The concept of organizational change capacity

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Abstract

Purpose – Change implementation presents a major challenge to managers. However, theoretical and empirical works waiver between the change management action and the management of the change/initial conditions. These opposing views reflect the theoretical instability, which characterizes work on organizational change. Faced with this theoretical mosaic, the question of knowing what the change capacity is, is fundamental. The purpose of this paper is to propose a framework for change capacity and to identify its dimensions and components.

Design/methodology/approach – To deal with this stake, the author conducted a single case study and observed an organization that had acquired the status of a company with change capacity. The Renault SA group makes for an interesting case. Renault, a 100-year-old company, is considered to be capable of undergoing change, of following its environment and even of shaping its own environment.

Findings – The study leads to the identification of three dimensions of the change capacity. These are the context, process and learning dimensions. The context dimension consists of resources that facilitate the change process. The process dimension incorporates principles of implementing change. Finally, the learning dimension tackles the introspective capacity of the organization.

Originality/value – If the literature on change capacity focuses more on the outcome of the capability than on the capability itself, the study has enabled the proposing of a framework for change capacity and to identify its dimensions and components. This framework is interesting in two respects. First, it shows that change capacity is as much linked to its management as it is dependent on the initial conditions. Second, it provides direction towards a strategic management of change.

Keywords Change capacity, Organizational change, Organizational learning, Organizational development

Paper type Research paper

Introduction

Organizational change is at the forefront of the academic and managerial environment (Pettigrew *et al.*, 2001). The study of Tarondeau *et al.* (1994) attempted ten years ago to identify the management variants at the beginning of the twenty-first century. The authors of the study looked at the organization's ability to change and how quickly this could be carried out. The current management scenario regularly shows us how relevant the results of the study are: the link between organizational dynamics and frequency of environmental changes is increasingly strong, resulting in changes that are endemic and both rapid and frequent (Brown and Eisenhardt, 1997; Nadler and Tuschman, 1994). Consequently, change processes and implementation present a major challenge to managers. It even seems that change is considered to be a solution in itself. Indeed, Thévenet (1988) stresses that companies fall in with the common trend of believing that change is always beneficial. It is important however, to remember that change can destabilize organizations, is costly and often risky. Moreover, Hannan and Freeman (1989) showed that internal and external partners favor stable and predictable organizations: change can open the door to inexperience.

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Even if the process of carrying out the change is a management invariant (Thévenet, 1988), the process itself remains highly problematic. The varying elements of this process only occasionally correspond to the intended action (Van de Ven and Poole, 1995). Surrounding literature confirms this: works waiver between the change management action and the management of the change conditions (Van de Ven and Poole, 1995; Pettigrew *et al.*, 2001). On the one hand, there are theories, which suggest that change drives itself; on the other hand, there are theories, which suggest careful preparation is required. Demers (1999) stresses that:

> [. . .] behind the apparent division of opinion in literature on organizational change, two very different perspectives can be found. The first places the emphasis on the management of organizational change, whereas the second deals with managing the change capacity of an organization.

In the end, these opposing views reflect the theoretical instability, which characterizes work on organizational change (Pettigrew *et al.*, 2001). Faced with this theoretical mosaic, the question of knowing what the change capacity is, is fundamental. Why do some organizations have more success with their change than others? What is the company's change capacity? To begin with, we will present the theoretical framework, highlighting the two models of change capacity; then we will explain the choices of methodology, which guided our research. Finally, we will present the results of this research.

1. Change capacity

There are numerous theories, which refer to change capacity. Before outlining the constituent elements, we shall try to clarify the theoretical contours.

1.1 Definition

According to March (1981), "that which we call organizational change, is a solutions package from various parties within an organization, that responds to various interconnected parties within the environment". This definition directs us as much towards the contents of the change, i.e. the solution, as towards its origin. Following the example of Pettigrew (1985), it emphasizes the idea of a contextual stance, which combines content, context and process. Change should therefore be analyzed on a number of levels: change as content (what it is that changes), as process (how it changes) and as context (why change is needed) and change as an interaction: change variables may be mutually defined in a series of interrelating elements (actions, reactions and interactions).

These elements enable us to propose an initial definition concerning change capacity. From the work of Pettigrew (1985), we propose in the first instance, that the change capacity is the ability of the company to produce solutions (content) that respond to environmental evolution (external context) and/or organizational evolution (internal context) and to implement these change processes successfully within the company (process). Studies of the evolution of organizations offer further clarification of the definition. For evolutionary economy (Nelson and Winter, 1982), understanding the evolution necessitates concentrating on the relationship between the organization and the environment, thus referring to the evolution of species and natural selection. As a subject of major debate in the field of strategy (Whittington, 1988) between the followers of emergent strategies and dynamic strategies, one of the questions raised concerns the degree of intentionality in the evolution. Here, two ideas emerge about organizational evolution.

The emergent strategy approach, represented notably by the evolutionist school (Nelson and Winter, 1982) and the ecology of populations (Hannan and Freeman, 1989), perceives a behavior in organizational evolution, which is guided by the constraints linked to the environment (external determinism of the ecology of populations) or to the organization itself (internal determinism of the evolutionary economy). The evolution of the company is therefore influenced by its adaptation to the constraints (the appropriation of resources), which bind it (the firm is selected). This adaptation can itself be programmed according to the nature of the competencies accumulated during the whole procedure (search routines).

The dynamic approach, particularly that influenced by the resource-based view (Wernerfelt, 1984; Barney, 1991), offers an alternative explanation to company evolution. In this approach, organizations, viewed as a collection of resources and skills, may adopt the behavior of "creator" (Daft and Weick, 1984). Henceforth, evolution is no longer so strictly limited to selection. The environment and the organization may become the tools of the managers, whose discretionary power has been established (Child, 1972). The managers may influence the change, "direct" the process in the manner of Weick (1979). Two schools of thought are evident. On the one hand, evolution no longer takes place exclusively by adaptation, but also by pro-action; the company is able to shape its environment. On the other hand, adaptation may be the result of a choice; it is not purely the result of selection procedures. Change thus adopts the characteristics of a deliberate reaction.

