors in social interactions. The next section will delve into how context has been constructed by different researchers working within the sociology of knowledge.

3.1 - Social contexts are produced in interactions

In this section, we draw on the ideas of a stream of sociologists of knowledge to define the knowledge transfer context in terms of social interaction. To begin with, knowledge context is defined as social in the sense of involving social interactions (Knorr-Cetina 1981; Latour 1988). The context involves what practitioners involved in a certain practice do, as they manipulate material, social, and linguistic entities (Latour 1988). This view of context-in-the-making focuses on the backstage and the procedures by which knowledge workers certify results and validate hypotheses, a process that involves a host of internal, 'cognitive' and 'external', social, interest-laden factors. A number of theorists (Knorr-Cetina 1981; Latour and Woolgar 1986; Latour 1988; Golinski 1998; Longino 2002) reject the micro-macro distinction between any contextual 'inside' and 'outside', arguing that social contexts are not given, but are produced in interactions during processes of translation, negotiations and bargaining.

More specifically, for Latour (1988), it is impossible to draw a distinction between the cognitive (individual), on one hand, and social, contextual aspects, on the other. Latour (1988) attempts to demolish the laboratory boundaries (or knowledge creation context as narrowly defined), the inside-outside, macro-micro distinction between contexts. There is no inside acting upon an outside, or inside acting on an outside. Rather, there is traffic and interactions between specific sites. In this traffic, elements of the one are brought to the other – a process of displacements and translation - translation not only of concepts, but also of interests.

Crucial to his approach is that the practices, in which practitioners are engaged, reconfigure the social context at the same time as they create knowledge about it (Latour 1988). The production of knowledge amounts to the transformation of the world (or context) it is about. In his interpretation of Pasteur's accomplishment in the 19th century, Latour argues that Pasteur's work did not only establish the germ theory of disease but also transformed agriculture and veterinary and human medicine by microbiology. And rather than understanding Pasteur's work in terms of a set of pre-given, stable interests and fixed context, Latour suggests that we focus on a series of displacements and translation.

As Golinski (1998) and Longino (2002) notice, Pasteur first takes his technicians out to the field where they collect infected matters and establish identities between field entities and laboratory entities. Hence, the farmer's infected field becomes part of the laboratory – at least for some period of time. Pasteur brings back and recreates only selected portions of the farm conditions in the laboratory. Specifically, he can create an outbreak of anthrax. Applying what he had learned from work with chicken cholera about variations in virulence, he is in a position to regulate the weakness or strength of the microbe thus ultimately to create a vaccine.

The effectiveness of the vaccine is not demonstrated simply by shipping vials of it from the laboratory to veterinarians, saying 'try this'. Instead, the laboratory conditions that support the vaccine's effectiveness in the lab must be recreated in the field – that is, the context must be extended to the farm. On this count, there is traffic between the laboratory and the farm. The interests of the French farmers' eco-

conomic success are translated into interests in the success of the experiments in Pasteur's laboratory, and thus into interests in its maintenance and support. In this way, the interests of Pasteur and those of the farmers are fused.

The laboratory is not a context where pre-existent social forces interact and stable interests prevail, but a context in which new elements are created and in which the social context (in its micro and macro senses) is transformed. The context (such as social, political factors) is just an outcome of the complex process of interactions, displacements and translation. Pasteur's anthrax bacillus both does and does not pre-exist Pasteur's attempts to isolate it (Longino 2002: 36).

Following Latour (1988), this paper assumes that micro actors, here corporate actors, are able to transform both the narrow and larger context of knowledge. This is achieved through interaction, translation, negotiation and bargaining processes between different sites. Knorr-Cetina (1981) emphasises interactions as one of the most significant highlights of the knowledge context. For her, it is the interaction that is the unit of analysis, rather than individuals, groups thereof, whole institutions, organizations or societies. Within the knowledge transfer literature, the role of interaction as a mutual, learning opportunity for the parties involved has not escaped the attention of researchers. Lane and Lubatkin (1998) views learning between two firms in terms of a 'teacher-student' relationship, where learning takes place through interaction. Jankowisz (1996; 2001) maintains that this interactive process leads to mutual understanding where both parties come into new insights. In this sense, knowledge transfer is more like a process of knowledge creation, creation of new knowledge for both parties. This view finds support in Longino (2002: 27), who argues that interaction is "the locus of significant activity in the processes of knowledge generation", thus also in knowledge transfer. Taking interaction as the social knowledge generator, and in line with Latour's ideas, the present paper regards knowledge transfer process as a set of activities of individuals who engage in social interactions.

4. Modes of interaction: *Participation and reification*

Interactions between parties may involve *reified* elements (such as strategies, budgets, statistics, ratios, documents, standards procedures, policies, designs, plans, budgets and so forth) (Almeida and Grant 1998), and *participatory* elements (Mohr and Spekman 1994; Almeida and Grant 1998; Hetrick 2002). Participation involves the mediators or boundary brokers who may accompany such reified artefacts and engage in face-to-face interactions with members of another community (Wenger 1998). Whereas reification refers to coordination mechanisms using codified and standardised forms of information and knowledge, participation involves proximal encounters between transmitters and recipients of a practice. The work of translation is achieved by brokers whose role it is to help interpret and translate the meaning of reified elements of the practice to be transferred. Without the participatory role played by brokers, reification can lead to reinforcing the difference between the sites, rather than transcending them (Wenger 1998).

Crucial to our discussion is the point that the ambition behind both participation and reification is to reduce scepticism and increase the 'rationality' of the knowledge to be transferred or the practice (insisting that it is a logical solution), its realism (that it is a fact), and that it serves the interests of the transmitters as much as those of the recipients of that practice. Whereas sites of participation are encounters where brokers – regarded as sources of certainty can communicate face-to-face with sceptical recipients, reification is a matter of providing artefacts and tools that give a material, tangible load and a more durable form, to the words exchanged among parties.

4.1 - Knowledge brokers

Knowledge transfer takes place within a context of individuals in interactions. Moving members between firms has long been emphasised as an effective mechanism of knowledge transfer (Rothwell 1978; Galbraith 1990; Argote and Ingram 2000: 175). Argote and Ingram (2000: 157) refer to Almeida and Kogut's (1999) empirical finding that "the mobility of engineers between firms contributed to the transfer of knowledge about innovation in the semiconductor industry".

Through interaction, the human mind and body provide a readily available means of carrying and transmitting both tacit and explicit knowledge across borders (Argote and Ingram 2000:157). Recognizing the difficulties of transferring tacit knowledge across long distances and cultural divides, von Krogh, Ichijo, and Nonaka (2000) emphasise the significance of what they call "knowledge enablers" who circulate frequently among the far-flung outposts of the global corporation, bringing knowledge with them in embodied forms.

The role of face-to-face participation by expatriates has been emphasized in the knowledge transfer literature. Mohr and Spekman (1994) highlight the role of face-to-face exchange and communication between the parties involved, especially in connection with the sharing of tacit, firm-specific knowledge. Geographically mobile experts are potential facilitators of transfer of tacit and specific forms of knowledge (Almeida and Grant 1998). Through coaching and mentoring local managers, expatriates – or as Hetrick (2002) calls them *boundary spanners* – play a significant role in facilitating the knowledge transfer process. Over and above expatriates, Danis and Parkhe (2002) mention formal training, company visits and personnel transfers. Encounters between knowledge brokers and local employees are occasions for socializing and the creation of implicit knowledge (Nonaka 1994)

Following Wenger (1998: 109), individuals whose function it is to mediate knowledge between different social groups are 'knowledge brokers'. One of their main functions is that of translation, or framing the elements of one group's world-view in terms of another group's world view. Because language is embedded in situated action, the meanings of particular words and forms of speech emerge continuously within communities of practice (Wenger 1998). In connection with knowledge transfer to Poland, the works of Jankowicz (1994), Dobosz and Jankowicz (2002), Beward et al (2003) and Hurt and Hurt (2005) have shed significant light over the knowledge transfer barriers pertinent to linguistic differences. Given that a large number of management terms did not exist in the Polish language, many of these are to be introduced in the Polish language, subsequently becoming part of the Polish manager's linguistic repertoire.

4.2 - 'Boundary objects'

Apart from the human body, knowledge has also often been closely tied to, and reified into rules, objects, material and immaterial artefacts. As noted above, exchange of tacit forms of knowledge requires intensive, face-to-face interactions and processes of socialization. However, transfer of more explicit forms of knowledge can be encoded in (material and immaterial) artefacts such as rules, directives and routines (Grant 1996; Almeida and Grant 1998). Artefacts can also be more tangible, involving tools, machines, power tools, cybernetic devices, and manuals, all of which can be viewed as codified bodies of knowledge (Mitcham 1994). Tangible tools, says Fuchs (2001: 306) "make little room for skepticism, especially when they generate rather predictable and uniform outcomes across a variety of settings, occasions, times, or operating personnel". The role of humans is crucial in that initiatives to transfer knowledge through technology have been found to be more effective when they are accompanied by personnel (Argote and Ingram 2000: 158).

Star and Greisemer (1989) have developed the notion of 'boundary objects' to refer to things that link together different social groups but who may view them and use them in quite different ways. Boundary objects may include representations, concepts, documents, artefacts or naturally occurring objects, elements of the physical environment or the inscriptions of instruments (Golinski 1998). These objects must have the character of what Latour (1987) calls 'immutable mobiles' in order to ensure their mobility: "Boundary objects are objects which are plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites...They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation" (Star and Greisemer 1989: 393).

4.3 - Standardization

Of particular relevance to the transfer process is standardization. For Latour standards are a precondition for making knowledge work away from the sites of its production, for making it "travel far without leaving home" (1987: 251). Standardized forms of printed material can circulate and be exchanged by different practices and social groups. Standardization also involves the training of personnel in procedures for calibrating instruments, tools and machines. Almeida and Grant (1998) observe that effective transfer of explicit knowledge requires a high degree of formality, standardization of rules and the format of data and compatibility of systems.

Mintzberg (1979; 1983) distinguishes between standardization of work processes, of work outputs, worker skills and of norms and values. As argued by many, training enhances absorptive capacity of the recipients and the adoption success of new practices (Ahire and Ravichandran 2001; Beyer et al 1997; Dixon et al 1994; Petroni 2002). Standardization also helps to create an understanding that is easily recognizable across different sites and organizational levels (Bateman and Rich 2003).

To sum up this section, interactions between individuals from different sites require both elements: reification and participation. Whereas reification revolves around imposing and implanting an 'alien' form of knowledge into an 'alien' locale, participation is an attempt to indigenize it. Indeed, the participatory process is characterized by a great deal of negotiations, translation and bargaining. Because what is to be transferred draws its meaning from the context of the practice in which it is produced, it cannot be transferred to another context without changing the target context so as to match the content of knowledge. Recreating or changing the target context in the image of the home context requires a great deal of translation (of terms and interests), negotiation between the parties involved.

It is to be noted that translation and negotiation aim to remake and transform the meaning of norms, rules, habits, etc, that prevail in the target context, and not only to adapt to them. This is different from Kostova's (1999) and Jensen and Szulanski's (2004) framework, where norms and values are taken for granted, as yardsticks to be adapted to. From the present approach, these would emerge mangled by, and as the outcome of, the processes of interactions (translation and negotiation).

The interactionalist approach adopted in this paper is more apt to explain how institutions change, rather than how there are preserved. Adaptation to institutions reflects a concern with path-dependency and stability, transforming them is about path-generation. Figure 1 captures the different elements of this tentative framework.

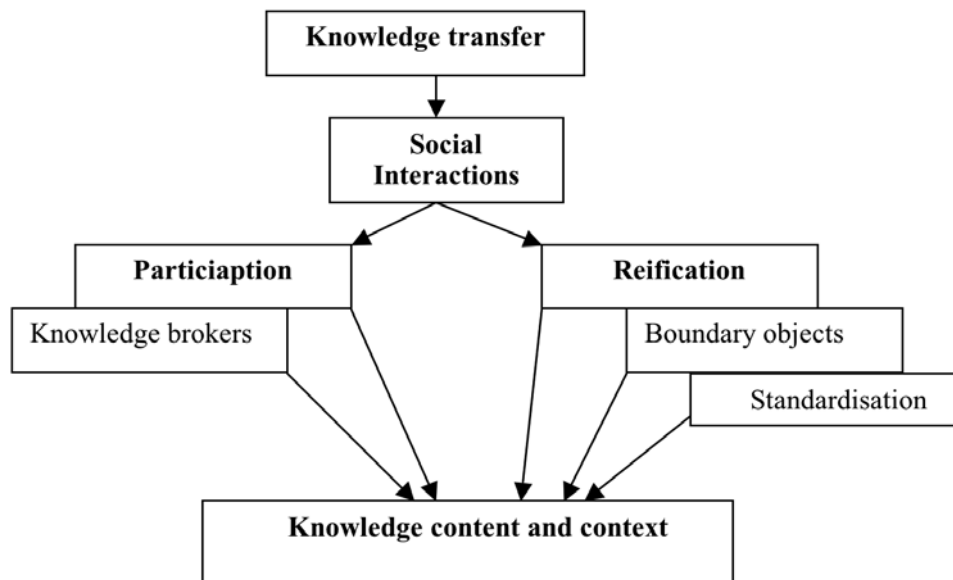


Figure 1: A knowledge transfer framework

5. Discussions

The works of sociologists of knowledge turn our attention to the centrality of interaction in the knowledge transfer process. A focus on interaction as the unit of analysis entails that content and context of knowledge do not pre-exist interactions. As knowledge is produced through the processes of participation and reification, the context is transformed. In these terms, knowledge is not a passive reflection of reality but it transforms it and creates new ones. This transformative role of knowledge transfer has been unheeded by researchers in the area, who have emphasised instead adaptation to the context. A high-profile example of the adaptation approach is Hurt and Hurt's (2005) case study relating to the *Transfer of managerial practices by French food retailers to operations in Poland*.

Although the case is written from an adaptation perspective, it can be argued that it speaks for a transformation approach. There is ample evidence that the success of the transfer of practices was dependent upon the transformation of the Polish (organisational and institutional) context by French retailers. In order to succeed French retailers had to transform a “45 years of a centralized communist economic system that encouraged stability and permanence” (Hurt and Hurt 2005: 39). They also had to transform the mentality of the Polish employees who “demonstrated a set of attitudes at work that included opposition to change; conformity and non-assertiveness” (Hurt and Hurt 2005: 39). Far from expecting that the French model will adapt itself to the Polish model, French expatriates were intent on changing it, engaging in a process of translation and negotiation. Because the Polish system was production-, and supply-oriented – although always short on supply – and not demand-oriented, it is logical that concepts like marketing, sales, and customers were lacking. As the authors put it, there was “nothing close to the idea that the customer is king” (Hurt and Hurt 2005: 41). Hence translators or knowledge brokers were used “during the recruitment process, in the training session on company policies, merchandising, and routines in general, and during discussions between French store management and the new Polish supervisory” (Hurt and Hurt 2005: 42).

Initially, the Polish context lacked words to “convey the ideas of marketing, merchandising, layout, facing, customer contact, accountability, or profitability” (Ibid. 2005: 43). The process of translation was not merely a linguistic exercise, a matter involving translating one word into another, but mainly one of creating new concepts altogether and the new realities these concepts are attached to it. As stressed

by the authors: “French managers realized that not only could they carry out a strategic mission set by the head office, but that they were able to bring about major changes on an environment that, by its chaotic and uncertain nature, had first appeared beyond their reach” (Hurt and Hurt 2005: 42). In many respects, this process can be regarded as an attempt to recreate a French context for the French model in Poland, but not to adapt to it, for many of these contextual features are inexistent neither linguistically nor in Polish reality.

The Polish context was transformed in significant ways so as to become more receptive of the “Western lifestyle with its overabundance of consumer goods and high technology” (Hurt and Hurt 2005: 45). This point is also brought home in the following quote: “French managerial culture, and the abundance brought by the retailers were projected into Polish society through French retailing and had a very strong effect on Polish society in general – and therefore, through the changing Polish context - affected the model of the Polish employee ...Retailers feel the Polish context has become similar enough to the French context” (p. 45).

French retailing has had a very strong effect on Polish society in general. The changing Polish context, in its turn, has affected the model of the Polish employee (Hurt and Hurt 2005: 44). Even the regulatory environment regarding government-imposed limitations on hypermarket expansion in Poland was transformed too (2005: 44). They have changed the cultural, institutional context of Poland from a production-led to a consumption-oriented environment. Values and lifestyles permeating the West have found their way into the everyday life of Polish society. Such changes would not have been possible if global players were simply to adapt to the local circumstances. This is the main point made by the present paper: the transfer of knowledge from one local context to another entails the transformation of the recipient’s context. Contrary to previous research, the assumption here is that context is not taken as fixed and stable, but rather as a dynamic one, emerging as a result of processes of translation and negotiation.

6. Concluding remarks

Taking seriously the assumption that knowledge is context-bound, the paper has sought to suggest that the transfer of knowledge from one context to another entails the transformation of the context of knowledge through social interactions. Social interaction implies individuals in interactions engaged in processes of translation and negotiation of linguistic terms as well as social interests. Interactions can be direct involving participatory, face-to-face interactions and reified artefacts and objects.

The paper emphasises the significance of interaction (translation and negotiation) as a basis for knowledge transfer/generation. What this means is that both the reality and propositional content to capture it are the outcome of social interaction and negotiation. Such an outcome is contingent, depending on the efforts of translators or knowledge brokers, the degree of stability of boundary objects advanced and the particular circumstances surrounding these.