These two change concepts, between selection and intention, allow us to clarify the ability to change. If we consider, as do some authors (Whittington, 1988) that these two stances are at opposite poles, strategic choice and determinism exert a reciprocal influence on each other making adaptability and pro-action coexist as forms of evolution. Adaptation should therefore be considered as an organizational change that varies in its depth and vigor (Nadler and Tuschman, 1994) depending upon the environmental change taking place; pro-action should be viewed as an intentional organizational change that is able to generate later adaptations amongst the competitors.

In the second instance, we consider that the change capacity is the ability of the company to produce matching outcomes (content) for environmental (external context) and/or organizational (internal context) evolution, either by reacting to the changes (adaptation) or by instituting them (pro-action) and implementing the transition brought about by these changes (process) in the heart of the company.

This definition, although essential, remains purely descriptive. Its ability to explain change capacity is limited. Therefore, we shall attempt to identify the components.

1.2 Attributes of change capacity

According to some authors (Demers, 1999; Soparnot, 2005), two strategic approaches can be applied to change capacity.

The first consists of more prescriptive elements. Composed of various models (Pettigrew *et al.*, 2001; Soparnot, 2005), the change management paradigm leans on a corpus of recommendations that will help the process to be better managed. Table I shows

Table I. Change management models

Change models and methods of implementation	Plan of the organization and of the change
Hierarchic model	
Planning change stages	"Machine" organization: individuals adopt change without resistance Change imposed and anticipated in terms of action-reaction
Organizational development model	
Staff support and back-up mechanism: participation, communication, training and incentive	"Humanist" organization: behavior is governed by emotions Participated change and anticipated in terms of action-reaction
Political model	
Negotiation facility to ensure the convergence of interests Legitimacy of reformers and political support	"Political arena" organization: behavior is guided by the satisfaction of personal interest Change unpredictable and conflictual due to power struggles
Incremental model	
Using existing methods for an incremental change	"Context" organization: the routines to be followed act as a behavioral guide Change is controlled by the fixed routines of the organization
Interpretative model	
Symbolic change management in order to act upon its direction	"Directional" organization: the shared understandings form the base of interpretation of the events "Signified" change based on the interpretation made by the change team

Source: Adapted from Soparnot (2005)

a summary of each model as well as their presumed effect on the organization and on the change.

A number of authors (Pettigrew, 1985; Soparnot, 2005) have highlighted the necessity of considering change from a multidimensional perspective. In the final analysis, these models complement rather than oppose each other. The change capacity is therefore formed from the modes of implementation adopted from the different models of the management paradigm.

These approaches, though the nature of their recommendation may vary, are based on a common principle: change manages itself. Some authors (Thiétart and Forgues, 1993; Thiétart, 2001) highlighted the dangers of this kind of management action plan. The second, more orthodox strategic approach based on the chaos theory, runs on the basis that the complexity of organizations is incompatible with any idea of managing the change process. Change must therefore be instituted so that it becomes a routine (Brown and Eisenhardt, 1997), a facility deeply rooted in organizational processes. Its inclusion in the make-up of the firm is the path explored by works on organizational learning (March, 1991). By learning to constantly review practices and methods of adopting these practices, the company enriches its depth of experience, which it is then able to draw upon when changes in the environment require it. Weick confirms this:

> [. . .] to do what has always been done is necessary in short term adaptation. To do what has never been done before is necessary in long term adaptation and the two actions are required simultaneously (Thiétart and Forgues, 1993).

This kind of organizational learning occurs in specific contexts (Thiétart and Forgues, 1993), having therefore something in common with work on self-organization (Brown and Eisenhardt, 1997). In the end, change capacity merges in this case with the aptitude for learning; it consists in establishing the conditions, which will allow the organizational form to adapt.

To sum up (Figure 1), change capacity draws its principles from two dominant theoretical approaches (Demers, 1999). For the management paradigm, change capacity is made up of implementation principles. For the complex paradigm, it arises from organizational learning and merges with the initial conditions that stimulate this learning.

Having put forward the conceptual framework, we now ask ourselves to what extent it is possible to perceive it as a useful skill for the implementation of the company strategy.

1.3 Change capacity: a dynamic capability

The constitution of change capacity refers back to the work of the resource-based view (Wernerfelt, 1984; Barney, 1991). From the proposed definition (Section 1.1), the change capacity may be classed as dynamic capacity. Capacity (in the sense of competence