Knowledge transfer as the transformation of context provides a better basis for understanding how institutional and cultural settings change over time. Rather than taking stability as the normal state of the world, context is assumed to be in flux, reflecting how the global economic, social environment, competitors and consumers' behaviour are in constant change. How, otherwise, can we understand the sea-wide changes that have taken (and still taking) place in the Easter countries during the last two decades?

Finally, in a spirit of self-critique, this paper is exploratory and theoretical. However, it can be regarded as a first step to shift attention away from a focus on adaptation to the context of the recipient of knowledge toward transformation of that context. This framework could be used to inform future empirical research.

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Etude empirique de l'internationalisation des PME : Le cas de l'entreprise familiale Française CANCE

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Résumé

Dans cet article nous tentons d'explorer le comportement entrepreneurial et la vision du leader-dirigeant en tant que propriétaire d'une PME familiale lors de la formulation et la mise en place d'une stratégie de délocalisation dans laquelle il s'efforce d'éviter les effets négatifs de la décision sur le développement économique du territoire où l'entreprise a historiquement été implantée. Bien que notre article se base sur un cas isolé, il met, néanmoins, en évidence le fait que les dirigeants doivent adopter un comportement socialement responsable (éthique et social) pour être en mesure d'exploiter les avantages des coûts de main d'œuvre internationaux tout en préservant les emplois du territoire. Cette internationalisation leur permet de maintenir ou d'améliorer la compétitivité de leurs entreprises sans pour autant détruire les capacités et les ressources locales. Notre exemple démontre qu'il est possible de créer de la valeur pour les actionnaires-propriétaires et en même temps de développer l'économie locale et régionale créatrice de richesse pour l'ensemble des parties prenantes. En quelque sorte, notre cas va à l'encontre des idées reçues, celles qui consistent à dire, qu'une entreprise dans sa quête d'opportunités internationales, en particulier celles liées à la délocalisation pour réduire ses coûts, crée de la valeur pour l'actionnaire mais détruit de la richesse pour les autres parties prenantes.

Mots-clé

PME, entrepreneuriat, direction, entreprises familiales, internationalisation, délocalisation, développement durable

I - Introduction

Les deux dernières décennies ont été témoin du renouveau des études sur les PME et l'entrepreneuriat. Ces études ont dans plusieurs pays montré que le nombre de nouvelles entreprises a augmenté et que l'importance du secteur des PME en tant que créateur d'emplois a lui aussi augmenté (Keeble et al. 1990 ; Busentiz, L. W. ; Gomez, C ; Spencer, J. W. 2000). En parallèle, il y a eu aussi une augmentation radicale de l'intérêt pour le rôle et la performance du secteur des petites entreprises chez les universitaires et les décideurs politiques.

Les modèles développés à partir du processus d'internationalisation des entreprises ont tous un point en commun. Ils sont tous fortement tournés vers les problèmes rencontrés par des grandes entreprises et vers le processus managérial de leur internationalisation (Kock & Laine, 2000; Young, 1987).

Cette vision plutôt réductrice du processus d'internationalisation des entreprises «essentiellement des grandes» est empiriquement mise en défaut par le fait que les PME deviennent les nouveaux acteurs, très dynamiques, sur les marchés internationaux. De ce fait, un plus grand intérêt est porté sur les études empiriques concernant le processus d'internationalisation des PME, leur position d'un point de vue contextuel ainsi que sur leurs motivations et difficultés rencontrées lors du processus d'internationalisation. Ce regain d'intérêt est devenu tel que la Commission Européenne l'a inclus dans ses priorités lors de la création du Marché Commun Européen.

De surcroît, le débat autour des effets du marché interne a provoqué un intérêt renforcé sur la situation des PME en Europe. La question essentielle est de savoir comment les PME peuvent partager les avantages établis par un marché unique et comment elles peuvent déployer leur potentiel de croissance. Dans ce contexte, l'objectif principal de cet article est d'explorer, sur la base d'un seul exemple, la manière dont le dirigeant-proprétaire d'une PME familiale met en œuvre une stratégie internationale qui lui permet de saisir les avantages de coût de main d'œuvre internationale en délocalisant sa production tout en maintenant ses investissements sur le marché local. En résumé, nous voulons tenter de comprendre d'une part, dans quelle mesure le développement économique local peut être compatible avec la décision de l'entreprise d'exploiter les opportunités internationales, fondée sur les bas coûts de la main d'œuvre, et tout particulièrement dans le cas de la délocalisation de certaines de ses activités, et d'autre part, dans quelle mesure les aspects comportementaux du dirigeant-proprétaire influencent le processus cognitif de la prise de décisions d'internationalisation de l'entreprise.

II - Cadre Conceptuel

Afin de tenter de mettre en évidence la relation existante entre l'internationalisation d'une PME et les aspects comportementaux de l'entrepreneur-proprétaire; nous allons dans cette section parler de cadre conceptuel plutôt que de revue de la littérature sur l'internationalisation des PME. Pour ce faire nous allons premièrement passer en revue quelques études empiriques, suivies des théories de la contingence et de la construction sociale, puis nous prendrons en considération la vision entrepreneuriale et le comportement de l'entrepreneur.

Alors que les explications conventionnelles ont longtemps sous-entendu que le commerce international est le domaine de grandes et riches entreprises (Johanson and Vahlne, 1977; Anderson, 1993), de récentes études sur l'émergence des PME tournées vers les marchés internationaux présentent un réel défi pour le mode de pensée conventionnel (Oviatt et McDougall, 1995). En Europe, en Asie, aux Etats-Unis et en Amérique latine, avec les progrès des technologies de communication et d'information, la mondialisation des marchés et d'autres facteurs aidant, de plus en plus des PME s'aventurent à l'étranger. Par conséquent, nous constatons que dans plusieurs pays, les PME représentent une part de plus en plus grandissante de la croissance exportatrice, de la création d'emplois et des possibilités de développement futur (Coviello, N. E. and A. McAuley, 1999).

Un autre facteur important dans ce cas précis est l'avantage inhérent aux PME. A l'encontre des grandes entreprises, les petites et moyennes entreprises sont dépourvues de bureaucratie, de pensée hiérarchisée et de coûteux systèmes d'information. Elles sont souvent plus novatrices, plus à l'écoute de leurs clients et ont une réactivité plus importante quant à la mise en place de nouvelles stratégies (Oviatt B. M. ; P. P. McDougall, 1997). Les dirigeants de PME peuvent plus facilement adapter leurs systèmes, procédés et politique managériale aux impératifs de la compétitivité internationale.

Ils peuvent souvent s'approprier et fixer l'information, en particulier l'information informelle, plus efficacement à travers toute l'entreprise (McDougall, 1994). En dernier lieu, avec la montée en puissance du rôle des réseaux, le commerce international est aujourd'hui de plus en plus facilité par l'intermédiaire de partenariats avec des distributeurs étrangers, des entreprises commerciales, des fournisseurs, des entreprises spécialisées ainsi que les traditionnels acheteurs et vendeurs (Johanson et Mattsson, 1988). Les réseaux, les alliances, et autres partenariats stratégiques remplacent, petit à petit, les formes d'organisation hiérarchisée, permettant ainsi les transactions avec des pays étrangers et procurant des avantages compétitifs aux petites entreprises (Achrol, 1991). En étant acteur de réseaux internationaux, les PME créent des conduits de flux d'information et de création de savoir. En parallèle, les réseaux sont pour les PME une source efficace et pertinente d'information qui facilitent ainsi la progression de leur

courbe d'apprentissage du processus d'internationalisation (Johanson et Mattsson, 1988 ; Westhead, P. ; Wright, M. ; Ucbasaran D. 2001).

En ce qui concerne la localisation et les engagements envers les ressources et moyens locaux (l'appartenance à un territoire), les petites entreprises, au contraire de grandes entreprises multinationales, dépendent largement des conditions de production locale dans lesquelles elles sont ancrées. Cet attachement inclut une multitude de facteurs divers allant du niveau de compétence et d'éducation de la main d'œuvre disponible, au coût de celle-ci, aux institutions de recherche et développement, aux moyens de communication disponibles, en passant par le système d'aides publiques jusqu'à la structure de l'environnement industriel local. C'est donc sans surprise que la proximité s'avère être un facteur important dans un grand nombre d'études de «districts industriels» menées ces dix dernières années (Becattini, 1990). D'après Michael Porter (1990), il se produit souvent un regroupement géographique d'entreprises au sein d'entreprises internationales. Il met en avant les tendances qu'ont des entreprises compétitives et des groupements d'industries de même type à se localiser dans de mêmes lieux au sein d'une nation. A contrario, l'importance des ressources locales doit être considérée par rapport au point de vue de l'entreprise : chaîne industrielle, stratégie de compétitivité flexible et position dans la chaîne de la valeur ajoutée. Certains types d'industries ont un fort besoin d'une localisation groupée plus que certains autres. Certaines PME ont des ressources et un savoir interne qui les rendent plus ou moins dépendantes de l'environnement local.

L'orientation internationale d'une région repose donc, d'une part, sur quelques entreprises clés exposées aux marchés internationaux (entreprises pivots) et sur leurs capacités à atteindre et maintenir une position au sein de réseaux internationaux et frontaliers. D'autre part, le comportement d'une entreprise unique, plus particulièrement dans les premières étapes du processus d'internationalisation est fortement influencé par les conditions d'approvisionnement d'une région, par exemple, des acteurs économiques de la région qui ont su combiner un savoir du marché et des produits, une orientation internationale des institutions à capital risque, etc.

2.1 - Les études empiriques sur la localisation et l'internationalisation

Seulement quelques études empiriques ont été menées avec pour centre d'intérêt l'importance de la localisation dans le processus d'internationalisation des petites entreprises. Dans une étude sur la Norvège, (Christensen, P. R. and L. Lindmark 1993) en concluent que la localisation ne peut être perçue comme une barrière définitive à l'internationalisation des petites entreprises. Cependant, les entreprises localisées sur des zones périphériques ont plus de mal à attirer du personnel formé et orienté vers l'international. Ces entreprises peuvent aussi être exposées d'une certaine manière aux effets de l'internationalisation des affaires comparées aux entreprises localisées dans les zones urbaines.

Dans des études ayant pour thème l'importance de l'environnement local sur les processus de croissance et développement des petites entreprises, des similitudes peuvent être constatées sur le processus d'internationalisation; par exemple, l'étude menée par O'Farrell et Hitchens (1988). Ils suggèrent, sur la base d'études empiriques, que le développement peut être freiné si l'approvisionnement et la qualité des services publics et privés sont limités, si le coût de la main d'œuvre est élevé et si les conditions sociales pour recruter du personnel sont difficiles à gérer. Mason et Harrison (1986) soutiennent ce point de vue et concluent que le capital risque est plus limité dans les zones périphériques du fait de la centralisation des institutions prêteuses et d'une perception déformée qu'elles ont des risques. O'Farrell et Hitchens suggèrent aussi que des taux de revenu bas et une croissance économique faible dans les zones périphériques freinent les opportunités pour le développement des petites entreprises sur les bases des marchés locaux et régionaux.

Toutes ces conclusions mettent davantage l'accent sur la taille et la diversité de la région que sur la spécialisation commune de la structure industrielle et de la localisation des économies. Ainsi, des études comparatives menées dans les provinces italiennes montrent que des services de conseil générique, supposés couvrir plusieurs branches d'industries semblaient être moins performants que des services spécialisés (Colnaghi, 1987).

Dans certaines branches d'industrie le processus d'internationalisation tend à être systématique. L'internationalisation d'une entreprise unique est mise en place en étroite collaboration avec d'autres entreprises et institutions. L'environnement coopératif local est aussi un élément essentiel au succès d'activités d'export pour d'autres PME. De ce fait, nous avançons l'idée que le processus d'internationalisation consiste essentiellement à dédier des ressources externes ancrées dans la région afin de permettre à l'entreprise de se positionner sur des réseaux frontaliers et de soutenir, ainsi, le processus d'exportation. Une conséquence de ce fait est que l'on peut présumer que l'internationalisation de petites entreprises varie avec leur localisation, le comportement de leur dirigeant et leur attachement à leur territoire et également avec leur comportement collaboratif entre elles.

2.2 - Les théories de Contingence et de Construction sociale

Les théories dominantes de contingence relatives à l'internationalisation des entreprises trouvent leur origine dans les idées de Coase sur les frontières/limites des entreprises (Coase, 1937). Coase tend à essayer de répondre à la question: qu'est-ce qui constitue une entreprise? Ceci n'est pas la question clé de cet article, mais empiriquement, il peut être observé que les limites d'une entreprise sont constamment déplacées, soit par des activités d'internalisation ou d'externalisation. En fait, l'externalisation ou l'internalisation des activités à travers les frontières sont précisément une démarche dominante des affaires et une démarche commerciale prépondérante.

L'internalisation par le biais d'investissements directs étrangers est le concept clé dans la théorie éclectique de Dunning (1988) et par le biais de la structure de direction hiérarchisée, elle est aussi le concept clé de la théorie de coûts de transaction de Williamson. Ils visent tous les deux à répondre à la question : sous quelles conditions une entreprise internalise-t-elle une activité ?

La théorie éclectique de Dunning apporte une réponse avec la formule PLI qui stipule qu'une entreprise n'investira à l'étranger que si elle possède la propriété (P), les avantages de localisation (L) et d'internationalisation (I).

La formule de Williamson (1979) est différente. Elle est basée sur deux facteurs humains (la rationalité et l'opportunisme) et sur deux facteurs environnementaux (l'incertitude et la structure de l'industrie). Etant donné les configurations spécifiques de ces quatre facteurs, une entreprise optera ou pas pour une solution d'internalisation ou d'externalisation. Il faut aussi noter que la théorie de coûts de transaction ne traite pas explicitement de l'internationalisation des entreprises. Cependant, son raisonnement par le biais des quatre facteurs est autant valide en dehors des frontières qu'à l'intérieur des frontières d'un marché économique unique.

Avec une certaine mesure de justification, les deux théories peuvent être vues comme traitant toutes deux de l'internalisation et de l'externalisation. Si, d'après les théories, cela n'est pas profitable d'internaliser, les entreprises externalisent leur activité, par exemple, l'activité est faite par d'autres entreprises avec lesquelles l'entreprise en question établit des relations de marché. Cependant, comme montré ci-dessous, du fait de la présomption des théories, elles ne sont pas aptes à prendre en compte toutes les questions de l'externalisation.

Pour ce qui est du concept d'externalisation, on constate que la vague de délocalisation de la production a été aussi importante que la vague d'investissements directs étrangers. La délocalisation de la production signifie d'abandonner la production interne et de la remplacer par des relations avec des fournisseurs. La délocalisation de la production a été ainsi associée à des activités en amont et en aval de l'entreprise, et elle a pu retrouver un élan, certainement causé par l'engouement pour les stratégies générales d'approvisionnement global de plusieurs entreprises. En bref, les entreprises délocalisent essentiellement leur production pour deux raisons :

1. Pour gagner de l'efficacité statique, particulièrement en exploitant les coûts bas de main d'œuvre. Pour arriver à cela, l'entreprise doit rester flexible étant donné que la carte mondiale des coûts de main d'œuvre bas change constamment. La question des économies d'échelle que les acteurs de marché indépendants peuvent exploiter, est liée à l'efficacité statique,
2. Pour bénéficier de l'efficacité dynamique, c'est à dire mettre à profit l'innovation d'autres entreprises, par exemple, de groupements ou districts industriels. Aujourd'hui de nombreux produits sont basés sur un portfolio de technologies et sur une plate-forme technologique complexe, de sorte qu'une entreprise ne peut pas toutes les maîtriser. Pour garder une compétitivité technologique, l'entreprise peut finir par signer des contrats de Recherche et Développement ou créer des alliances avec d'autres entreprises, y compris ses concurrents.

A ce point, la question est de savoir s'il faut ou non établir des installations de production similaires à celles déjà en place dans le pays ou s'il faut servir le marché en exportant. La théorie de coûts de transaction n'a aucune orientation spécifique ni en amont ni en aval. Elle peut être utilisée sur n'importe quel marché. Cependant, la théorie se préoccupe essentiellement de l'efficacité statique. Au contraire, des théories de délocalisations (Lamming, 1993; Grattorna et Walters, 1996) qui favorisent la délocalisation de production pour gagner en efficacité dynamique, la théorie de coûts de transaction tendra, elle, à préconiser l'internalisation. La raison principale de cette différence est que les présomptions de la théorie de coûts de transaction, en particulier la présomption de la tendance opportuniste de l'homme, ne lui permet pas de proposer une solution en réseaux comme structure de direction.

Les présomptions questionnables sur l'homme sont les seules raisons pour justifier de la popularité des théories de délocalisation générale vis à vis de la théorie de coûts de transaction. Une autre raison est le développement technologique. Par exemple, le développement des technologies de l'information a rendu possible de diriger à distance, de relier étroitement à travers les frontières les activités économiques d'entreprises autonomes sans besoin d'une structure de direction hiérarchisée, ainsi que d'exploiter des économies d'échelle tout en adaptant les demandes du marché local grâce à des plans de production flexibles.

En comparaison avec les modèles en étapes (Johanson et Vahlne, 1977; Welch, L. and R. K. Luostarinen, 1988), les modèles de contingence élargissent le concept d'internationalisation. Tandis que les modèles en étapes se préoccupent principalement des activités en aval, les modèles de contingence traitent eux de l'internationalisation par les activités en amont, par exemple par l'approvisionnement et la délocalisation.

Dans la perspective de construction sociale l'internationalisation est vue comme une construction en soit, qui s'oppose au point de vue qui consiste à penser qu'il existe un monde objectif au-delà de l'esprit humain (Morgan, 1986 ; Popova et Sorensen, 1997) permettant de comprendre ces objectifs apparemment contradictoires. La perspective de construction sociale cherche donc à voir si les perceptions et comportements uniques de dirigeants et des entreprises dans leurs quêtes pour des avantages stratégiques, en délocalisant certaines activités, est compatible avec une approche de développement durable ou de responsabilité sociale de l'entreprise. Ce comportement unique résulte de l'interprétation managériale de chacun, de l'expérience, des intuitions et de la chance. En résumé, l'entreprise est une

construction sociale créée par les employés de l'entreprise. Cette construction sociale s'oppose au point de vue qui consiste à croire qu'il y a un monde objectif au-delà de l'esprit humain, un monde qui peut être révélé par des méthodes scientifiques et nous être ainsi présenté comme un fait objectif.

Les implications managériales des deux points de vue sont claires. Le dirigeant, qui croit à un monde objectif, mettra en place une recherche de marché d'après les modes de recherche positivistes (neutralité, représentativité, fiabilité, viabilité, etc.) et prendra sa décision basée sur des faits, qui lui seront présentés sous la forme d'un rapport. Le dirigeant, qui pense qu'il construit le monde autour de lui, agit et interagit avec d'autres personnes, gagne en expérience, essaye des idées, prend des décisions basées sur sa propre compréhension et interprétation du monde. Ce type de dirigeant est plus proche du comportement des dirigeants de PME, en particulier, dans la manière d'envisager l'internationalisation de son entreprise (Slife et Williams, 1995).

Ainsi, il peut exister des attitudes volontaristes dans le fait de développer des activités à l'international et celles-ci n'étant pas toujours, en contradiction avec le développement interne de l'entreprise sur son territoire. Lorsque le dirigeant d'une PME pense que certaines activités de son entreprise peuvent être réalisées plus efficacement et à moindre coût à l'étranger il n'est pas inconcevable de s'engager dans la voie de la délocalisation, sans pour autant nuire à l'activité locale, voir nationale de l'entreprise. Le concept même de délocalisation doit alors être appréhendé de façon différente et il se peut que ce dernier soit source de richesse en interne, pour l'entreprise sur son territoire.

D'autres raisons telles que la «vision» du dirigeant de PME, ainsi que les compétences qu'il a développées au travers d'opportunités rencontrées sur des activités internationales, devront être prises en compte, également, dans les processus d'internationalisation. Ces facteurs rentrent dans le processus de délocalisation et permettent de développer une stratégie de conquête positive pour l'entreprise et pour le territoire dans lequel elle est implantée.

2.3 - La vision entrepreneuriale et le comportement de l'entrepreneur

La vision entrepreneuriale a fait l'objet de nombreuses études (L.J. Fillion, 1991; J. B. Carrière, 1991; Thornberry, 2003). On peut, à la suite de Campbell and Yeung (1991), dire que celle-ci peut se trouver centralisée sur un seul et même acteur «leader» qui anime et manage l'entreprise.

Pour Senge (1990), la vision est «un mix de stratégie, d'objectifs, de valeurs et de croyances». Quant à Fillion, c'est un cadre de réflexion qui permet au dirigeant, à partir de son environnement propre, d'avoir une action entrepreneuriale. Selon T. Verstraete (2005), la vision entrepreneuriale se construit à partir de représentations plurielles, «elle se fonde sur l'expérience, sur les informations que l'entrepreneur obtient et s'articule avec les plans qu'il construit pour résoudre les problèmes de son entreprise». Le dirigeant va chercher à formaliser et clarifier sa vision stratégique (Hitt, M. A. ; Reed, T. S., 2000) et donner ainsi la direction dans laquelle il souhaite que son entreprise s'engage. Selon Marchesnay (1993), la vision est un élément clé «du système de gestion» de la PME, mais n'est pas toujours clairement définie, en raison des caractéristiques intrinsèques de la PME.

Cette vision est un élément déterminant au niveau des choix stratégiques en termes de délocalisation et conduit le dirigeant à prendre des décisions liées à l'internationalisation sur la base d'une stratégie de conquête et de recherche de la performance de son entreprise, tout en maintenant une activité locale productive. Le management stratégique va ainsi s'appuyer, de plus en plus, sur la valorisation des compétences de l'entreprise (analyse interne des ressources) et ne dépendra plus seulement de l'analyse économique et industrielle des marchés.

La PME innovante et qui cherchera à se différencier, cherchera à avoir ainsi une attitude proactive et tentera de produire une chaîne d'avantages concurrentiels. La pensée du dirigeant sera au cœur du processus de prise de décision (Le Saget, 1992; Cossette, 2005) et la compétitivité de l'entreprise dépendra des ressources (Penrose, 1959) et des compétences du dirigeant ainsi que de la façon dont ce dernier sera en mesure d'appréhender les forces et les faiblesses de sa vision stratégique, à partir de sa propre carte cognitive, (Cossette, 2005).

Ce processus visionnaire sera dynamique et évoluera, sans cesse au niveau de la PME, car le dirigeant peaufinera, au fur et à mesure, sa démarche. Cette vision sera influencée par l'information propre dont dispose l'entrepreneur, ainsi que par les connaissances et savoirs présents dans son entreprise et les capacités personnelles d'imagination et de créativité de ce dernier. Ceci lui permettra d'être, de plus en plus pertinent, au niveau des actions qu'il envisagera, car le processus est en construction permanente et s'enrichit des expériences passées, au cours du temps.

Ces anticipations constructives et originales vont lui permettre de construire l'avenir de son entreprise, en exploitant des avantages économiques et sociaux; en prenant des décisions pertinentes en matière de choix stratégiques de délocalisation, autant au niveau des activités existantes sur son territoire que sur les actions à mener dans les pays où il va délocaliser une partie de son activité. Ces considérations renvoient à ce que Mintzberg et Waters (1985), appellent le **leader visionnaire** où l'individu qui possède un contrôle personnel sur l'organisation a la possibilité d'imposer sa propre vision à son entourage.

En se référant aux travaux de Scott and Bruce (1987), il ressort que les entrepreneurs de PME vont développer leurs activités internationales en faisant appel, beaucoup plus, à leurs compétences et aux opportunités qu'ils vont rencontrer qu'à la mise en place d'une véritable stratégie d'entreprise à long terme. C'est ainsi que le propriétaire-dirigeant des PME familiales va utiliser ses compétences pour conduire sa démarche d'internationalisation.

Pour développer les activités à l'international l'entrepreneur cherchera alors, à mobiliser **les ressources** (Penrose, 1959) et **les compétences de l'entreprise** (Hamel et Prahalad, 1990). Il est à noter que c'est la combinaison des ressources et compétences qui constitueront l'un des facteurs déterminant de la réussite du processus d'internationalisation. L'autre facteur de réussite de ce processus d'internationalisation est le comportement de l'entrepreneur en particulier son approche éthique et sociétal lors de la prise des décisions.

En allant plus loin dans cette réflexion, Forgues et Leconte (2000), montrent l'importance jouée par les compétences de l'équipe dirigeante dans le processus d'internationalisation. Selon Van Den Bosch, Van Wijk et Volberda (2003) le rôle de l'équipe managériale dans la conduite du processus d'internationalisation est aussi un facteur déterminant dans la formulation et la mise en œuvre des stratégies de conquête des entreprises.

Il en ressortira que le mode de management propre du dirigeant viendra impacter de façon particulière, le processus de délocalisation. Ceci pourra apporter des limites dans ce processus managérial stratégique et avoir des répercussions sur les richesses dégagées et sur les actions de délocalisation qui sont menées.

Ce sont les comportements, les compétences et la vision du dirigeant qui seront déterminants dans les choix faits et les décisions stratégiques internationales menées et nous verrons que cette façon d'agir qui consiste à tirer avantage de ressources extérieures, n'est pas incompatible avec la volonté de pérenniser l'activité localement et de développer sur place des «savoir-faire» compétitifs et innovants.

Nous serons donc amenés, à réfléchir et à comprendre quel est le rôle des compétences du dirigeant dans la conduite du processus de délocalisation; voir en quoi ses choix de délocalisation peuvent avoir des impacts positifs, au niveau du territoire local sur lequel évolue cette entreprise et comment il utilise sa vision entrepreneuriale, malgré les biais cognitifs, tout en faisant preuve d'esprit d'initiative et d'intuition créatrice de valeur.

III - L'Etude de Cas comme Méthode de Recherche

Notre recherche étant fondamentalement qualitative, nous avons retenu comme méthode de recherche la méthode de l'étude de cas. L'intérêt de cette méthode réside dans le fait qu'elle permet aux chercheurs d'avoir une compréhension globale (holistique) des événements de la vie réelle (Yin and Campbell, 2003), tels que les processus décisionnels, le cycle de vie des individus ou des organisations, les relations internationales ou la maturité d'une industrie.

D'une manière générale, l'étude de cas comme méthode de recherche (Yin and Campbell, 2003) est préférée, d'une part, lorsqu'il s'agit de répondre à des questions du type «comment et pourquoi» et d'autre part, lorsque le chercheur a très peu de contrôle sur les événements d'un phénomène contemporain ou de situation réelle. Nous sommes, cependant conscient, comme le dit Yin, que l'étude de cas comme méthode de recherche demeure un vrai challenge que nous tentons de relever ici.

Pour ce faire, nous avons sur la base d'un questionnaire, effectué une série d'interviews semi-directifs auprès du dirigeant actuel. Les entretiens ont été menés dans les locaux de l'entreprise et ceux de notre école. Ils ont été enregistrés et par la suite retranscrits. De plus, l'un des auteurs en sa qualité de membre de l'Association pour le Progrès du Management (APM) a suivi et observé pendant plus de deux ans, le comportement du dirigeant de l'entreprise.

Lors des entretiens, nous avons voulu comprendre le processus cognitif, le processus de formulation de la stratégie de son entreprise et les décisions attenantes pour sa mise en œuvre. Ainsi nous lui avons demandé de nous parler de son entreprise, des phénomènes qui l'ont conduit au processus de délocalisation, de sa façon de manager et des compétences, que selon lui un dirigeant de PME doit avoir et celles que doivent avoir les collaborateurs de l'entreprise. Nous avons, par la suite voulu croiser les résultats des entretiens et de la période d'observation avec des informations secondaires que l'entreprise a mis à notre dispositions. Nous avons pu, ainsi, valider la pertinence et la véracité des données recueillies lors des entretiens.

IV - L'expérience d'internationalisation de l'entreprise Cancé

Notre démarche exploratoire s'appuie sur le cas du groupe familial CANCE, dont le siège social se situe à Nay. Cette entreprise travaille dans les secteurs des charpentes et constructions métalliques, de la métallerie et de la menuiserie aluminium. La stratégie de l'entreprise n'a eu de cesse de rechercher des facteurs de différenciation et d'attractivité à partir d'autres territoires porteurs, tout en restant convaincu que l'élément central et le pivot de l'entreprise ne pouvait que se trouver sur son territoire d'implantation «centre du monde», selon les dires du Président Directeur Général et propriétaire Monsieur

Christian Cancé. C'est en pratiquant la délocalisation d'une partie de sa production que cette entreprise a obtenu des avantages significatifs lui permettant de jouir, aujourd'hui, d'une position de leader sur son secteur d'activité.

Il a toujours existé une tradition familiale, dans le travail du métal, car c'est en 1880 qu'Eugène Cancé arrive à Nay (Pyrénées Atlantiques) pour installer une première forge. Son fils Robert Cancé, père de l'actuel dirigeant, en 1961, crée une entreprise artisanale de serrurerie, située derrière la maison familiale, avec un apprenti et 100 m² d'atelier.

Lors de la mort tragique Robert Cancé en 1968, son fils Christian Cancé, alors qu'il n'a que 16 ans, reprend l'entreprise familiale qui emploie 2 ouvriers et 3 apprentis et possède 600 m² d'ateliers. Il oriente alors l'activité de l'entreprise vers la construction métallique. En prenant en charge la direction de l'entreprise il devra se battre seul, contre les banquiers et un monde qui lui est inconnu. La création du groupe Cancé, en 1991, le positionne comme le spécialiste du métal dans le bâtiment et à la fin des années 90, grâce à des investissements importants, notamment dans la conception assistée par ordinateur, il devient un des leaders nationaux de la construction métallique.

Aujourd'hui, le groupe familial est dirigé par Christian et Bertrand (son fils) Cancé. Le groupe est présent au niveau national avec 4 sites de production et 6 sites commerciaux et perpétue son savoir-faire dans le métal pour le secteur du bâtiment. Ces agences s'étendent sur le territoire national, sur la façade atlantique, de Bayonne à La Rochelle, en passant par Bordeaux, Narbonne, Toulouse et Clermont-Ferrand.

Le développement international commence avec l'ouverture d'une usine de production en mars 2003, à Carrégal Do Sal, au Portugal. En octobre 2004, le groupe Cancé rachète la partie «Métal» du groupe Cégélec, à l'île de la Réunion (250 m² de bureaux, 35 collaborateurs) où le groupe Cancé développe ses 3 métiers de base que sont les constructions métalliques, la métallerie et la menuiserie Aluminium. Le chiffre d'affaires du groupe Cancé, en 2005, est de 70,0 millions d'euro avec un effectif de 400 salariés.

Le comportement entrepreneurial du dirigeant et sa vision ont été à l'origine d'une stratégie de croissance et de conquête qui a emprunté les sentiers de la délocalisation, tout en évitant les effets négatifs, au niveau du développement économique local. Il a recherché à utiliser, à bon escient, les critères sociaux et fiscaux des pays voisins ainsi que les infrastructures existantes, tout en maintenant les activités de l'entreprise dans son territoire d'origine autour de la bourgade de Nay où se situe le siège social du groupe.

Si on se réfère, à Jean Pierre Couderc et Eric Stephany (2005), on peut classer ce dirigeant, dans la typologie du «dirigeant entrepreneurial», leader avec des principes liés à la recherche de la croissance, de l'autonomie de sa structure et de la richesse dégagée, par le biais des actions entreprises. La seule différence, par rapport au positionnement typologique du dirigeant, à ce jour, est d'une part, que le dirigeant du groupe Cancé ne souhaite pas faire appel à des sources de financement externe et d'autre part, n'envisage pas l'ouverture de son capital car il veut rester indépendant et seul décisionnaire des orientations stratégiques et opérationnelles de son entreprise.

Même si Christian Cancé est un autodidacte, il a su comprendre et saisir les avantages positifs, liés au coût de la main d'œuvre dans certains pays, par le biais des unités de production, tout en maintenant le niveau d'investissement sur le marché local. Il n'a eu de cesse, de parfaire sa connaissance et son savoir, en s'inscrivant, en tant que 1er adhérent du club APM (Association pour le Progrès du Management), il y a 20 ans déjà. Il a également beaucoup voyagé, individuellement et par le biais du réseau APM, pour se rendre compte sur place, des possibilités qui pouvaient être offertes sur les marchés et territoires porteurs (Chine, Europe Méridionale et de l'Est, les pays du Maghreb).

Il a, ainsi, cherché à se différencier de ses concurrents par une approche liée à des stratégies de conquête et de recherche de performance à travers les délocalisations par rapport à son bassin. L'effet déclencheur de cette stratégie de délocalisation, selon lui, a été un séminaire APM qui lui avait montré les avantages qu'un dirigeant de PME, comme lui, pouvait tirer d'une telle stratégie.

Ce visionnaire, avide de croissance pour son entreprise, a été séduit par la démarche d'une certaine internationalisation d'une partie de ses activités, notamment au niveau de sa production et il s'est donné les moyens de voir ce qu'il était possible de faire au niveau de son activité, ailleurs, dans des zones à potentiel, pour développer son groupe de façon optimale. Il a su prendre des risques et prendre les décisions qui convenaient, tout en restant humble et en allant chercher, à chaque fois l'information requise, quand il ne la détenait pas. Il a su reconnaître ses erreurs et reconstruire à chaque fois, une nouvelle démarche qui prenne en compte les événements antérieurs.

C'est par l'apprentissage qu'il a, au fur et à mesure, construit son processus de délocalisation et à chaque fois, il a envisagé les conséquences de ses actions sur son territoire d'origine. Il a le souci de rendre ses clients heureux et recherche, pour lui et ses collaborateurs, la volonté et le goût du travail bien fait, dans la bonne humeur et l'épanouissement des hommes qui composent l'entreprise. Son style de management est fondé sur la fidélité et le travail en équipe, la convivialité et la bonne humeur qui ne peuvent se dégager que dans un climat de confiance, avec des règles de jeu comprises par tous et la possibilité donnée à chacun, de se réaliser pleinement et de grandir au travers des expériences professionnelles et personnelles vécues, au sein du groupe.

Pour comprendre et visualiser la démarche entreprise par ce dirigeant et son mode de fonctionnement, concernant ses décisions stratégiques en matière de croissance et de développement nous utiliserons le concept de la «stratégie en nappe d'eau» ou stratégie d'irrigation à partir de l'expérience et des résultats obtenus au niveau local (voir figure 1, pour comprendre le mécanisme de cette approche).