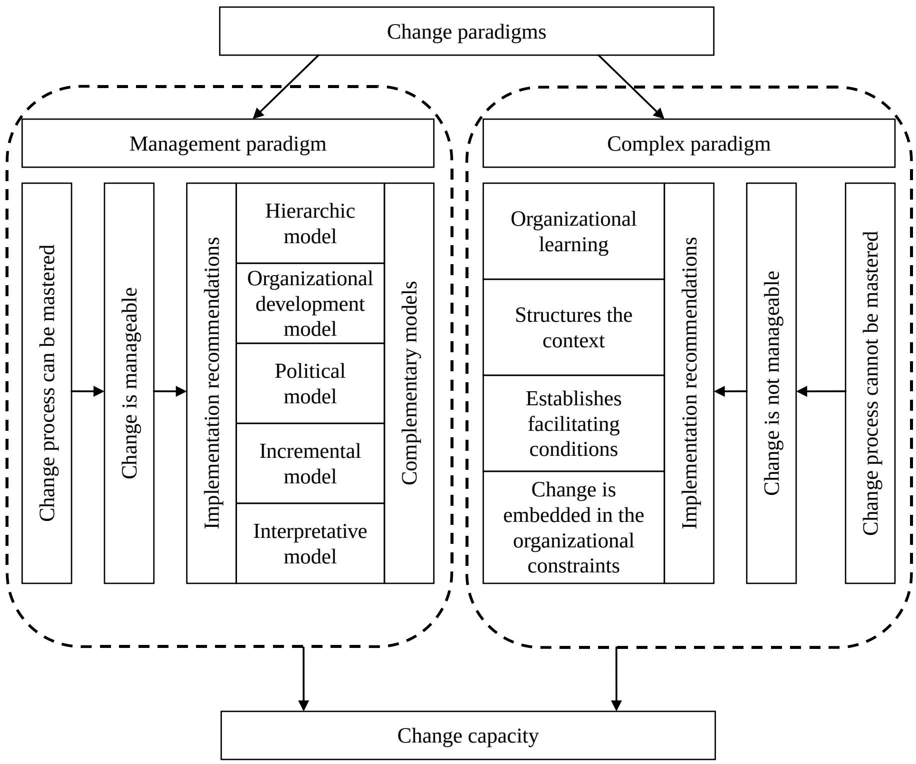

Figure 1.
Contrasting paradigms in the organizational change literature

as suggested by Barney (1991)) first because it is an organizational aptitude which mobilizes various organizational resources (structure, culture, participants, etc.) and interlinks them by a change process (communication, training, etc.) with the view of renewing the characteristics of the firm. And dynamic because it gives rise to a renewed combination of resources and skills resulting from the organizational renewal. This capacity takes on a dynamic characteristic (Teece *et al.*, 1997; Eisenhardt and Martin, 2000) in as much as it enables the creation and reconfiguration of the assets of the company, generating an inheritance of assets that matches with the evolution of the environmental conditions. However, where change capacity may be qualified as dynamic capacity, it should not be confused with it. Since, even if the concept of dynamic capacity identifies the routines at the origin of the strategic and organizational reconfigurations, it does not explain how these renewals may be carried out; this is what the change capacity is trying to identify.

Having built this theoretical framework, we will now set out the methodology used in conducting the study.

2. Methodology research choices

Methodology research aims to break down the change capacity in order to identify its components. The capacity for transformation constitutes the hidden order, which it is possible to reveal placing such research in the domain of discovering uniformity. The research instrument is therefore determined by this epistemological position. It should facilitate the most neutral observation possible of the facts. From this perspective, the case study should be considered as a genuine research strategy (Yin, 1989; Eisenhardt, 1989). To understand the change capacity means flushing out any empirical data immersed in the history of the individuals and of the organization; in the relationship which links the change phenomenon to its context (Pettigrew, 1985).

An essential question concerns the number of cases studied. Taking into account the subject matter, it was decided to undertake the study of a single case, following the recommendations of Pettigrew (1985) and Pettigrew *et al.* (2001). The question was then one of defining the criteria, which should guide the choice of case study: we were to observe an organization that had acquired the status of a company with change capacity. This would be evaluated on the number of years of existence and the extent of changes undergone. But which organization(s) and what change(s) should form the basis of our observation?

The Renault SA group makes for an interesting case. Renault, a 100-year-old company, is considered to be capable of undergoing change, of following its environment and even of shaping its own environment. One of the company specialists described its ability to adapt:

> It is rare to find a company that has been in existence for one hundred years. This period of time represents one of the best signs of success, that of durability [. . .]. Renault is one of the largest automobile companies, a company which has been able to adapt to the large variety of contexts that have arisen from 1898 to the present day (Loubet, 2000).

Similarly, Thiétart links what he feels to be the company's status as strategic innovator to its capacity for pro-action. According to this author, the company has operated "an impressive strategic turnaround and has altered the rules of competition, much to everybody's surprise" (Thiétart, 2001).

However, studying Renault's case in its entirety would have required many years of observation and direct access to general management. Moreover, the Renault SA group is made up of several sites spread out over the world. We could not undertake the challenges of such a study because of restraints on time and geographical access. However, it was necessary to access data that pertained to our research study. Consequently, we based our case study on one department of the Renault SA group, thereby fixing a boundary for our research.

In order to carry out our observations, we were given the opportunity of working with the test systems engineering (TSE) department. The function of this department is to design, develop and maintain systems for testing engine and mechanical parts and instruments and for vehicle testing. With a staff of 160 people, the department underwent an organizational overhaul in 1999, an operation that according to one of the departmental managers "went pretty well and produced the results which we had expected". The area offered interesting characteristics for our research: it enabled us to observe the development of change capacity. However, it quickly became apparent that we could not focus on this one subject. Indeed, the initial analyses showed that the success of the creation of the TSE department did not depend exclusively on the change in itself (its content) or on the way in which the change was conducted (process); the context was a determining factor. The boundaries of the case (that is, the subject of the study) were pushed further and further out. We proceeded with discussions with the participants on the major company changes (which they had experienced more or less directly) (Table II). By concentrating on the last three decades, we were able to establish a time frame for the study. This choice was made as a result of two findings; the participants had been with the company for a maximum of 33 years and major changes in the sector had taken place over this 30-year period (Loubet, 2000). Table II shows the main stages of the evolutions of the company.

Qualitative methodology was favored. Discussions revealed data that had been buried in the professional archives of the participants. It was felt that the complexity of the area being researched and the extent of the context make such steps necessary (Pettigrew, 1985; Pettigrew *et al.*, 2001). For this purpose, data were retrieved from the following sources: interviews, documents and first-hand observation (Table III).

These investigations took place between May 2002 and September 2003 (the TSE change was ending). In order to limit elitist bias (Miles and Huberman, 1991), we conducted interviews at all management levels of the TSE department. We spoke with various TSE department managers, middle management (elementary work unit (EWU) managers) and "ground" staff, i.e. consultants, specialists and project leaders.