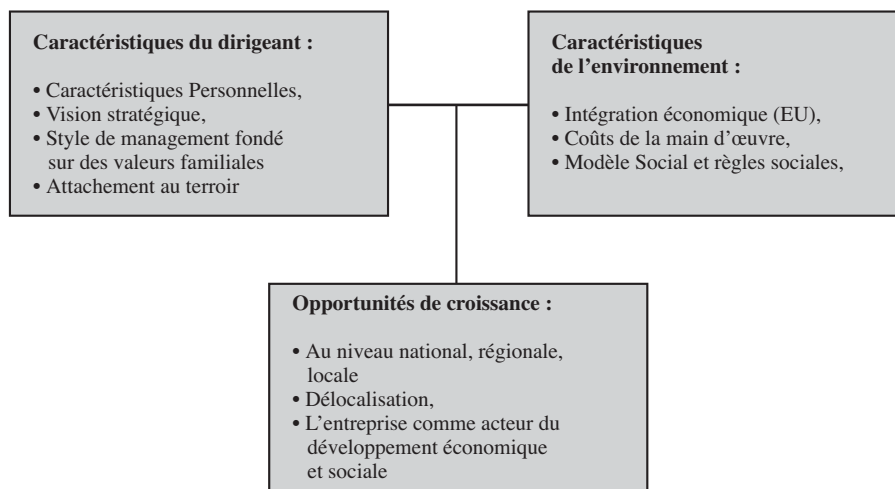


Figure 1: Composants d'une stratégie de croissance "Nappe d'eau"

Le processus stratégique et de prise de décision dans le cadre d'une stratégie dite «nappe d'eau», à partir des expériences et résultats obtenus sur son marché national, régional et local, se caractérise d'une part, par des éléments liés directement à la personnalité du dirigeant et d'autre part, par des éléments liés à l'environnement économique, politique et social de l'entreprise. En d'autres termes, le dirigeant dans sa démarche stratégique de délocalisation cherche à reproduire ailleurs (irriguer) les expériences, le mode de management et les comportements qu'il a vécus dans son territoire d'origine. Par exemple, lors de l'ouverture de l'usine au Portugal, il s'implante dans une zone rurale et n'emploie que des personnes ayant un fort attachement à la terre, tels que, ceux qu'il emploie dans son territoire rural de Nay.

4.1 - La personnalité du dirigeant entrepreneur Christian Cancé

La démarche comportementale de Christian Cancé ou personnalité du dirigeant a eu un impact sur sa façon d'agir. Cela lui a permis de construire sa vision stratégique de différenciation qui a renforcé sa position de leader sur son marché. Ce comportement peut s'appréhender à 3 niveaux : les caractéristiques personnelles, la vision stratégique et le style de management.

A. Les caractéristiques personnelles et intrinsèques sont regroupées au travers d'éléments tels que :

- une **curiosité** importante de ce dernier sur tout ce qui l'entoure et une volonté de créer «un empire à sa mesure», pour laisser son empreinte,
- un **plaisir et une force de travail** au quotidien, sur tout ce qu'il entreprend et cela est associé à une attitude volontariste et positive, de sa part, quelle que soit la situation rencontrée,
- une **persévérance et une combativité**, en toute occasion, liée à un caractère intuitif et optimiste,
- une **ouverture d'esprit et un non conformisme**, sans idée préconçue sur ce qui peut se passer.
- **une envie** d'associer **l'art** dans le monde de l'entreprise, pour inciter ses collaborateurs à avoir un regard différent et ouvert sur ce qui les entourent et ne pas s'enfermer dans un cadre,
- un besoin d'**apprendre en permanence** qui cherche à se construire et à acquérir le plus d'éléments possibles pour avoir les informations requises et prouver qu'il peut non seulement y arriver, mais aussi à avoir une position de leader incontesté.
- **une vision originale** sur le monde qui l'entoure, ce qui ne l'empêche pas de se remettre en cause en toute humilité, si nécessaire.

B. La vision stratégique constitue le véritable déclencheur des actions de développement de son entreprise. Cette vision se caractérise par :

- **Un désir de laisser son empreinte sur son territoire**, pour montrer aux autres (les «notables d'avant») qu'il a réussi et qu'aujourd'hui il faut compter sur lui dans la région.
- **Un besoin de construire en permanence, en partant de zéro**, pour choisir ses collaborateurs, imposer sa façon de manager et la culture qu'il souhaite développée au sein de ses structures.
- **Une réelle appropriation du risque et l'envie de saisir des opportunités**, en exploitant des avantages significatifs sans pour autant détruire ce qu'il a construit sur son territoire.
- **Une bonne analyse de la situation géographique**, dans laquelle il se trouve afin d'utiliser la proximité géographique, pour construire des scénarios gagnants, tout en prenant en compte l'évolution du contexte mondial,
- **Un déclencheur extérieur déterminant**, en ce qui concerne sa stratégie de délocalisation. Un séminaire de l'APM auquel il a assisté, l'a conduit à réfléchir sur la croissance de son entreprise en augmentant sa productivité et en reproduisant ailleurs, les schémas appliqués au niveau du siège.

C. Le style de management se caractérise par :

- **Un management en direct** où tout passe par lui, c'est le pivot de la structure. Ceci peut avoir des effets négatifs sur le développement de compétences managériales des employés.

- **Une volonté de ne pas avoir ni de service des ressources humaines ni d'organigramme établi**, afin d'être en prise directe avec l'ensemble du personnel et être incontournable, par rapport aux décisions liées au recrutement des futurs salariés.
- **Une non définition des fonctions** pour que ses collaborateurs ne se trouvent pas enfermés dans un cadre pour agir, prendre des initiatives et développer leurs créativité. Ceci est, selon le dirigeant, un facteur essentiel de la polyvalence et de la motivation de son personnel.
- **Un climat convivial** où les règles sont néanmoins édictées par le patron qui peut être craint, mais qui sait écouter et créer des moments de convivialité,
- **Une prise de décision sur les actions** à mener qui lui est personnelle ; ce qui lui a laissé jusqu'à présent, une grande liberté d'action. Cependant, les choses sont en train de se modifier, car il y a la mise en place d'un Comité Directeur composé par son fils et ses 3 directeurs d'agence et son Directeur Administratif et Financier. L'émergence de cette nouvelle gouvernance va réduire sa marge de manœuvre et l'obliger à partager avec d'autres, sa vision et ses décisions.
- **Un management à distance** effectué sur les activités se trouvant à l'étranger par le biais de visioconférences et autres moyens technologiques

Toutes ces caractéristiques comportementales sont des éléments forts qui constituent la personnalité du dirigeant. Elles sont à prendre en considération dans l'orientation et la concrétisation des choix stratégiques. Toutefois, ce ne sont pas les seuls déterminants de sa vision car ils sont à rapprocher des éléments contextuels qui font partie de l'environnement dans lequel le groupe Cancé évolue. Il est à noter que, suite à nos entretiens, certains traits environnementaux ont eu un impact sur sa façon d'agir et de mener l'évolution de son groupe.

D. Pour l'environnement de l'entreprise, le dirigeant a mis en avant des éléments qui l'ont incité à agir d'une certaine façon et qui l'ont conduit à anticiper sur les actions à mettre en place.

- Il ressort que les facteurs liés aux contraintes fiscales, sociales, législatives et économiques au niveau national ont conduit notre dirigeant à s'interroger sur les opportunités existantes, hors du marché français, afin de profiter d'avantages. Il a reconnu que cela a été facilité par l'existence du marché unique européen et les accords de libre échange avec d'autres pays.
- Les caractéristiques sociales du lieu de localisation de l'entreprise ont été, également, prises en compte dans les choix retenus au niveau de la stratégie internationalisation. Ainsi le côté rural du territoire a toujours été un élément déterminant du choix des implantations.

La stratégie de «nappe d'eau» a pris tout son sens lors de l'internationalisation de l'entreprise. Ainsi, dans les localisations retenues, il a souhaité reproduire des éléments identiques à ce qui s'était fait sur Nay. Lorsqu'il a délocalisé une partie de sa production, il a repris le même schéma ; il a cherché en ce qui concerne la main d'œuvre à embaucher des personnes ayant les mêmes caractéristiques que celles qui ont fait leur preuve sur Nay, c'est-à-dire des collaborateurs issus du monde paysan avec le sens des valeurs et du travail bien fait.

Il apporte une attention particulière à la compétence de son personnel d'encadrement et pour ce faire il a formé sur place, à Nay, les responsables de ses unités. Ces derniers sont des autochtones de ces pays et qui après quelques mois de formation sur Nay, ont intégré la culture et les valeurs de l'entreprise. Une fois formés au siège ils repartent alors, dans leur pays d'origine pour manager l'équipe de collaborateurs embauchés sur place en appliquant la philosophie de la maison mère ou plus tôt la philosophie du dirigeant-proprétaire.

Le choix des endroits d'implantation de ses sites est aussi quelque chose de très important pour notre dirigeant. Il recherche, en allant dans le pays, des lieux qui possèdent les mêmes caractéristiques que celles qui ont fait le succès de son entreprise Nayaise. Ceci est d'autant plus important qu'il ne peut pas être, lui, physiquement sur place, en permanence, pour se rendre compte de l'ambiance qui se développe dans ces structures internationales. Les endroits d'implantation des ateliers sont, alors, loin des capitales, proches des campagnes, mais possèdent tous un réseau routier performant.

Cette stratégie de délocalisation a été utilisée à chaque fois et s'il y a eu des replis, dans certains pays, c'est que le dirigeant a pensé que ce n'était pas encore le bon moment (Europe de l'Est) ou encore que des événements contraires sont intervenus. Son esprit d'ouverture et son approche de l'apprentissage lui ont permis de changer et modifier sa stratégie à chaque fois que cela a été nécessaire.

4.2 - La Stratégie de développement national

L'objectif a été de construire un réseau en implantant des agences régionales sur une partie du territoire national. Il a privilégié, en premier, l'Ouest de la France, car il y a trouvé des caractéristiques proches de celles qu'il connaissait sur Nay, avec des gens qui avaient une certaine considération du travail et de la façon dont ils devaient se comporter. Puis, il a retenu, dans son expansion géographique, les axes routiers qui lui permettaient d'avoir une meilleure couverture sur le territoire national.

Cette approche proactive de sa stratégie lui a permis de répondre rapidement aux attentes de ces clients et d'être présent sur plusieurs chantiers, à la fois, sans passer par des intermédiaires. Son souci d'indépendance a, ainsi, été satisfait. Il a pu construire des centres de compétences, près des clients où il peut proposer des services complets et de qualité, avec du personnel très compétent.

C'est ainsi qu'il s'est engagé dans un processus de délocalisation qui lui a permis d'une part, de saisir des opportunités stratégiques dans des pays où les coûts de la main d'œuvre sont moins chers, exemple le Portugal et d'autre part, renforcer sa position de leader tout en évitant de détruire la richesse sur son territoire d'origine.

4.3 - La Stratégie de délocalisation

L'objectif essentiel de cette stratégie a été de réduire les coûts de production trop importants sur le territoire national, en raison des contraintes salariales. Pour ce faire, il a commencé par délocaliser au Portugal, 50% de sa production. Il a ensuite, exporté une partie de sa production en Martinique et Mayotte puis implanter une usine de production sur le territoire français d'outre mer de la Réunion. Le choix de la localisation des sites a aussi pris en compte le coût des terrains, sur lesquels il souhaitait se développer. Ce qui lui a permis d'améliorer la performance globale de l'entreprise. A chaque fois, il s'est personnellement rendu sur place pour se rendre compte, par lui-même, des avantages et inconvénients des différents territoires.

Il a toujours conservé des clients français et a choisi de s'implanter dans des pays où le poids de la langue n'est pas un handicap, pour lui, les gens devaient comprendre le Français ou l'Anglais. C'est aspect constitue un élément essentiel dans son comportement, car il aime rester en contact avec les gens qui se trouvent sur place, comprendre leurs attentes et voir ce qu'il convient de faire pour être plus efficace pour l'entreprise et pour les hommes qui la composent.

Il n'a pas hésité à faire des avancées et des replis stratégiques que ce soit en Espagne, au Maroc ou encore dans les Pays de l'Europe de l'Est, car les circonstances et les événements n'étaient plus au rendez-vous. Sa stratégie a été de privilégier les voies d'accès partant et arrivant sur Nay, car pour lui il est inconcevable de ne pas mettre Nay au milieu de tout, même et il le reconnaît, «c'est le bout du monde». Pour lui, c'est son univers et c'est de là que tout doit partir.

De plus, il a toujours pris en compte, dans le choix des territoires sélectionnés, les gens et leur façon de vivre, car pour lui le relationnel est très important. Il veut avoir des personnes qui ont envie de vivre pleinement et qui ne sont «pas tristes» (dixit Christian Cancé). Il cherche à reproduire ailleurs, ce qu'il a sur Nay, car c'est ce qui lui plaît et ce qui lui a permis de fonder et construire son groupe. Comme nous l'avons vu cette stratégie de délocalisation ne s'est pas fait à l'encontre de ce qui existe sur Nay, mais au contraire, a pris en compte les contraintes existantes et à tenter avec ces dernières d'en faire des avantages. Ceci a permis de garder sur place l'entreprise Nayaise, malgré la situation géographique et le contexte économique.

En d'autres termes, le comportement du dirigeant de cette PME met en évidence le fait que le dirigeant qui adopte un comportement éthique et social, attaché à son territoire, dans le déploiement de sa stratégie d'internationalisation, apporte un regard différent sur les pratiques liées au phénomène de délocalisation. Dans le cas de l'entreprise Cancé, nous voyons que ce sont **les compétences du propriétaire dirigeant, sa vision stratégique fondée sur le développement** durable des territoires et son comportement qui sont à l'origine d'une stratégie de délocalisation à visage humain dans laquelle l'homme est placé au centre du processus de prise de décision.

Ce processus s'est construit et a évolué, en partant de son propre mode d'apprentissage, de ses connaissances, de sa volonté de valoriser sur place son activité et de ses expériences personnelles à l'international. Il a su aménager et optimiser les ressources internes mises à sa disposition et il a été en mesure de les combiner efficacement pour développer l'activité de l'entreprise. Ce processus de délocalisation fondé sur les compétences et comportements du dirigeant peut être schématisé comme suit :

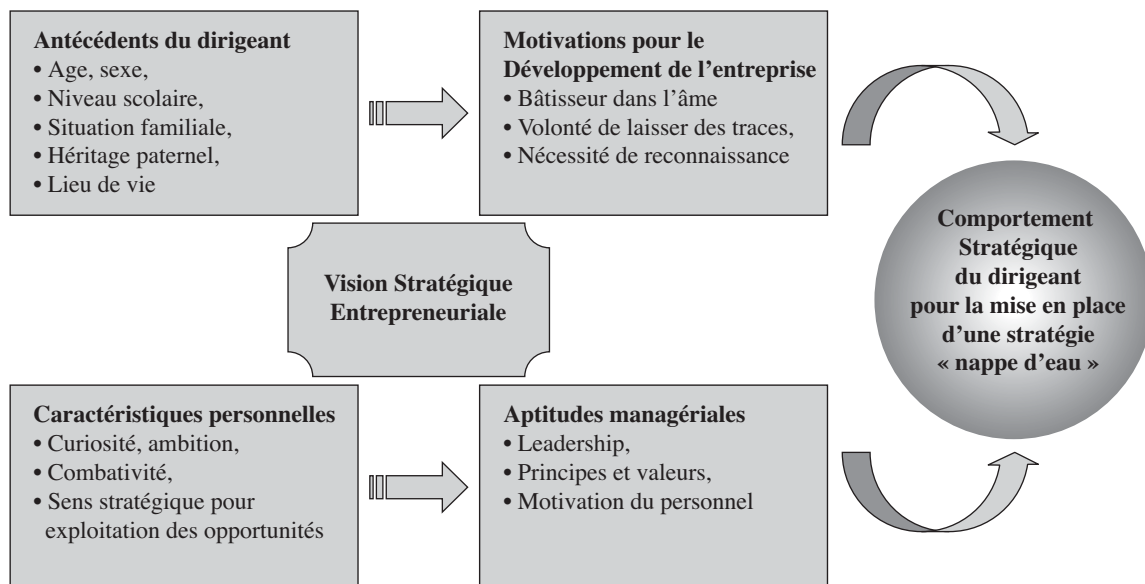


Figure 2 : Schéma de représentation du comportement du dirigeant

Ce sont le comportement, les compétences et la vision du dirigeant qui ont été déterminants dans les choix faits et les décisions stratégiques internationales menées. Cette façon d'agir qui consiste à tirer avantage de ressources extérieures, n'est pas incompatible avec la volonté de pérenniser l'activité loca-

lement et de développer sur place des «savoir-faire» compétitifs et innovants. Ceci permet de poursuivre le développement de son activité «du bout du monde, dans une localité enclavée» ; cette activité demeure, ainsi, viable, malgré les contraintes contextuelles particulières et cela permet aux gens de cette région de continuer à vivre et travailler, au beau milieu «d'une zone campagnarde», sans réels avantages compétitifs.

C'est parce que l'on arrive à dégager dans ces zones délocalisables, de la valeur économique qui est transférable sur les autres parties de l'activité que l'on peut continuer à exercer et développer son activité au niveau du siège. Il existe donc une véritable connexion, entre les qualités personnelles de l'entrepreneur et le succès économique de l'entreprise qu'il dirige car c'est le dirigeant qui est le pivot de la structure et des décisions qui sont prises.

Dans le cas présenté, nous n'avons pas pris en compte, comme le signalent Hamel et Prahalad (1990), l'entourage direct, constitué par l'équipe dirigeante, car l'entrepreneur, en question, agit seul et quelquefois même, à contre-courant des actions voulues par son encadrement. Le seul leitmotiv de l'entrepreneur est d'assurer l'indépendance de son entreprise et sa pérennité, en saisissant des opportunités économiques et sociales, là où elles se trouvent pour développer la performance globale de son entreprise et celle de son territoire.

V - Les limites de l'étude et discussions

L'approche par la vision et les compétences du dirigeant permet d'appréhender le processus de délocalisation sous un autre angle que le seul angle économique ce qui conduit à revoir le seul schéma économique et la seule rentabilité recherchés dans de telles opérations. Le dirigeant de ce groupe familial possède un système de valeurs très fort, une appartenance à son territoire natal qui est viscéral et pratique un management familial original, centré sur ses valeurs et un système de représentation sociétal dans lequel l'homme et le respect de l'aménagement du territoire sont au centre de sa démarche stratégique. Sa stratégie d'internationalisation a été progressive (modèle d'internationalisation du type Uppsala). Elle a démarré par des extensions proches de son site, en s'engageant sur la construction d'agences voisines et se sont poursuivies, par la suite, par des projets de délocalisation, de plus en plus ambitieux, mais avec en commun, les mêmes objectifs, la croissance et la pérennité de l'entreprise mère.

Les études de Penrose (1995), Reynaud (2001), mettent en avant le rôle des compétences de l'équipe dirigeante et du potentiel interne de l'entreprise dans le processus d'expansion de l'entreprise. Ici, nous rajoutons au rôle moteur des compétences du seul dirigeant, son aspect comportemental éthique qui ouvre une voie de réflexion intéressante sur les phénomènes de délocalisation. Ces dernières peuvent, alors, être appréhendées, de façon plus positive et ne pas conduire systématiquement à la fermeture des unités sur place, dans un bassin d'emploi qui à priori n'est pas le plus porteur.

Ce cas montre l'importance des compétences, des comportements, des valeurs et de la vision de ce dirigeant que nous qualifions de dirigeant entrepreneurial, à la tête d'un groupe familial. Nous espérons que l'analyse de notre cas puisse enrichir les travaux et la compréhension du phénomène de délocalisation. Nous avons tenté de donner un éclairage différent du processus de délocalisation, en ajoutant d'autres critères tels que la vision du dirigeant et ses comportements dans les choix de délocalisation et ce pour une typologie particulière d'entreprise œuvrant dans le champ de l'entrepreneuriat.

Nous sommes, néanmoins, conscients que ce phénomène réussi de délocalisation dans le respect de l'aménagement du territoire et des compétences locales est limité car il ne s'appuie que sur une seule expertise et ne tient compte des spécificités du comportement et des compétences que d'un entrepreneur, sur une période donnée, dans un bassin d'emploi spécifique et un secteur d'activité particulier. Cependant nous espérons contribuer à attirer l'attention sur le développement de l'approche fondée sur le comportement des dirigeants-proprétaires des PME dans la décision d'internationalisation et tout particulièrement dans les décisions de délocalisation souvent citées comme destructrice de valeur sur leur territoire d'origine.

VI - Conclusion et perspectives de recherche

Le comportement de ce dirigeant, ses décisions stratégiques et sa façon de procéder sont les clés de voûte de la réussite de sa stratégie de délocalisation et de sa stratégie de croissance, d'un point de vue global, car il a su au même temps maintenir, sur place, son activité.

Il a été capable de capitaliser sur ses expériences antérieures et d'enrichir ainsi son action managériale, il s'agit ici de la notion de capital social (Adler and Kwon, 2002). En utilisant son capital social, pour à chaque fois, entreprendre et apporter une pierre supplémentaire à son édifice, afin de créer et produire non seulement de la valeur pour l'actionnaire familial mais aussi de la richesse pour l'ensemble des parties prenantes de l'entreprise et donc de contribuer au développement durable d'un territoire ne possédant pas de véritables avantages comparatifs.

Il semblerait donc que nous puissions aborder le phénomène de délocalisation de façon différente et montrer que ce dernier n'est pas toujours négatif pour l'économie locale. En effet, dans ce mode de fonctionnement, il y a une complémentarité entre les phénomènes de délocalisation effectués et le maintien de l'économie locale ; de plus, l'entrepreneur a su utiliser, de façon judicieuse et efficiente, les compétences réalisées sur chaque site, en augmentant la performance économique globale du groupe. Il a été en mesure de juger les besoins nécessaires, de mobiliser les ressources voulues qui permettent la réussite pleine et entière de ses projets, tout en ralliant l'adhésion de l'ensemble de ses collaborateurs, dans un but commun.

Des recherches ultérieures, utilisant un échantillon significatif d'entreprises familiales et patrimoniales, permettraient de valider ou d'invalider les hypothèses ici émises sur la relations entre les postures comportementales du dirigeant-proprétaire et ses décisions de délocalisation dans sa quête à la croissance et la performance de son entreprise, tout en évitant les effets de ses décisions, sur l'économie du territoire d'origine de l'entreprise.

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Predictors of Multidimensional Well-Being in Women Entrepreneurs in France and the US: Family Business Demands and Sense of Coherence

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Extended Abstract

Women who are entrepreneurs report aspiring to "be" and "do" well in important areas of their lives while meeting demands from multiple sources. Influenced by Frankenhaeuser (1991) and Antonovsky (1987, 1994a, 1994b), this study was designed to partially test a proposed model of multi-dimensional well-being applicable to women entrepreneurs (women entrepreneurs) in family businesses that included two salutogenic criteria (quality of life and position on a disease-health continuum related to physical, psychological, interpersonal and social role functioning) and three predictors (environmental demands from family and business sources and sense of coherence or SOC). The SOC construct, referring to a global orientation that the world is meaningful, comprehensible, and manageable, was of particular interest.

The study tested elements of a new model of well-being in women entrepreneurs within family businesses adapted from the conceptual framework offered by one resiliency scholar (Frankenhaeuser, 1994). Additionally, the work of several other resiliency scholars (Antonovsky, 1994a; McCubbin, McCubbin, Thompson & Thompson, 1995) influenced the operationalization of variables.

Frankenhaeuser, a Swedish psycho-physiological occupational stress researcher, has spent the past twenty-five years examining the impact of stress on workers' health. Recently she has taken a salutogenic orientation which is gender sensitive and recognizes the cumulative effect of work and non-work stress on the individual's productivity and well-being. While she has studied production line workers, support staff, managers, and professionals, Frankenhaeuser has not examined entrepreneurs.

Women entrepreneurs in France and the United States agreed to participate in an anonymous survey. The French data was collected through the Aquitaine Europe Communication. The sample reflected ethnic diversity and representation from sparsely and densely populated areas. Consistent with prior research, the results showed that demands from family and business sources and SOC were significantly associated with both dimensions of well-being. The results of separate hierarchical regressions indicated that the three predictors, in combination, accounted for significant variance in quality of life and disease-health (31% and 60%, respectively). SOC alone accounted for 24% and 40% of the variance, respectively; while environmental demands did not contribute significantly to quality of life when SOC was entered. SOC did not moderate the demands-well-being relationships; however the results suggested that SOC may act as a mediator. Where feasible, women entrepreneurs' levels of well-being, demands, and SOC were examined and comparisons made with other groups of women. Given the evidence, SOC may be an important intervention target.

This study was designed to potentially make contributions to psychology in general and the family-owned business, entrepreneurship, stress, and resiliency literatures in particular. Any new knowledge concerning women entrepreneurs will expand this occupational group's sparse empirical base. The focus on well-being honors the merit in using a salutogenic orientation, rather than a pathological one. The selection of two dimensions of well-being reflects the multiple criteria women entrepreneurs use for measuring their "success" and the multi-dimensional nature of well-being. The proposed model of well-being recognizes the contribution that both person and environment make in achieving well-being in the family business. Finally, the study asks the question, "Does sense of coherence act as a moderator in the relationship between environmental demands and well-being of women entrepreneurs in the family business?"

Introduction

In recent years corporate down-sizing and restructuring have led to reduced opportunities for career advancement in the corporate sector. As a result, entrepreneurship has become an increasingly attractive career option. This is reflected in the rapid rate of new business formation in the United States during the past decade, especially of those businesses owned and operated by women (Business Week, 1994; Nation's Business, 1996). At present, over nine million women own 38 percent of all businesses, employing 27.5 million workers (Center for Women's Business Research, 2001). This employment figure is greater than the number employed by the Fortune 500 companies combined (HRFocus, 1995). Cumulatively these businesses contribute \$3.6 trillion annually to the U.S. economy. While the largest share of women-owned businesses is in the service sector, the greatest growth continues to be in non-traditional industries such as construction, wholesale trade, transportation/communications, agriculture, and manufacturing.

Greenhaus and Callanan (1994) have identified a number of factors that differentiate entrepreneurship careers from the more traditional careers of organizational employees. These include personal risk of failure; higher degree of personal commitment to success of the firm; a lower degree of structure, predictability, and support; as well as the need to perform multiple functions. McClelland (1967a) posited that entrepreneurs have a higher degree of achievement motivation (the need to do something better than it has been done before) than managers, whereas managers have a higher degree of power motivation (the need to influence other's behavior) than entrepreneurs. Wameryd (1988) theorized that entrepreneurs uniquely combine a quest for novelty behavior. Lowman (1991) suggested that entrepreneurs have a preference for individuality, an antagonism toward authority, and a willingness to take more risks than is typical of managers.

This increase of women and men in entrepreneurship careers necessitates an examination of entrepreneurs as a unique occupational group. It is time to understand the nature of their lives, the pressures of owning and operating a business while attending to non-work demands, and the factors that contribute to success and well-being

Research on organizationally employed men and women has demonstrated the interdependence of work and family roles and highlighted the importance of examining both work and family domain variables in understanding the predictors of health, career success, and job satisfaction (Loscocco & Leicht, 1993; Parasuraman, Purchit, Godshaik, & Beuteil, 1996). More specifically, research has established strong relations between environmental demands and physiological responses that ultimately led to health damage and disease (Frankenhaeuser, 1991). Although a few entrepreneurship studies have explored the relation between family demands and business growth and success, the combined impact of work and family variables as they relate to entrepreneurial health, career success, and well-being has not yet been explored. There is a need to examine work and non-work demands on entrepreneurs and the relationship to entrepreneurial success, health, and well-being.

Studies comparing entrepreneurs to the organizationally employed show that entrepreneurs have greater freedom, autonomy, and opportunity for self-fulfillment, but show no difference in satisfaction and psychological well-being (Eden, 1975). This may be due to offsetting demands such as working long hours, facing considerable financial risks, experiencing work-family conflict, dealing with market competition, and having ultimate responsibility for business outcome.

The entrepreneurship literature, based predominantly on the study of white males, has primarily focused on the criterion variable of economic success (e.g., annual revenue or sales, profit, growth, return on investment) and possible predictors (e.g., education, experience, and achievement motivation) (Brush, 1992). The career literature suggests that psychological indicators of success in both work and non-work domains be included in studies of any occupational group's well-being (Greenhaus & Callanan, 1994).

Thus personal satisfaction, job satisfaction, family satisfaction, life stress, and psychological well-being should be considered when defining "success."

Recent empirical analysis confirms gender differences in the career goals of entrepreneurs. Contrary to their male counterparts, women entrepreneurs establish more comprehensive goals beyond achieving economic success (Butner & Moore, 1997). Both personal and professional well-being are important to them. Women entrepreneurs view the freedom and flexibility offered by entrepreneurship as facilitating the pursuit of work and non-work simultaneously.

Greenhaus and Callanan (1994) posit the potential paradox of this situation. Theoretically, entrepreneurs are their own bosses and thus have the freedom and flexibility to set their own schedule and pace. They can modify their paid work as non-work demands surface. In reality, however, they are still responsible for the survival and economic viability of their enterprise. Four out of five businesses fail within the first five years of operation (Hisrich, 1990). Time and resources spent on meeting business demands results in less availability for meeting non-work demands. The reverse is true as well. As non-work demands increase, the entrepreneur has less ability to devote time and energy to the business. The results of the only study that has examined the influence of work and non-work demands on the more broadly defined criterion variable of entrepreneurial success and well-being suggest a complex relation between work and family characteristics and the criterion variables (Parasuraman, Purohit, Godshalk, & Beutell, 1996). Specifically, time commitment to work and family and conflicts at work and home act as mediators and intervening mechanisms.

Little research attention has been focused on women entrepreneurs; however gender differences have been identified in motivation for entrepreneurship, business goals, business growth, and approaches to business formation (Brush, 1992). It is too early to tell if there are gender differences in regard to predictors of entrepreneurial success. Gender difference studies have yielded equivocal findings concerning environmental demands, health and well-being (Cox, 1985; DiSalvo, Lubbers, Rossi, & Lewis, 1988; Pollard, Ungpakorn, Harrison, & Parkes, 1996). In general, gender differences appear to diminish as environmental conditions and behavioral characteristics become similar (Frankenhaeuser, 1991).

Entrepreneurship researchers now recognize a need for studying women's intra-group variability, broadening the definition of "success," expanding the potential list of predictors beyond education, experience and motivation, and identifying moderator variables. No models of entrepreneurship exist that address these deficiencies.

I - Purpose of the Study

The purpose of this passive design study was to partially test a new model that relates environmental demands from family and business sources and a personal characteristic known as sense of coherence (SOC) to different dimensions of well-being for a sample of women entrepreneurs. The study focused solely on women entrepreneurs, an occupational group that is rapidly growing in numbers and importance, yet for whom scientific knowledge is sparse.

First the general model is presented in pictorial form, and then described in narrative form. Finally, research questions are proposed that relate to partial testing of the model. The model has a salutogenic rather than a pathological focus, i.e., the interest is in identifying predictors of well-being rather than disease and distress. Multi-dimensional well-being, the criterion variable, was defined by two different measures: quality of life (UOLI) and position on a disease-health continuum (DQ) in regards to physical, psychological, interpersonal, and social role functioning. Environmental demands from

PROPOSED MODEL OF WELL-BEING IN WOMEN ENTREPRENEURS

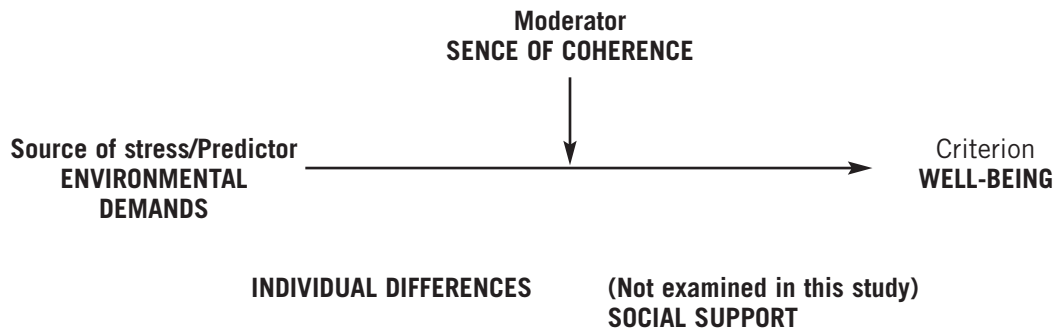


Figure 1: Proposed Model of Well-Being in Women Entrepreneurs

family and business sources, the predictor variables, were defined as the pile-up of environmental demands from normative and non-normative family life (FILE) and business (BUSEVT) events. Sense of coherence (SOC), the moderator variable, was defined as one's self-reported global orientation to seeing the world as comprehensible, manageable and meaningful. The model recognized the importance of individual differences and social support in achieving and maintaining well-being. For the purposed of this study, social support was not examined.

II - Research Questions

Since two different dimensions of well-being (quality of life and position on the disease-health continuum) were selected, separate versions of a model of well-being were formulated for each dimension. The model stated that environmental demands from family and business sources combined (PILEUP) are negatively related to the quality of life (QOLI) dimension of well-being and positively related to the position on the disease-health continuum (OQ) dimension of well-being. In addition, the model stated that sense of coherence (SOC) is positively related to the quality of life (QOLI) dimension of well-being and negatively related to the position on the disease-health continuum (OQ) dimension of well-being. The main effects of environmental demands from each source and sense of coherence on each criterion were examined. Finally, the study explored how sense of coherence (SOC) influenced the relationship between environmental demands from family (FILE) and business (BUSEVT) sources and each dimension of well-being (QOLI and OQ). Specifically, the study asked, "Does sense of coherence (SOC) moderate the relationship between environmental demands from family and business sources and each dimension of well-being (quality of life and position on a disease-health continuum in regards to physical, psychological, interpersonal, and social role functioning) in women entrepreneurs?"

III - Theoretical Perspective

In formulation of a theoretical perspective for studying the well-being of women entrepreneurs, resiliency theory provided a useful prototype. It has a salutogenic focus, which is grounded in historical contributions from psychology, sociology, and medicine. Resiliency theory is grounded in historical contributions from psychology, sociology, and medicine. Resiliency theory recognizes the potential damaging physical and psychological effects of exposure to acute and chronic stress, yet suggests that alternative outcomes are possible (McCubbin, McCubbin, Thompson, Han & Allen, 1997). This research has identified resistance resources and protective mechanisms, which allow individuals to survive and even thrive during times of extreme stress.

Resiliency theory attempts to achieve a synthesis of connections between personal and environment; resources (intrapersonal, familial, interpersonal, and societal) and environmental demands from multiple domains (individual, family, and work); and ultimately the recursive interactions among stimuli/events, responses/outcomes, and process.