Two series of interviews took place with the participants. The first series (24 interviews) was aimed at researching the organizational context, familiarizing ourselves with the highly technical environment, acquiring the specialist vocabulary and building a trust-based relationship. At this stage of the procedure, we did not describe the interviewee's profile, as the nature of the data did not require it. At the end of this first series of interviews, we were able to detect participants who had hands-on experience of change situations. The second series of interviews (32) enabled us to collect data centered around the research issue. Basing ourselves on the approach of Pettigrew (1985), the table was built up around three main axes: content, process and context. A first series of questions dealt with changes relating to the automotive sector, to the testing systems sector and to the way in which Renault had followed

Period	Phase 1970-1983	Phase 1983-1995	Phase 1995-2003
Strategic paradigm	Volume approach (market shares)	Flexibility approach (research of break-even point and variabilisation of fixed costs)	Volume and flexibility approach
Management of activities	Diversification Integration	Refocusing Disintegration	Refocusing Intensive outsourcing
Method of growth	Internal growth Self-development	Industrial cooperation	Global cooperation External growth
Industrial system	Robotized automation	Just in time input (upstream)	Just in time input and output (upstream and downstream)
Management of subcontracting	Traditional subcontracting Selection according to price Opening to competition	Reduction and selection of subcontractors Quality, cost, deadline criteria Establishment of the supplier quality assurance (SQA) standard	Partnership mode Co-development "Tightening" the SQA standard: innovation and international set-up criteria
Quality	Low quality	Overall quality Multiskill working Suggestion methods	Management through quality Multiple certification approach Generalization of the concrete ideas on progress (CIPs)
Internal organization	Hierarchic organization Bureaucracy	Restructuring Reduction of structures Creation of elementary work units (EWUs)	Formal structure Activation of CIPs and development of initiatives
Automobile creation	Sequential engineering	IRIS experiments and X06 (Twingo) project Associated engineering	Concurrent operations and experiments on methods of reducing deadlines Creation of a "Techno-centre"
Automotive product innovation	Low risk-taking (birth of the R5)	Creation of multi-models Risk of the Espace Innovation of the Twingo	Automotive invention car of the third millennium

Table II.
Chronological matrix

or instigated these changes. It involved inviting the interviewee to describe what he felt lay behind Renault's capacity to evolve. The second series of questions concentrated on a particular moment of change amongst the main evolutions previously identified. We attempted to lead the interviewee gradually back in time, to "re-experience" the context, by asking him to reconstruct the "history" of the change; then, after questioning him on the results, he was then in a position to report on the way the change had been managed. Finally, the last series of questions was directed at Renault's capacity for renewal. This series was intentionally left open so as to allow the interviewee greater freedom in his replies. This final phase was meant to enable discussion to flow freely and to prompt data to be revealed.

Afterwards, the data produced by these interviews was collated, added to and compared with data retrieved from documents and direct observations. Passive observations were conducted during EWU and departmental meetings and were written up in a research journal. The documentation was used as much for gaining credibility in the eyes of the participants (through a sound knowledge of the sector and of the company) as for detailing and comparing data resulting from the interviews.

The data were processed according to the recommendations of Miles and Huberman (1991). In particular, data were compressed using thematic coding. Rough transcripts enabled themes to be highlighted. These were grouped by analogy, forming categories. Since the research was aimed at identification/detection of the change capacities (and not at how they were made), we attached importance to the themes (and their recurrence) rather than to their connection. Table IV shows the results of the thematic content analysis.

We will now analyze the attributes of all different dimensions of the organizational change capacity.

3. Components of organizational change capacity

Our study leads us to identifying three dimensions of the change capacity. These are the context, process and learning dimensions.

3.1 The context dimension of change capacity

Context appears as a significant modulator of success (35 percent). This result refers to the complex paradigm of the change capacity by identifying its facilitating conditions. It gives a central role to the context of the organization on the success of the changes.

Our study first lays emphasis on the shared representations of the change (value of change). This component clearly must be considered as a facilitating initial condition of the complex change capacity paradigm since it depends on the historical links between

Sources	Contents
Interviews	One-to-one exploratory and focused interviews (semi-directed in nature and lasting one and a half hours)
Documentation	Activity reports, press reviews for the same period, in-house journals, presentation documents for the new organization, working documents, in-house training documents, CCFA data (French Automobile Manufacturer's Association), works concerning Renault and the automobile sector
Observations	Presence at general and departmental meetings, presence on departmental committee, observations of day-to-day work

Table III.
Research case sources

Categories	Themes	Number of occurrences *n*	%	Number of occurrences per category *n*	%
Context dimension	Value of change	18	28	64	35
	Structural flexibility	9	14		
	Cultural convergence	8	12.5		
	Trust between those undergoing change and those performing change	12	19		
	Practices based on consensus	9	14		
	Individual learning capacity	8	12.5		
Process dimension	Transformational leadership	15	19	80	44
	Perceived legitimacy of change	21	26		
	Co-construction of change	18	22		
	Incremental deployment	12	15		
	Creation of visibility	14	18		
Learning dimension	Improvement through experience	14	37	38	21
	Renewal through experimentation	10	26		
	Interdepartmental knowledge sharing	14	37		

Table IV. Qualitative analysis summary chart

the company and its environment: it cannot be created through the change process. These representations convey the "organizational stance" with respect to the change, the environment and the conventional management practices. This "stance" in turn reflects the relational mode that the organization maintains with the environment. And, though the leader may play a determining role in creating the future, this representation is not limited to the leadership, but is fundamentally collective, i.e. "shared" by all the actors. The actors then adopt the representations of the change, which will affect their support and behavior regarding the decision to change, and its implementation. Here, the representations are a structuring intermediary process between the reality and the resulting action. Transformation thus becomes a "shared label" at the heart of the representations, which are at the base of the regeneration process. In short, these representations "interpret" the reality, the discontinuities and the change decisions. They enable the individuals to structure their visions of reality more consistently and they have a transitory character, i.e. they are a regenerating feature of the organizational model.

In our study, the change was perceived as inescapable with regard to competition and opportunities in the sector and as a source of progress to help maintain a competitive position:

> These changes, they are because we have to look to expansion to a certain extent so that we don't fall flat on our faces, I think that's what it is, and we are in a competitive climate in which we have to be expanding constantly. Because of that, you don't have the choice; you have to adapt.

> If we want Renault to stay in the market, we must do the same as the others; we cannot let the others overtake us. It's like the 100-meter sprint, if you let go, you'll be too far behind; you have got to keep up. [. . .]. It is not a problem unique to Renault, it is the problem that we all experience these days; it is not even a problem, it is just the current situation. We have to keep Renault in the market and, in order to do that, Renault has to take risks [. . .]

This does not mean that change only assumes positive aspects; some people experience loss of employment, stricter demands on them and a restriction of means, etc.

Although they are fundamentally ambivalent, representations associated with change remain positive nevertheless. They are the result of social interaction amongst the actors; events that have affected the sector (disappearance or repurchase of the manufacturers) and company changes (total quality, extensive outsourcing following near-bankruptcy in 1984) structure these representations. The actors have learnt that inertia was dangerous for the survival of the company.

The flexibility of the organization, defined by the structural form (reticular on the outside and organic on the inside), constitutes a second characteristic. This flexibility is twofold: external through intensive use of subcontracting and internal through organization of work in semi-autonomous teams. These attributes can also be analyzed as facilitating conditions of the complex change capacity paradigm as they had been built in the past for reasons (like cost reduction, flexibility, etc.) which are not connected to the management of change.

As the participants perceive it, the external flexibility changes the nature of their relationship with the environment. The structures, perceived by the participants as agile and conforming to the practices of the sector, make it possible to build collective representations, which facilitate action on the reality and particularly, on transformation processes. As a consequence, the participants sanction strategic and organizational choices and create their own devices for interpreting the reality. From this viewpoint, structural conformity to the demands of the sector leads to a mental representation of the changes; it plays a role of environmental mediation.

In our study, Renault, after its near-bankruptcy in 1984, refocused on its operations and gradually outsourced any activities not directly linked to the manufacture of vehicles. Renault became an assembler, a pilot firm at the heart of a network of sub-contractors, which the company gradually transformed into partners following a rigorous (supplier quality assurance) and evolutionary selection process. The conformity of organizational choices to the changes and challenges of the automobile sector "confirmed" by being generally adopted within the sector has some of the characteristics of a reassuring representation of change. It helps in the process of constructing the internal reality.

The flexibility of the structure also plays a role in the implementation of the change. The organic mode (through semi-autonomous teams) provides the organization with a capacity for individual learning. Indeed, the teams become areas where dialogue and freedom and exercise of intelligence may take place. The organic nature of the structure becomes therefore an asset in the day-to-day management of change since it facilitates the understanding of the challenges of change and allows islands of flexibility to be created within which arguments and the exchange of opinion give rise to creative solutions.

In 1991, the system of operating in semi-autonomous teams was initiated within the company researched. By organizing themselves in EWUs, initially in the factory and then on all the sites, Renault reduced the number of management levels and established decentralization of decisions, a more "relaxed" style of work, versatility and autonomy of the participants and a style of personnel management which was closer to teamwork than hierarchic control. The EWU, a workable-sized team, an area for exchange and negotiation in which communication can take place on a give-and-take basis, became the point of reference for the participants. And it helped people to understand the company challenges and changes as well as enabling them to participate in its construction:

> There was also a lot of work done on the development of what we call the hierarchic pyramid which enabled us to direct the company operations according to decisions taken; I think that it was one of the first things to be done so that everybody could get to know what directions the company was taking and could thereby contribute.

> The EWU is a bit like a company: there are problems to be solved and we have to find the solutions. It's really interesting.

> In the teams, we are autonomous, we can put forward our ideas and test them, we talk about them in our meetings and we find our own solutions, it avoids the red tape.

Although this flexibility through the structure is an important characteristic of the context dimension, cultural convergence is equally important. This component can be qualified as a facilitating condition of change. Indeed, the values of a company come from past managerial decisions and acts. Culture is a symbolic framework, which acts as a reference for the interpretation of events and from which it is possible to understand the level of involvement of the participants and their attachment to the organization. Cohesion through values thus appears as a dynamic resource. In fact, a cohesive culture rises above negative representations as far as changes are concerned and makes collective action converge on the target of the change. Cultural features form the shared representational basis from which the individuals attach a greater or smaller degree of legitimacy to the change.

Renault is characterized by a "true" company culture; its managers, history and operations have shaped a particularly strong culture. In-depth research of this case has brought us alongside a culture centered around innovation and change, costs (and profitability) however small, quality (and technical expertise), speed of execution (deadlines) and customer satisfaction (internal and end customer). This culture, of which we are describing the main characteristics, has experienced considerable changes over the many decades, even though they may have been slow and difficult. Hence the cultural traits of lifetime employment, of the small car, of technical excellence disassociated from profitability, have practically disappeared [. . .] The sharing of these cultural traits is expressed by an attachment to the company, which is in itself a guarantee of the involvement of the participants when changes occur:

> We spoke about total quality, as much on the fact that plans concerning the reduction of costs may not necessarily be supported because there could be an impact on the level of resources, [. . .] as on the fact that the plan concerning total quality should lead to meeting the car user's ultimate expectations especially as far as quality is concerned. I feel that you can only support it to a certain extent as far as the target is concerned.

> The Renault staff has a company culture, at least, that's what I feel, the people generally feel more concerned about the company, they invest a lot in it, they are much more motivated and in some ways, they feel more professionally involved, which I would say reinforces the change.