IV - Basis for the Model

The study tested elements of a new model of well-being in women entrepreneurs adapted from the conceptual framework offered by one resiliency scholar (Frankenhaeuser, 1994). Additionally, the work of several other resiliency scholars (Antonovsky, 1994a; McCubbin, McCubbin, Thompson & Thompson, 1995) influenced the operationalization of variables.

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Frankenhaeuser (1991) formulated the Bio-psychosocial Framework for Stress-Health Interactions – a conceptual framework that includes environmental demands, individual differences, cognitive assessment, and social support as the predictor variables. Health and well-being are the criterion variables, which have been operationalized as physiological markers. Frankenhaeuser has not yet indicated the relationship between/among the elements of her model. Over the past few years, she and her colleagues have focused on developing a research instrument (Total Workload or TWL) to measure environmental demands (Mardberg, Lundberg, and Frankenhaeuser, 1991). Until recently the TWL had not been cross-culturally validated and was available only in Swedish. Plans are currently in place to translate the Total Workload into English and conduct pilot testing around the world (U. Lundberg, personal communication, February 2000). Frankenhaeuser and her colleagues have not yet operationally defined individual differences nor the cognitive assessment elements that are so critical to the framework.

This deficit was addressed by turning to the work of Antonovsky, an Israeli medical sociologist, who spent twenty-five years attempting to convince the health/medical community of the merit in shifting to a salutogenic orientation, i.e., studying predictors of health rather than disease. Antonovsky (1987) formulated a resiliency theory regarding how health is maintained during times of stress. He honored the ubiquitous nature of stressful events and sought to learn from people who were doing well in spite of their challenging life situation. Antonovsky recognized the importance of both person and environment in achieving well-being.

While his theory posited the complex relationships among a plethora of variables, he identified the sense of coherence (SOC) variable as a key predictor of well-being (Antonovsky, 1994b). Simultaneously characterized as personal characteristic, resistance resource perceptual orientation, and a reflection of the appraisal process, Antonovsky's sense of coherence appears to parallel Frankenhaeuser's cognitive assessment construct.

McCubbin and his colleagues have formulated a culture-sensitive, comprehensive model of family adjustment and adaptation that is grounded in child and family studies (McCubbin, McCubbin, Thompson & Thompson, 1995). They have incorporated the knowledge derived from psychologists, health professionals, and sociologists in identifying relevant resources, process, and environmental demand variables that have links to salutogenic outcomes for families. Antonovsky's sense of coherence is incorporated both as a critical part of the resiliency process and a valuable resistance resource that helps protect against conditions of acute and chronic stress. Of particular interest, is the recognition that environmental demands come from multiple sources. The McCubbin model defies pileUp as the accumulation of environmental demands from normative and non-normative work and family life events. This variable incorporates key elements of Frankenhaeuser's environmental demands variable and offers a measure that is culturally-valid and available in English.

V - Significance of the Study

This study was designed to potentially make contributions to psychology in general and the entrepreneurship, stress, and resiliency literatures in particular. Any new knowledge concerning women entrepreneurs will expand this occupational group's sparse empirical base. The focus on well-being honors the merit in using a salutogenic orientation, rather than a pathological one. The selection of two dimensions of well-being reflects the multiple criteria women entrepreneurs use for measuring "success" and the multi-dimensional nature of well-being. The proposed model of well-being recognizes the contribution that both person and environment make in achieving well-being. The sense of coherence variable is introduced into the field of business management. Finally, the study asks the question, "Does sense of coherence act as a moderator in the relationship between environmental demands and well-being of women entrepreneurs.

VI - Study Participants Inclusion Criteria

While the study sample size had been targeted at participating French and American women who met established study eligibility inclusion criteria and returned completed study packets, 60 entrepreneurs actually met criteria and returned completed study packets. The French data was collected through the Aquitaine Europe Communication (AEC). The specific inclusion criteria were linked to characteristics of women who assumed the accompanying financial, psychic, and social risks associated with being an entrepreneur (Hisrich, 1990, p. 209). In this study, the criteria for inclusion were: (a) being in business for at least one year (Butner & Moore, 1998); (b) having initiated or founded the business or bought the business from an already established business (Hisrich, 1990); (c) having at least fifty percent ownership in the business (Hisrich, 1990); (d) having primary responsibility for operating and managing the business (Langan-Fox & Roth, 1995); and (3) working on the average a minimum of twenty hours per week with the business. The use of these restrictive criteria resulted in a reduction of the pool of eligible participants. Some women were interested in participating, but did not meet inclusion criteria. Frequent reasons for non-inclusion were: (a) business inherited from estate or received in divorce sett-

lement; (b) partnership with more than one partner resulting in shared rather than primary responsibility for the business; or (c) ownership of less than 50 percent of the business. Some women were not included because they reported being in a different phase of business involvement, resulting in a reduced work week, i.e., less than 20 hours per week.

VII - Snowball Sampling

In the process of making preliminary inquiries about accessing women entrepreneurs, it became apparent that neither random nor conventional convenience sampling were feasible. These women were not listed in any one location nor linked to a common network or entity. Many of the women were not afflicted (i.e., electing not to join chamber of commerce, professional organizations, or entrepreneurial associations) for various reasons including a preference for independence, time constraints, inaccessibility to the "nearest" network, or lack of knowledge about existing support entities. A relatively small subset had adequate resources to participate in such networks. All these factors highlighted the difficulty of accessing eligible participants and gaining an adequately sized sample. A third sampling approach seemed warranted.

Snowball sampling was used to obtain participants. This approach has been labeled as such because subjects are requested to pass questionnaires on to their friends and acquaintances (Rohblum, 1994). Accepted as an appropriate methodology when there is potential difficulty in identifying a specified population, snowball sampling can result in recruitment of adequate numbers of participating (Klein, Sepekoff, & Wolf, 1985). In this study the following seven recruitment methods were utilized: letter of recruitment sent through mail, face-to-face at an organizational gathering, introduction via telephone, Internet communication, invitation through a mutual friend or third party, door-to-door canvassing of business sites, and announcement in periodicals and relevant publications.

The snowball sampling approach has some disadvantages. It may produce a nonrandom or self-selected sample which affects the generalizability of findings to the broader population and may inadvertently create subgroups with significant differences in the means of the study variables. The effect of recruitment method on study variables was examined during data-analysis. Using SPSS (Statistical Package for Social Sciences) Version 10.0, three types of analyses were conducted: screening data, primary analyses, and secondary analyses.

VIII - Personal Characteristics

A total of 60 females ranging in age from 26 to 77 participated in the study. The mean age was 47.32. The largest portion were in their 40s, almost one third were in their 50s, and one fifth were in their 30s. Relatively few women in their 60s or 70s participated. Only 2 females in their 20s responded. A total of three participants did not report their age, ethnicity, or education.

The means, standard deviations, and ranges for the study variables (quality of life, position on the disease-health continuum, environmental demands from family and business sources, and sense of coherence) appear in Table 1. The pre-adjusted /pre-transformed version of the data were used to make interpretations regarding the levels of well-being, demands, and sense of coherence reported by this sample, and where feasible, made comparisons with other groups of women.

IX - Primary Analyses

After screening the data, internal coefficients (Cronbach's alphas) were conducted to ensure that each scale had adequate reliability. Descriptive statistics (means, standard deviations, and ranges) were determined for the study variables based upon both the pre-transformed/pre-adjusted and transformed/adjusted versions. A one-way analysis of variance was performed to determine the effect of recruitment method on the study variables. Pearson product-moment correlations were assessed to determine the relationships between and among the study variables (QOLI, OQ, PILEUP, FILE, BUSEVT, and SOC) and test several of the research hypotheses. These correlations were based on the transformed versions of OQ, PILEUP, BUSEVT, and FILE and adjusted version of QOLI. Separate hierarchical regression analyses of each criterion (QOLI and OQ) on predictors, hypothesized moderator and interaction terms were conducted based upon the transformed (OQ, FILE, and BUSEVT) and adjusted (QOLI) versions. The variables were entered in three sets:

1. Environmental demands (FILE and BUSEVT separately)
2. Sense of coherence (SOC)
3. Product (interaction) term for FILE X SOC and BUSEVT X SOC

The main effects hypotheses were tested by the magnitude and significance of R^2 in Set 1 and the change of R^2 and significance of the change when Set 2 is entered. More specifically, the first set dealt with testing the main effects of the sources of environmental demands. The second set examined the main effects of SOC on criterion even when the first set (FILE and BUSEVT) was controlled. The moderator hypotheses involving the statistical interaction terms (FILE X SOC and BUSEVT X SOC) were tested examining the change in R^2 and the significance of the change in R^2 when Set 3 was entered.

Conclusions

The level of well-being in this sample was relatively high (as measured by quality of life). While the reported environmental demands from family and business sources were at statistically low to moderate levels, they were not significantly different than levels of family demand reported by women parenting children with chronic disease. The sense of coherence of the sample of women entrepreneurs was relatively strong. A Pearson product-moment correlation matrix for the criterion, moderator, predictor, and selected biographical characteristics was produced. Quality of life and position appeared to be different dimensions of well-being in women entrepreneurs. In combination, environmental demands from both family and business sources (PILEUP) correlated more strongly with both criterion measures than either source of demand alone. Consistent with prior research, the study results indicated that environmental demands from family and business sources were significantly negatively correlated with quality of life and positively correlated with positioning on the disease-health continuum referenced. Also, consistent with prior research, sense of coherence was significantly positively correlated with quality of life and negatively correlated with positioning on the continuum. Based upon the results of the first set of the hierarchical regressions, environmental demands from business sources (BUSEVT) appeared to improve the predictive value of environmental demands from family sources of both criterion measures. This provided empirical evidence justification for inclusion of both sources of environmental demands in the model when testing main and interaction effects. In addition, environmental demands and sense of coherence had different relationships to each criterion measure. Given these factors, two versions of a model of well-being were proposed and tested based upon the two dimensions of well-being.

A second set was designed to examine combined main effects for each criterion measure to determine the predictor variables' ability to predict quality of life. Results from the second set indicated that the predictor variables, in combination, accounted for 31 percent and 60 percent of the variance in the two dimensions of well-being, respectively. While environmental demands from both sources were only statistically significant as a predictor in the position on the continuum version of the model, sense of coherence was statistically significant as a predictor in both versions of the well-being model.

Finally, the moderator effect was examined in the third set of each hierarchical regression. By entering interaction terms it was possible to determine whether sense of coherence acted as a moderator on the environmental demands-well-being. The results from these analyses failed to offer support for sense of coherence acting as a moderators, although there was evidence that sense of coherence was acting as a mediator in either demands-well-being relationship. While these findings were contrary to the primary research hypotheses and some prior research findings, they were consistent with some recent resiliency research that has failed to provide empirical support for the moderator effect of certain personal characteristics and sense of coherence on the environmental demands-well-being relationship (Masten, 2001; Svavarsdotir, McCubbin & Kane, 2000).

In summary, sense of coherence appeared to have strong predictive value on both dimensions of well-being, although there was no evidence that it moderated the environmental demands-well-being relationship. In contrast, environmental demands appeared to only have predictive value regarding position on the continuum. The results suggest that sense of coherence appears to mediate the demands-well-being relation on both criteria measures. Given the amount of variance explained by the study variables, there may be room for inclusion of other variables into a model of well-being in women entrepreneurs.

Limitations of the Study

In spite of the fact that there are many contributing factors to well-being in women entrepreneurs, the present study found that sense of coherence does not moderate the demands-well-being relation on either dimension of well-being, however a sizeable portion of the variance in well-being can be accounted for by SOC. Surprisingly, when included with SOC, environmental demands from both family and business sources had no predictive value in the quality of life version of the well-being model. However, environmental demands from both family and business sources did not have predictive value in the disease-health version when included with SOC. Nonetheless, these results should be taken into account with the context of the limitations of this study.

The sampling selection procedures and participation requirements may pose limitations on the research. Unfortunately, for reasons already mentioned, it was impossible to obtain a random sample from the population of women entrepreneurs. While every effort was made to minimize the bias and to maximize opportunity for participation, the eligibility criteria for inclusion, participation requirements, and recruitment methods may have resulted in selection of a sample that was biased. Therefore, generalizability is limited by the type of women who participated according to select personal, family, and business characteristics. As this is a preliminary study, differences between the French and U.S. has not yet been made and is ripe for future research as is the goal of increasing the sample size.

Subject to the limitations of the study, the following conclusions are generalizable to population of women entrepreneurs sampled in this study:

1. women entrepreneurs report an average to high quality of life with relatively low levels of disease and dysfunction
2. women entrepreneurs report a strong sense of coherence
3. women entrepreneurs report low to moderate levels of pileup or environmental demands from family and business sources. However, the reported levels of demand from family sources are not significantly different than the levels reported by women parenting children with chronic disease. In fact, women entrepreneurs report significantly higher levels of environmental demands from family sources than those reported by a sample of women representing all life stages.
4. Quality of life and position on the continuum represent different dimensions of well-being with little over-lap.
5. Environmental demands from business sources make a valuable contribution in predicting well-being. In combination, environmental demands from family and business sources are a better predictor of well-being than either source alone.
6. Total environmental demands or pileup are significantly correlated with both dimension of well-being. The associations are moderate to moderately strong.
7. Sense of coherence is significantly correlation with both dimension of well-being and the associations are strong.
8. Quality of life is predicted primarily by sense of coherence, while environmental demands from family and business sources do not contribute significantly.
9. In contrast, position on the continuum is predicted by both environmental demands from family and business sources and sense of coherence.
10. Sense of coherence does not appear to moderate the environmental demands-well-being relationship on either the quality of life or position on the disease-health continuum dimensions, however there is evidence that SOC may act as a mediator.

There is still much to understand about the resiliency of women entrepreneurs, their well-being and contributing factors. Additional empirical inquiry is warranted. It will be important for researchers studying women entrepreneurs to keep abreast of any new theoretical or empirical developments regarding well-being, resiliency, and sense of coherence. New theoretical ground is being broken and new research is examining the processes which underlie protections against difficulty and foster a sense of coherence and well-being. Directions for future research should be made up of further analysis of the present study data base, theoretical and methodological refinements in the model and the study design, and replication with different samples based on the outlines improvements.

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Table 1 Descriptive Statistics

Variable	M	SD	Range
Quality of Life			
Pre-adjusteda	55.62	8.92	11.00-73.00
Adjusted	55.70	8.57	31.00-73.00
Disease-Health Continuum			
Pre-transformedb	.92	.37	.13-2.36
Transformed	.94	.19	.37-1.53
Total Environmental Demands			
Pre-transformedc	13.79	8.16	0.00-62.00
Demands from Family Sources			
Pre-transformedd	9.85	6.91	0.00-50.00
Transformed	2.95	1.07	0.00-7.07
Demands from Business Sources			
Pre-transformede	3.94	2.64	0.00-12.00
Transformed	1.83	.77	0.00-3.46
Sense of Coherencef			
	5.32	.67	3.14-6.97
Demands from Business Sources			
Pre-transformedg	3.94	2.64	0.00-12.00
Transformed	1.83	.77	0.00-3.46
Sense of Coherence			
	5.32	.67	3.14-6.97

Note. Variable measured by Scale:

Quality of Life = QOLI or Quality of Life Inventory;

Disease-Health Continuum = OQ or Outcome Questionnaire;

Total Environmental Demands = PILEUP or Sum of File and BUSEVT;

Demands from Family Sources = File or Family Inventory of Life Events;

Demands from Business Sources = BUSEVT or Business Challenges and Events Faced by Entrepreneurs;

Sense of Coherence = Orientation to Life Questionnaire or SOC Scale.

Values and scoring information are based upon pre-transformed or pre-adjusted version:

a Maximum score = 76;

b Ratings range from 0 ("never experience") to 4 ("almost always experience");

c Maximum score = 85;

d Maximum score = 71;

e Maximum score = 14;

f Ratings range from 1 ("very seldom/never") to 7 ("very often/always").

Table 2: Hierarchical Regression Examining Main and Interaction Effects on Quality of Life

Variable	R ²	ΔR ²	sr ²	β
Version 1: Predicting Quality of life (QOLI)				
Set 1: Main Effects	.08***	.08***		
Environmental Demands				
Family (FILE)			.02*	-.16*
Business (BUSEVT)			.03**	-.18**
Set 2: Main Effects	.31***	.24***		
Environmental Demands				
Family (FILE)			.00	-.04
Business (BUSEVT)			.00	-.04
Sense of Coherence (SOC)			.24***	.53***
Set 3: Interaction Effects	.32***	.01		
Environmental Demands				
Family (FILE)			.00	-.05
Business (BUSEVT)			.00	-.04
Sense of Coherence (SOC)			.23***	.53***
FILE X SOC			.00	-.01
BUSEVT X SOC			.01	.09

Note. (N = 227) *p < .05, **p < .01, ***p < .001.

Table 3: Hierarchical Regression Examining Main and Interaction Effects on Disease-Health Continuum

Variable	R ²	ΔR ²	sr ²	β
Version 2: Predicting Disease-Health (OQ)				
Set 1: Main Effects	.20***	.20***		
Environmental Demands				
Family (FILE)			.05***	.25***
Business (BUSEVT)			.08***	.30***
Set 2: Main Effects	.60***	.40***		
Environmental Demands				
Family (FILE)			.01*	.09*
Business (BUSEVT)			.01*	.11*
Sense of Coherence (SOC)			.40***	-.69***
Set 3: Interaction Effects	.60***	.00		
Environmental Demands				
Family (FILE)			.01	.09
Business (BUSEVT)			.01*	.10*
Sense of Coherence (SOC)			.40***	-.70***
FILE X SOC			.00	.00
BUSEVT X SOC			.00	.06

Note. . (N = 228)

*p < .05, **p < .01, ***p < .001

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Toward an understanding of
relevant strategic organizations:
a fuzzy logic approach

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Abstract

The purpose of this paper is to attempt a preliminary development of a new model that integrates strategic organizational analysis and the fuzzy logic approach. We suggest that in today's business environment and according to the stage of the business life cycle that firms are facing, managers must pay attention to how important it can be to focus on either efficiency or effectiveness when designing their firm's organizational structure. The results of our investigation are a theoretical concept that we call **"Relevant Strategic Organization Index" (RSOI)**, which is built in applying the fuzzy logic approach to organizational development theory. We have chosen three input variables: The firm's business life cycle, efficiency, and effectiveness. The model's output variable is the Relevant Strategic Organization Index or RSOI.