Thus, total quality has a strong symbolic responsibility, that of customer satisfaction. By conforming to a key value of the culture of the company, this change was helped.

In the same way, trust, as a relational asset, is a resource of the transition and is considered as a facilitating condition of change. Indeed, trust is built through a long relationship between people and does not emerge with the change process. If it exists between the participants and the promoter of the change, the transformation runs more smoothly. In this respect, the leader who symbolizes the change can enjoy this trust and make positive use of it for the transformation. Trust is a form of guarantee for the behavior of the reformer and the contents and procedure of the change adopted. It is strengthened (or destroyed) during the course of discussions and acts. Its existence can encourage the actors to follow the reformer in his decisions.

In our case, the ISE manager already benefited from an amount of trust before the event. His job profile at the factory and his perfect knowledge of company and sector production afforded him high credibility:

> When D (name of the TSE department director) arrived, he already had his allies, his job profile was known and during the first few months, we got to know him as a person. When the TSE department was created, we all worked for him somehow or other; we wanted to follow his ideas.

In this case, trust was based on his skills. This trust had made itself felt, enabling the participants to understand that it was fully justified.

Our study also highlights the importance of the practices of mobilizing personnel and collective problem solving. These practices are analyzed as facilitating conditions of change in the sense that they are embedded in organizational routines. They are indicative of the capacity of participation and initiatives of the actors. When they are institutionalized, they are the reflection of a culture based on negotiation. And by institutionalizing participative practices, it enables the participants to develop aptitudes for initiative, commitment and learning (participative practices are regenerators of representations), which become major assets in change procedures.

At Renault, participation is a practice that has been followed for several years, inherited from the "generalization" of Japanese methods (Kaizen). In order to maintain this drive for continuous improvement, creativity amongst the employees is encouraged. They may take part through their EWU in the improvement of "local" practices. They may also contribute to the improvement of company practices through the concrete ideas on progress (CIPs). When the TSE department was undergoing change, the increase in number of working groups enabled the project to be designed quickly and with a high level of consensus:

> Participating in change is completely normal, at least, we participated more to try to solve the problems than we did during the meetings at the beginning, but well [. . .] it's because it's our job within the EWU to think about these problems and then we talk about them at the client-supplier and inter EWU meetings. So that is the normal procedure which seems necessary to me if we want the staff to be active in the change.

> Before, we had "pill" participation; in other words, you take part and quickly realize that your presence serves no purpose at all and that, in fact you are just being made to swallow the pill, [. . .]. So afterwards, it's quite obvious that when the change has been decided, you do just as you did before, you don't change anything because in any case you were never given a say in the matter. In this area Renault has made progress as far as we can make out; in fact, now our opinion is sought and they have understood that in order for us to invest in the change, we have got to have taken part in it.

Finally, the learning capacity of the participants is a powerful modulating factor in the success of change. It is clearly a facilitating condition of change as it emerges from specific organizational practices which are not connected to the change process. These learning capacities may be shaped by schemes for training, internal mobility, etc.

Such organizational investment comes across as being a series of mechanisms meant for transformation purposes since they determine the capacity of the participants to acquire new ways of thinking and acting. The individual acquires a predisposition to change. He becomes a "driving" rather than an "obstacle" participant.

Renault invests quite considerable financial resources in training throughout the career of its employees and has put in place a policy of functional and geographic mobility. Such organizational investment leads the participants to regularly changing their job, place of work, team, etc. These personal changes have taught them to adapt positively to the change:

> We are actually in an environment where we are used to changing, we change jobs or positions easily here and also we have a lot of training options, even on-going training which allows us to keep up-to-date. We are always encouraged to develop our knowledge and performance methods.

and they become involved in pro-active problem-solving strategies.

In short, the context dimension of the change capacity consists of resources, assets that facilitate the change process. Embedded in the company management practices and shaping the organizational context, these resources should be compared with organizational catalysts for future transformations. Although the presence of these resources increases the possibility of a successful change, their absence does not mean that the change will not work, but that the process will slow down. Our research also highlights the importance of implementation procedures.

3.2 The process dimension of change capacity

As expected, the method of change management is a decisive factor (44 percent); it influences the success of all intentional actions. It is structured around a set of practices forming the process dimension. Good management by the reformer helps to give the company greater potential for success in the running of the changes. Here we find the management paradigm for change capacity.

First of all, our research emphasizes the role of transformational leadership which refers to the interpretative and political models. As creator of the change, the role of the leader in the process is decisive for three reasons. By personifying the change, the leader acts on its symbolic identity. He carries the change of identity and produces reasons for it so that the participants will accept its general significance. His action is also political: he creates a team of "supporters" who will ensure the propagation of the change. He finds political backing and makes sure he has the support of a critical number of individuals who will relay and spread his vision of the change. His action through the ranks is led skillfully: he knows how to handle his powers of decision. A good listener, the leader has confidence in his collaborators, encourages debate, argument and consensus. A strong character, the leader knows how to take positions that go against the flow, even to the point of unorthodoxy.

In our case, a number of managers have been raised to the status of hero for changes, which they have managed successfully. Georges Besse is one of the most symbolic; the background to his appointment (by L. Fabius after the ousting of B. Hanon), the difficult context in which he led his action (historic strike at Renault), the tough stands he took and tough decisions he made (the first redundancies) and the scale of the changes he undertook (total quality) all make him a key character in Renault's history. Those who knew him refer to him as an exceptional leader capable of inspiring his forces with phenomenal strength. Such admiration shows how important it is for a leader to have the ability to mobilize and to wield strong powers of seduction in order to carry out major changes:

> I lived through the 1980-84 years and at the beginning of 1980 the government at that time made Renault buy up a number of "sinking ships" which meant that Renault ended up in 1984 with a cumulative deficit of 64 thousand million (FF) [. . .]. An extraordinary man, George Besse, was appointed at the head of Renault; he arrived and said nothing. At first, a lot of people were shocked, "Why isn't he saying anything?", but he did however allow a few words and phrases to filter through which gradually restored confidence in the people, knowing that there was somebody at the top who was watching us [. . .]; and then, one day he produced a company plan. There was an extraordinary effect: it triggered off a feeling of company-belonging, people felt that things were moving, something was being put back in place [. . .]. This was a person who [. . .] carried Renault to a new phase fairly rapidly, but it was very deeply worked out and he set the standards on which we work today [. . .]

The legitimacy of change also proves to be a major element: the participants only commit themselves to projects, which they feel to be justified. In this sense, it refers to the interpretative and organizational development models of the management change capacity paradigm. Our research led us to itemizing two forms of legitimacy: legitimacy of outcome and legitimacy of procedure. Legitimacy of outcome concerns the contents of the change, its ability to solve the problem that the project was created for and, more generally, for the benefits it offers to the organization and its participants. Legitimacy of procedure concerns the various stages, the path taken in order to achieve the ultimate objective. It does mean that the routes taken are relevant. This legitimacy leans on a number of indicators: the actors justify the changes according to the commitment of the reformers, the persistence of their actions and the means used.

In our case, the implementation of quality, the new methods of project management and the reorganization of the TSE department were considered justifiable and legitimate by a critical majority. Total quality was seen as a means of better satisfying the end customer and the TSE department enabled an improved quality of service provisions to be obtained for in-house customers. This legitimacy relating to the contents of the change led to commitment on the part of the participants for their implementation:

> There must be pretty obvious justification for the change. If there is, then you will have no problems in putting the change through. If you can explain it clearly [. . .]

> I wouldn't say that the methods aren't important, but I tend to judge by the effect produced [. . .], but what I'm really interested in is the final result.

Our study also shows that the legitimacy of change is closely linked to the construction process. In this respect, it concerns the organizational development model. Indeed, the change could not be created behind closed doors and then imposed upon the actors by decree. It is an exercise of group construction, of collective invention and learning, of exchanges of views and of negotiation. The change is either constructed or emergent. It can then be made the object of a sufficiently large collective ownership as to become effective. Indeed, the contribution of the participants to the "construction" of the project should generate their support. This should increase the sense of legitimacy felt by the participants.

In the case of the creation of the TSE department, the manager had a rather vague idea of what he thought the TSE department should be. He created groups responsible for formalizing and amending this vision and sought contributions from the participants during EWU meetings. Because they belonged to the project; because they had amended the change to suit their interests and based on sound knowledge of the organization; because they defined the challenges, the aims and the procedure and had built a representation from tangible and objective data, the change gained in legitimacy in their eyes:

> If you don't go down to the basement, you don't know what is going on down there nor do you know what is happening up above; you can create organizations which are good, but which may be detached from the living part of it [. . .]. We are not on a base with solid foundations, so it means that we have to build on foundations made of "cardboard boxes"; in this way, we build a good organization on foundations which only partially exist.

Our research also shows the necessity of implementing an "evolutionary" procedure which is linked to the incremental and hierarchic models of the management change capacity paradigm. The incremental approach makes it possible to carry out a gradual transition during which the participants follow the rhythm that enables them to manage the change better using their own representations and their own way of behaving. In this sense, the rhythm of the change gives time for appropriation and for getting used or adjusting to the context. The "step-by-step" approach enables the change to be firmly linked into the context and makes it possible to fix the boundaries of the context, maintaining continuity in the organization. In this scenario, the support and help extended to those undergoing the change helps them to engage in the operations under reassuring conditions; it also ensures that the organization is brought up to standard.

In our case, the experience of the participants in matters of change highlights the interest in having a form of stability within the organization. Thus, the implementation of total quality was carried out gradually, both in terms of the contents as of organizational spaces, enabling the participants to alter their representations and their professional behavior. Their tasks evolved with total quality (more monitoring, more administrative work, etc.) making it necessary to acquire knowledge and skills that were essential for playing a different role; aptitudes which can only be acquired gradually and with the support (especially training) of the organization:

> I think that it is always the old Kaizen problem, of the continuous wheel of progress, which is better moved on at a regular speed rather than in huge steep steps. With steep steps, you get out of breath, not everybody is able to follow; whereas with the Kaizen steps you can follow and we go progressively forwards.

> I really think that change strategy should be based on implementation in stages. Consider total quality: first of all it was tested, worked on, improved in the EWUs in the factories and only after that was it implemented in successive phases in other areas such as testing systems.

Similarly, the visibility of the process proves to be a fundamental requirement as referred to the organizational development model. Indeed, the participants could see their reference points disappearing. It is necessary to give them an analysis framework enabling them to rebuild these reference points, which are essential for the act of interpretation, an act which will help them to give meaning to the process. These steps to create objectivity consist in obtaining resources in the form of information and facts, which will allow the participants to adapt within the psychological conditions that they find acceptable. Thus, the approach relies on a high level of communication within an interaction-based strategy. Good communication is important because the efforts towards "visibility" are not only concentrated on the announcement of the change (the reasons for the decision and the stakes), but they also punctuate the process by creating moments of communication concerning the progress of the project (essential for changes whose "returns on investments" are slow). And a strategy of interaction is important because dialogue involves verbal communication as well as representations amongst the participants. By sharing, the participants dismantle and reconstruct their framework of interpretation.

The participants feel extremely strongly about this:

> (There had to be) two-way communication which would make it possible to be in touch with the people on the ground to explain to them what had to be done. Why was this necessary? How should it be done? From that moment on, things went quite well. It's true that it took me a little time to understand it, but I think the main thing is that you really need the two sides to carry out a successful change, support from the management and dialogue so that those concerned know where they are heading.