The preliminary conclusion of the study is that in a competitive environment with a short business life cycle the **question is no longer how efficient the firm's organization might be but how relevant are the decisions made in terms of strategic alignment between strategic organization and business strategy.**

Key words:

Strategy, fuzzy logic, organization, structure, and competitiveness.

Introduction

In today's uncertain and global business environment, companies are facing several organizational and structural challenges. We believe that to deal with these challenges managers at all level of firms should explore new ways and new approaches to redesign and build a new corporate organizational architecture or "Organizational Strategy of the Firm" that can make companies more flexible, more adaptable to a very dynamic competitive environment mostly characterized by a short life cycle.

To explore these new ways and approaches, we suggest a multi-field research in crossing the fuzzy logic approach with of that of organizational development (OD). We believe that the findings of this multi-field research can be helpful for managers to respond to key questions about:

- How to manage company's organization in a global context,
- How to design or restructure a new corporate organizational architecture,
- How to adjust the organization of the firms to enhance their competitiveness,
- How to build a strategic organizational ecosystem that enable firms to deal with environmental business changes,
- How to build an organization that is relevant strategically to the firm's business life cycle and strategy

The central question of our research proposal is **How Can Firms' Managers Move From an Efficient or Effective Organization to a Relevant Strategic One?** We make the assumptions that first, being an **efficient organization** is no longer enough today to compete in a business world characterized by uncertainty, short business cycles, and a very dynamic competitive environment that requires firms to be more flexible and adaptable. Second, at the early stage of the business life cycle, decision-making about organizational structure might look at **effectiveness** instead of **efficiency**. Third, at the later stage of the life cycle, say maturity and decline, decision-making about organizational structure might look at efficiency instead of effectiveness. So managers have to balance **efficiency** and strategic **effectiveness** when making decisions about how relevant their firm's organization is when facing the competitive business environment and its Key Success Factors (KSF).

Our research suggests a framework that could help managers to understand what a Strategic Relevant Organization is and assesses it through what we call the **"Relevant Strategic Organization Index" or RSOI**. The **RSOI** is a concept built on three variables: The Business Life Cycle, Efficiency, and Effectiveness. The model result is the Relevant Strategic Organization Index or RSOI.

We believe that by using the RSOI managers will be able to make better decisions to align the firm's organizational capability to that of the business life cycle and strategy, therefore to enhance the firm's ability to compete. In a global and highly competitive environment with a short business life cycle, the question is no longer how efficient the firm's organization might be in terms of process or structure but how effective or relevant are the decisions made in terms of strategic alignment between strategic organization and business strategy.

The time of "fix your strategy and structure follows" as Alfred Chandler said is gone, now is the time of "fix your organization and then you can know what kind of business strategy you can formulate and implement". It is in this logic that managers might behave to give their firms the level of adaptability and flexibility that they need to compete in today's competitive business environment.

We assume the fact that this high capacity of adaptability and flexibility is only possible if companies are able to build real organizational ecosystems (Moore, 1997) in which organizational boundaries are blurred by a dense network of capabilities, competencies, resources, and human skills. Therefore, managers face strategic decisions not only related to their firm's operational efficiency but also to their firm's organizational effectiveness that matches the stage of the business life cycle that the firm is facing. This is what this paper is all about.

I - Literature review

Most managers make decisions about their firms' organization in terms of division of labor and division of power or management style. This type of decisions is more related to how to optimize the firms' efficiency, operating model, and the firms' management efficiency than the strategic contribution or strategic impact of the organization on the firms' competitiveness itself. In other words, managers are not enough aware of how much the design of the firm's organization can constraint or hinder the firm's strategic options or strategic intent.

What we want to explore, throughout the paper, is the dynamics of organizations and the impact it can have on how managers strategize their firms in an unstable, and uncertain business environment. In so doing, we want to challenge the idea of what we know about the organization of the firm, which is mainly focused on organizational efficiency rather than on the strategic relevance of the firm's organization. We will call this the "organizational strategy of the firm".

This organizational strategy of the firm, as a response to the business environment, could be assess by using the "Relevant Strategic Organization Index or RSOI." The more important the RSOI is let us say; medium, high or very high the more the organizational strategy of the firm is relevant to the firm's business environment and its competitive strategy. We believe that the fuzzy value of the RSOI could help managers better understand the continuing loop over time connecting the actions of managers to align the organizational strategy of the firm with the firm's business strategy.

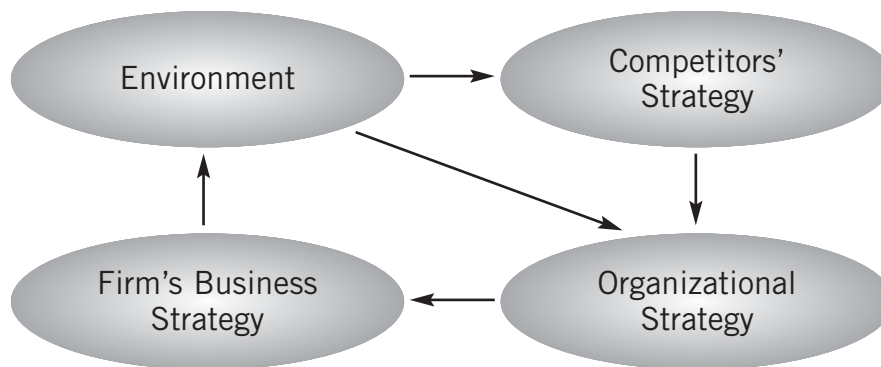


Figure 1. Organizational Strategy alignment to the Business Strategy

In other words, the organizational strategy of the firm is the reaction of what it looks like its shape and its capabilities. The organizational strategy of the firm is what you see when you stand at the organizational boundary and look inwards. *The role of personal leadership is important and sometimes decisive in the accomplishment of strategy. Although we know that organization structure and processes compensation, incentives, control, and management development influence and constrain the formulation of strategy, we should look at first at the logical proposition that structure should follow strategy in order to cope later with the organizational reality that strategy also follows structure (Andrews, 1980)*

The implications of this organizational strategy can result in new way to measure the firm's organizational performance. This new organizational performance measure can be described in terms of aspects such as:

- Customer's share instead of market share,
- Customer's image instead of brand image,
- Competence in relation to customers' needs instead of competitors' competence,
- Customers' profitability instead of market revenue

The organizational strategy is, then, a framework of how an organization relates to its environment. At this point, we can ask some questions: To what extent the organizational strategy determines the business strategy; to what extent the business strategy is constrained to the organizational strategy.

Responses to these questions can be obtained by studying the dynamics of organization along with the business life cycle. Thus, by identifying the fundamental laws governing successful organizational strategy. If this can be done, managers will be able to prescribe what to do to create and manage organizations that will succeed in the future.

Throughout this paper, we are concerned with what managers can do to design organizations strategically relevant to the business strategy by taking into account the stage of the business life cycle in which the firm is.

It was Adam Smith who built the premise of what we called today “organization theory” when he demonstrated the greater efficiency that could be gain through division and specialization of labor (*Stigler, 1957*). This work laid the foundation for later organizational and industrial theorists such as Max Weber and Frederick Taylor who advocated narrowing the scope of workers’ jobs so that specialization could be developed and efficiency enhanced. Weber’s monumental work presented bureaucracy as the ideal form of organization (*Wren, 1972*).

The organizational and management writers grouped under the classical school- look at organizational issues from two different directions. Frederick Taylor focused on rationalizing jobs beginning at the lowest levels of the organization. Henry Fayol, on the other hand, focused on providing a rational model for top management of an organization (*Bedeian and Zammuto, 1991*). Their approaches have two things in common: (1) they proposed one best way to manage and (2) they attempted to develop rational techniques that would help in building the structure and processes necessary to coordinate action in an organization.

Another important contribution to organizational theory was that of Chester Barnard known as the Human Relations School. This approach explored the role of groups and social processes in organizations. The most notable work is the Hawthorne studies at Western Electric by Roethlisberger and Dickson and works by Elton Mayo (*Roethlisberger and Dickson, 1939; Mayo, 1945*). These studies questioned the rational, efficiency-oriented scientific management views of work. Other works of note in this school include Chester Barnard’s book *The Functions of the Executive* and Douglas McGregor’s book *The Human Side of Enterprise*. While the classical theorist viewed organizations as well-oiled machines, the human relations theorist viewed organizations as coalitions of people with multiple and divergent needs. According to the Human Relations School, there is more to organizational effectiveness than efficiency.

The works of contingency theorists have a decidedly rational overtone and have resulted in extensive investigations of organizational technology, the external environment, goals, organizational size, and how these contextual factors are related to organizational structure. Contingency theorists reject the one-best-way model of firm’s organization proposed by earlier theorists. The basic premise of contingency theories is that different structural configurations are appropriate for different contextual conditions. As interpreted by managers, contingency theory suggests that they should attempt to assess the contextual conditions and select the appropriate structure and design for the organization. However, as we will see, the world of organizations is complex and uncertain.

Recently, several new ways of viewing organizations have emerged. Some of these approaches have tried to deal with the shortcomings of contingency theory, while others take different views of organizations such as institutional theory, ecological perspectives, holistic, and organizational economics approaches. To finish, this brief review of organizational theory we focus on two theories based upon industrial and organizational economics, namely transaction cost economics and agency theory. Although subtle differences distinguish these two approaches, their central focus is similar. Both view organizations as bundles of transactions or contracts binding workers and owners together. According to agency theory, the primary interests of owners (principles) and workers (agents) are essentially different (*Fama, 1980*). Owners seek to maximize their return on investment by the most efficient use of the organization. Agents, on the other hand, seek to minimize their efforts and maximize their remuneration.

Transaction cost economics explores transactions that take place both inside and outside the organization. These include transactions between owners and managers, managers and subordinates, suppliers and producers, and sellers and buyers. Both agency and transaction cost perspectives view the primary reason for organizing as being the reduction of uncertainty that exists in typical transactions.

We argue that these different approaches are more focused on the search for operational efficiency than strategic effectiveness of the firm. Although operational efficiency is important, we believe that the search for strategic organizational effectiveness is critical for firms that want to succeed in a highly competitive environment and fast business life cycle.

II - A reinterpretation of the concepts of efficiency and effectiveness

For the sake of this research, we will define an **Organization** as an open system interacting with the external environment from which the organization imports energy in the form of physical, human, technological, and financial resources. The open system model makes explicit the fact that organizations must interact with their external environment and thereby that managers must be aware of the strategic impact of the firm's organizational choice on the firm's capacity to formulate and implement its competitive strategy. Additionally, when determining how best to manage the organization, managers must consider other contextual factors such as organizational size, technology, goals, and culture.

This kind of strategic system approach to organization theory states that managers should consider these contextual factors when they determine the strategies for managing the firm. The conclusion of this approach is that the choice of an organization's structure should be contingent, or dependent, on the context that the organization is facing. This choice is on the one hand, a function of the stage of the business life cycle in which the firm is competing or will compete and on the other hand, a function of the capacity of the organization to be flexible enough to achieve the firm's strategic goals.

One lesson of works such as *In Search of Excellence* is that organizations that are efficient at one point in time will certainly not be effective in the future. Many organizations that Peters and Waterman identified as excellent at the time of the book was published are no longer in business or have fallen on hard times. Thus, we can ask the question: In an uncertain and intense competitive environment, what should managers look for in the firm's organizational structure: Efficiency or Effectiveness? In other words, how relevant is the firm's organization to the competitive environment the firm is facing or will face?

The response would be: it depends on what managers understand by organizational efficiency and organizational effectiveness. We will try to define both concepts while describing what we understand by Relevant Strategic Organization and how to measure it.

Efficiency or Effectiveness: What is the choice?

If managers do not talk about their organization's strategic goals, they cannot understand the concept of organizational effectiveness. The preceding examination of organizational goals in some respects sets the stage for exploring the importance of decision-making in terms of organizational efficiency or organizational effectiveness vis-à-vis the stage of the business life cycle and competitive environment that firms are facing or will face.

The term **effectiveness** is itself unclear. An organization may be more or less effective in a variety of different ways. Is effectiveness simply the amount of profits earned? Or is it the number of units produced or customers served? What about worker satisfaction? And what about definitions of **effectiveness** proposed by the organization's stakeholders? Are customers satisfied with the organization's products or services? Is the broad community satisfied with the manner in which the organization has conducted itself? Has the company polluted the air and water? Has the company provided some value to the community? All these questions help us to define the **firm's organizational effectiveness** as the way managers structure their companies so that they are able to satisfy stakeholders' interests even though these interests can be somewhat different. Concisely, we define organizational effectiveness as "the right organization that takes in account not only the need to create value for stockholders and customers but also to create wealth in an ethical and societal manner for employees and the community as a whole." In addition, this organizational effectiveness must enable the company to adapt its shape to the business life cycle and competitive environment, in brief, how flexible the organization is to respond to the critical success factors it faces.

On the other hand, **efficiency** is defined as the way the firm uses its resources to maximize its outputs. In this, the efficiency approach is more a legacy of the industrial engineering and time-motion studies of Frederick W. Taylor. Expressed in simple terms, an organization is effective to the extent that it maximizes outputs with respect to the costs of inputs and the costs of the transformation of those inputs into outputs.

The underlying assumption is that an organization that more efficiently transforms inputs is more effective than an organization that is less efficient. Although that logic is appealing, effectiveness typically involves more than merely being efficient.

III - Description of the fuzzy rsoi inference system

The fuzzy logic literature offers a large variety of fuzzy inference systems. However, to model the relevant strategic organization index (RSOI), we chose to use a fuzzy logic controller (*Lofti Zadeh, 1965, 1978, and 1983; Mamdani, 1975*) which is schematized as: crisp inputs, fuzzy inference system, crisp outputs.

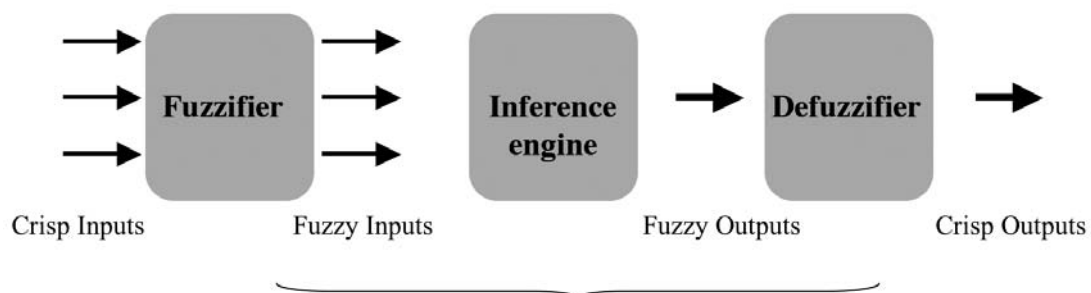


Figure 2. Fuzzy logic controller.

The fuzzy logic controller manages both inputs and outputs linguistic variables. For the sake of this research, we have chosen four linguistic variables: business life cycle, efficiency, effectiveness and the relevant strategic organization index, the later being the output variable of the fuzzy system.

3.1 - Definition of linguistic variables:

A linguistic variable can be defined as a triplet (V, X, T_v) , where V is the name of the variable; X is the reference set and T_v is a collection of normalized fuzzy subsets of X . We first define the linguistic variable business life cycle, which is specially defined in order to model its four periods or stages.

$X = [0,100]$, a set of real numbers between 0 and 100,

$T_v = \{\text{embryonic, growth, maturity, decline}\}$; we visualize the four periods of the life cycle on a scale between 0 and 100: between 0 and 10, we are in the embryonic period, from 10 to 20 we pass from embryonic to growth, and then from 20 to 40 we go from growth to maturity, and so on. Every element of T_v is a fuzzy set as defined in the next figure.

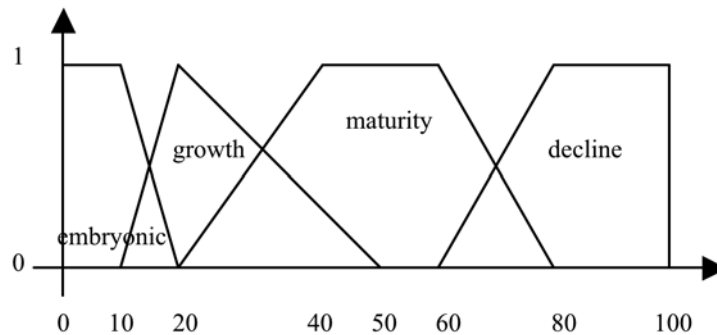


Figure 3. Description of the variable life cycle.

The linguistic variables efficiency, effectiveness and relevant strategic organization index are defined in the same way.

$X = [0,100]$, set of real numbers between 0 and 100

$T_v = \{\text{very low, low, medium, high, very high}\}$

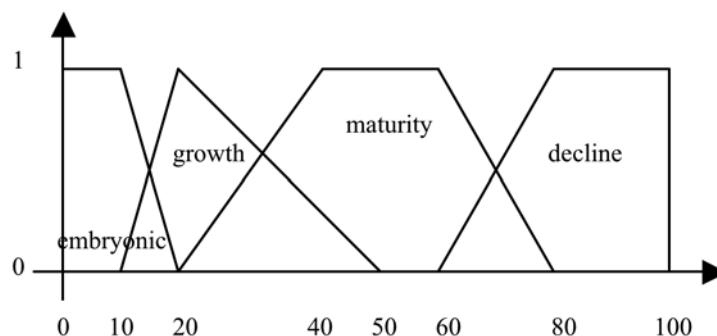


Figure 4. Description of the variables efficiency, effectiveness and relevant strategic organization index.

3.2 - Definition of the rules of the inference engine:

The next step is to define the fuzzy rules for the inference engine. For our model, we have defined four sets of rules. We should notice that the expertise of the system depends on the quality of the rules. Therefore, building the model needs the expertise of many persons who know the universe of the firm's strategic environment and are aware of the firm's strategic intent. Thus, for each life cycle stage

(embryonic, growth, maturity, decline), a set of rules is identified. We finally obtain four matrixes (5, 5) where efficiency and effectiveness vary from very low to very high. The figure below shows the fuzzy values for a life cycle at maturity stage.

		Effectiveness				
Efficiency		Very low	Low	Medium	High	Very high
Very low						
Low						
Medium				Very low	Low	Medium
High			Very low	Low	Medium	High
Very high			Low	Medium	High	Very high

Figure 5. Definition of the set of rules when the life cycle is at the maturity level stage.

3.3 - Inference process:

The fuzzy inference process contains the following three steps:

1. Application of rules:

We denote by V_1 the variable “life cycle”, V_2 the variable “efficiency” and V_3 the variable “effectiveness”. Let us consider input values of the fuzzy system $V_1 = x_1$, $V_2 = x_2$ and $V_3 = x_3$. In using a small example where $x_1 = 50$, $x_2 = 75$ and $x_3 = 65$; the value of the variable life cycle is **maturity** at level 1; the value of the variable efficiency is **high** at level 1 and the value of the variable effectiveness is **medium** at level 0.4 and **high** at level 0.6.

$$\mu_{B'}(y) = \min(\min(\mu_{A_1}(x_1), \mu_{A_2}(x_2), \mu_{A_3}(x_3)), \mu_{B_i}(y))$$

The output variable is denoted Y ; the result of the application of a rule, called consequent, is:

Now, if we take an example in applying two rules, the result can be as follows:

If efficiency is high and effectiveness is medium then the RSOI is low.

If efficiency is high and effectiveness is high then the RSOI is medium.

The value associated with the first consequent (low) is $\min(\min(1, 1, 0.4), 1) = 0.4$; the value associated with the second consequent (medium) is $\min(\min(1, 1, 0.6), 1) = 0.6$.

2. Aggregation of consequents:

$$\mu_{A(B'_1, \dots, B'_n)} = \max\{\mu_{B'_1}(y), \mu_{B'_2}(y), \dots, \mu_{B'_n}(y)\}$$

Therefore, we obtain a polygonal structure.

3. Defuzzification:

By this means, we can calculate the value of RSOI by the centroidal method;

$$y_0 = \frac{\int \mu_{A(B'_1, \dots, B'_n)}(y) y dy}{\int \mu_{A(B'_1, \dots, B'_n)}(y) dy}$$

Thus, the whole process could be summarized as follow:

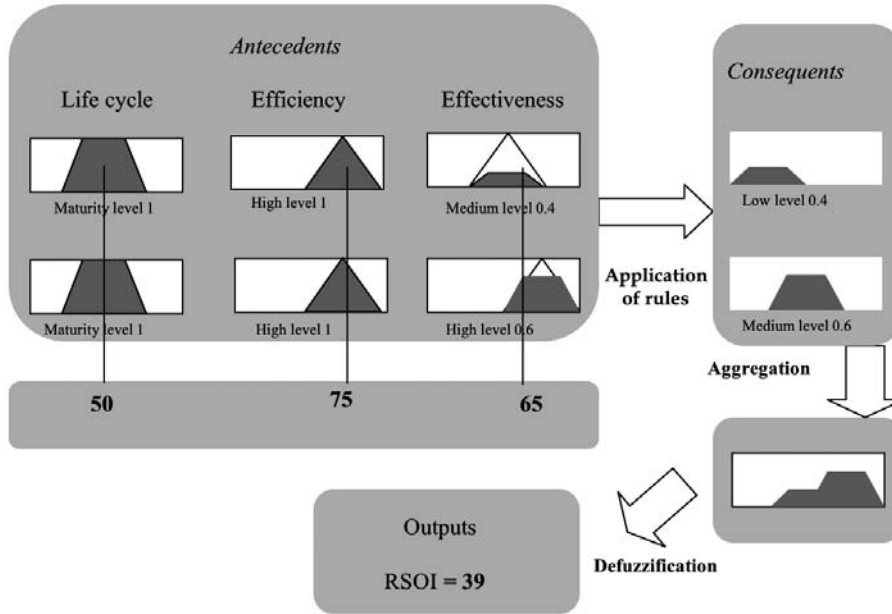


Figure 6. Framework of rules application.

IV - Simulations and comments

4.1 - First simulation when the business life cycle is at the EMBRYONIC stage

For input variables whose life cycle value is 10, efficiency value 60, and effectiveness value 60 the RSOI value, once the fuzzy rules are applied, is equal to 46 or close to a medium fuzzy value (see figure 4).

What can a firm's managers do to improve their strategic organization? To answer this question we simulate a list of RSOI when efficiency and effectiveness vary from 50 to 70 with a pace increment of 2.

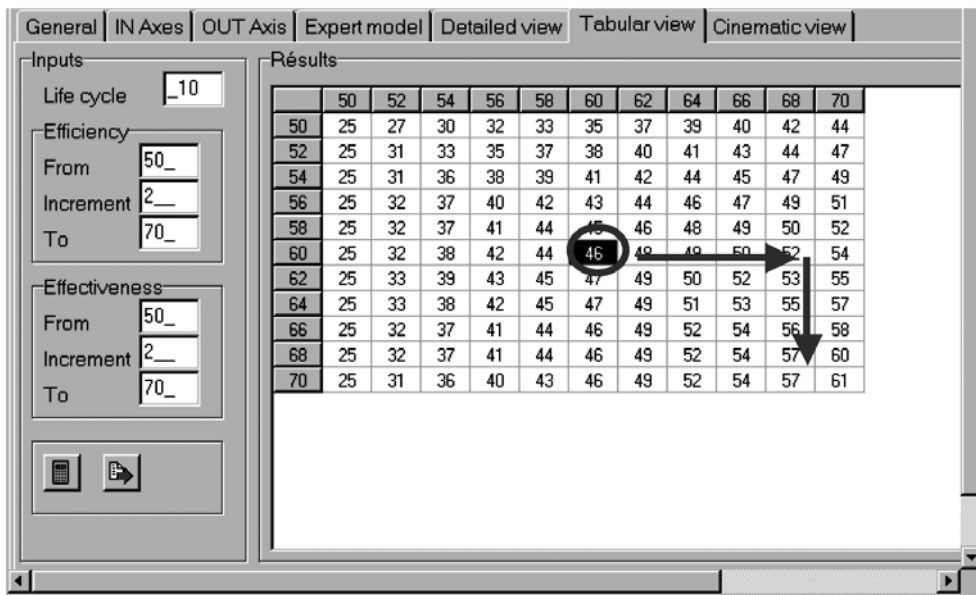


Figure 7. Crisp RSOI values when the value life cycle is 10, efficiency and effectiveness varies from 60 to 70.

We can see that managers must decide to improve first their effectiveness and secondly their efficiency if they want to improve their firm's RSOI value. Consequently, the RSOI value goes from 46 to 54 and then to 61, which are values that can be read as medium. Thus, the organization of the firm is more effective and would be stretched towards a high value. The conclusion we can draw from this first simulation is that at the embryonic stage of the life cycle, managers must be aware of the importance of effectiveness rather than efficiency to make their firm's organization relevant to its competitive environment. It is the effectiveness that enables the firm to adjust its organization to its business strategy. If managers do not pay attention to the critical role of being effective in decision-making about their firm's organization, they can jeopardize the whole strategy of their firm.

Nevertheless, the path to improve the firm's effectiveness as a first objective may imply a change management process that can be difficult to deploy and finally jeopardize the whole result. To deal with this possible problem, managers would be well inspired to take the efficiency path-side first, even though the result is merely neutral to the organization. However, this path can offer the firm the possibility to learn and capitalize on its experience, thus be ready to improve its effectiveness, which is the final objective.

4.2 - Second simulation when the business life cycle is at the GROWTH stage

For input variables whose life cycle is 20, efficiency 60, and effectiveness 60 the value of RSOI is also 46.

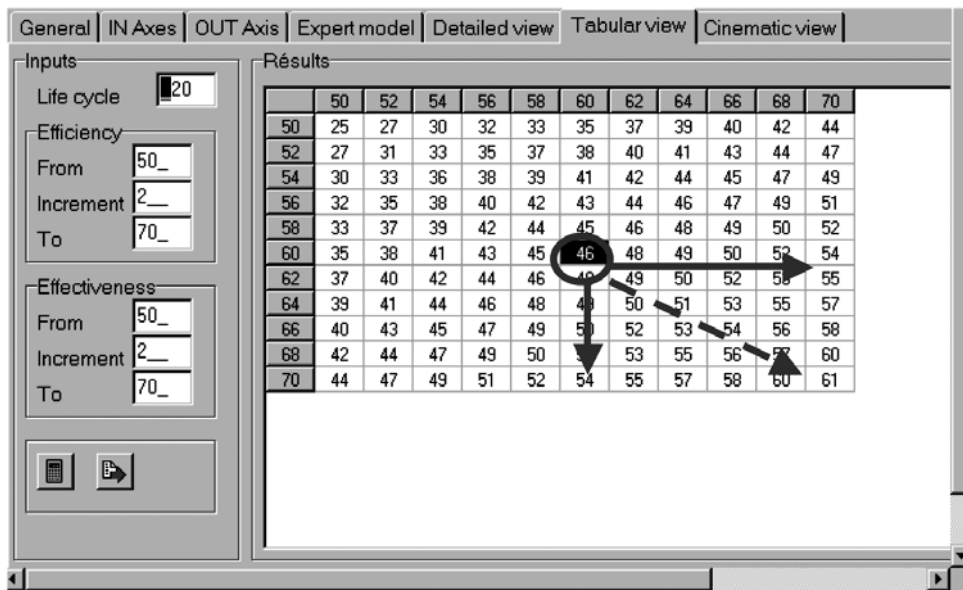


Figure 8. Crisp RSOI values when the value life cycle is 20, efficiency and effectiveness varies from 60 to 70.

Now, suppose Managers want to increase their firm's RSOI value, in this case they should decide to improve at same time efficiency and effectiveness, or efficiency first and effectiveness second. Another decision, they could make is to improve effectiveness first efficiency second. Therefore, the conclusion we can draw for this example is that at the growth stage of the business life cycle firms must be efficient and effective if their managers want to keep their firm's organization strategically aligned with their firm's business strategy.

4.3 - Third simulation when the business life cycle is at the MATURITY stage

For input variables whose life cycle is 50, efficiency 60, and effectiveness 60 the value of RSOI falls down to 32 or rather lower than medium.

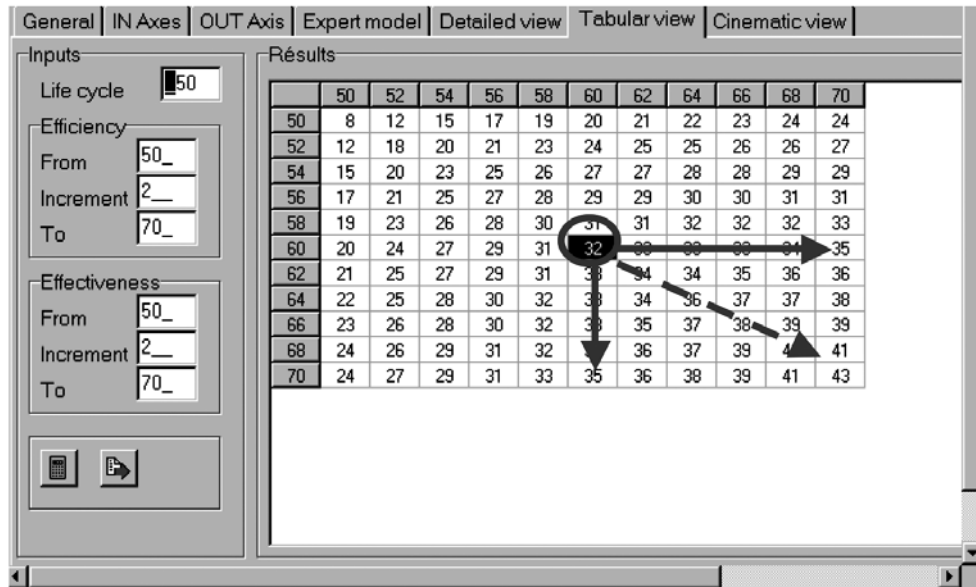


Figure 9. Crisp RSOI values the when life cycle is 50; efficiency and effectiveness vary from 60 to 70.

In this case, managers should decide to improve simultaneously efficiency and effectiveness if they want to improve their firm's RSOI value. If they do not do that, their firm's RSOI will fall down dramatically (e.g., when the values of efficiency and effectiveness are 50, the RSOI falls down to 8). Therefore, the conclusion we can draw here is that at the maturity stage of the business life cycle for firms determined to maintain their competitive advantage they must be efficient and effective. At this stage, there is no reason for managers to look at being an efficient organization or an effective one because this will have a negative impact on the RSOI value in the end.

4.4 - Fourth simulation when the business life cycle is between MATURITY and DECLINE stage

For input variables whose life cycle value is 70, efficiency 60, and effectiveness 60 the RSOI value is 33 or low value rather than a medium one.

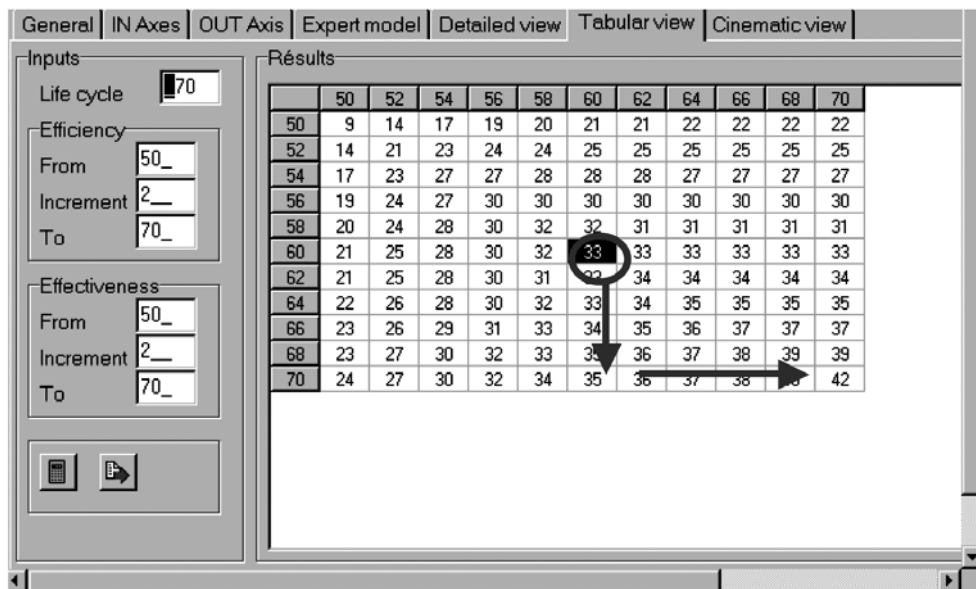


Figure 10. Crisp RSOI values when the value life cycle is 70, efficiency and effectiveness varies from 60 to 70.

What managers can do here to improve their firm's RSOI is to pay attention particularly to their firm's efficiency instead of effectiveness that has almost no contribution to improving the RSOI value. In other words, at the stage between maturity and decline the effective decision to make in terms of organization is to exploit the firm's economy of scale as long as possible and then get out of the market.

Conclusion and implications

A general conclusion we can draw from this analysis and simulation is that in an uncertain and intense competitive environment, managers must be aware of the role played by efficiency and effectiveness when dealing with decision-making about their firm's organizational structure. The more the business life cycle is at the beginning (embryonic) of the cycle the more important the role of effectiveness becomes to set up the firm's organization. On the other hand, the more the business life cycle is at the final (decline) stage the more crucial the role of efficiency becomes to adjust the firm's organization to the competitive environment that the firm is facing. In some ways, the life cycle of firm's organization needs to be managed in a strategic way so that the firm can align its structure organization to its business strategy, which is directly influenced by the economic and competitive environment.

We trust that the Relevant Strategic Organization framework we are suggesting could be an interesting and useful approach and tool to help managers to align their firm's organizational structure to that of their firms' competitive strategy. Further studies and applications must be done to determine how consistent and relevant our framework can be to that knowledge.

More precisely, we hope that the preliminary results of a fuzzy management approach of organizations proposed in this paper will prove relevant both to organizational development theory (OD) and to the theory of the business decision-making process.

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