Whatever the change being referred to, they find that communication, in the sense of an exchange, is a determining factor. In the case of total quality, for example, Georges Besse was highly present, visiting the different sites and playing his role as ambassador of change.

In short, we have presented the principles of implementing change. They incorporate the process dimension. Nevertheless, these principles do not signify the absence or disappearance of intentional action, but simply help with the problems that are inherent in any change. Our research finally highlights a last dimension of change capacity.

3.3 The learning dimension of change capacity

This dimension tackles the introspective capacity of the organization. In this sense, the assets of the change capacity, underpinned by the context and process dimensions, may be acquired and improved. They are built and renewed within the framework of a process of learning. This learning process plays a central role in structuring the components of the change capacity. From this viewpoint, these components have structural properties, which are both the method and the outcome of the organization's change practices. This outcome refers to the complex paradigm of the change capacity by underlining the structuring role of the initial conditions.

Our research highlights the influence of practices of improvement through experience. This learning strategy is considered as a facilitating condition of the complex change capacity paradigm as it is embedded in the organizational practices and is not connected to the change process. This consists in observing its practices and learning from them in order to limit the number of similar mistakes in the future. If it is able to do this, the company can plan and improve its organizational practices in a series of tests. Its action is structuring in three ways. First, mastering this practice is a part of the evolutive nature of the representations (learning from the past) since the latter are inevitably directed towards the continuous improvement of practices and consequently of their change. Similarly, this aptitude structures the practices of consensus since experience feedback is a collective exercise during which the participants question their actions and think of improvements. Finally, the collective construction of a change will benefit from respective experiences.

Our case study describes a company that has this aptitude:

> At Renault, we never speak of failure; when we do something, we make an assessment. What are the negative and positive points? We refer to the negative points in order to make improvements and a real change.

> I think that every one of us has a lot to gain and benefit from the good or bad experiences of the various sectors and that is what can help to make a success of the changes being implemented because we can make use of the good experiences and learn from the bad ones.

Loubet (2000) has highlighted this in relation to various practices. When the TSE department underwent change, the participants frequently referred to past changes both to help put the present change into context and to draw on things they had learnt in order to apply them to the current process.

The second form of learning, renewal through experimentation, leads us to question the very relevance of the practices. In this respect, it has to be qualified as an initial facilitating condition of complex change capacity paradigm as it refers to embedded practices which are not linked to the change process. The guiding values, which lead to the adoption of the practices, are challenged. As a result, there is a renewal of the collective memory (dominant paradigm) and the portfolio of solutions is extended. Its action is structuring in three ways. First of all, experimentation generates an evolutional nature in the representations since they are directed towards the invention of solutions and consequently the abandonment of certain practices. Second, it brings out individual learning capacities as the participants are often forced to adopt new practices. Finally, it helps consensus procedures because the participants have the correct legal set-up for the collective invention of systems and strategies for negotiation and compromise that form the basis of the consensus procedures.

Our case study describes a company that does have this aptitude for experimentation:

> It is the capacity to step outside the rules, to develop new ideas and new concepts, that stimulates the best source of progress: the imaginary.

> Thinking along one line alone is banned; you have to ask questions, look further afield, look for cheaper options, but there should be more than one way of looking at things.

> What happens is that there are lots of innovations and therefore this forces us to keep up to date; otherwise we are quickly overtaken. It does have its advantages, but there are times when it's all a bit too much: we just cannot relax.

Experimentation can result in certain risk products, as was the case in the launch of the Espace (development of a brand new segment in Europe) and the Twingo, or risk elements such as the penetration of the American market under Bernard Hanon. When the TSE department underwent its change, the participants were sometimes forced to invent solutions, which seemed unavailable within the organization.

Finally, the process of sharing new knowledge across the board is the last component and can be considered as an initial facilitating condition as it is an organizational capability unconnected to any of the change management models. The knowledge should be formally imparted and spread throughout the organization. The organization may develop mechanisms for managing the diffusion of knowledge (through the promotion of initiatives, the creation of discussion clubs, etc.). This aptitude is structuring for one main reason. The success and consequently the testing of an organizational practice (resulting from a change) on a local level make its general adoption by the organization, or at least by the area experiencing similar problems, more legitimate.

This is illustrated by the TSE department change:

> We collect information from the outside [. . .] which may have come on merit and we think: yes, we tried that and it works very well, so we must continue to receive the information which will help us with the project, provided we do receive it [. . .]: this has already happened to us and it didn't work.

> We have understood what the other departments can give us, so it is true that meetings have been set up so that we can explain and share our methods. I, for example, am going to present our technical solutions in the acoustic domain to the products people and soon, we shall be seeing how we can capitalize, because this practice already exists in the factories.

> Actually, what we have been doing in the TSE department has already been done elsewhere in Renault, so this really helps us when we are starting from scratch.

One of the challenges was the adoption of simultaneous project management and the platform approach. These two mechanisms were developed in previous years within the company and their practice is becoming more and more widespread. Their success was the reason for their adoption in the case of the TSE department.

In short, the three components of the structuring dimension lend dynamic properties to the organization. Through their structuring properties, these features may have considerable impact on the path taken by the change. Mastering them enables the organization to be maintained in a "dynamic" state.

The three dimensions of the change capacity are made up of transformational assets, which have a strong influence on each other. Indeed, these dimensions are interlinked and co-activate each other, forming a "chain" of resources of the change capacity. There is an element of recursion: the structuring dimension is itself structured since its components only develop in a context, which enables this. Hence the dimensions, which are highlighted, reflect the change capacity of the companies (Figure 2).

4. Discussion

Our study has shown that change capacity consists of three types of transformational assets. These results are interesting in two respects.

First, it responds to the double paradigm of change theories. It steers us towards the notion that the two paradigms complement each other and underlines the exchange of ideas between the two models. Indeed, change capacity is as much linked to its management (the process dimension relates to the management paradigm) as it is dependent on the initial conditions (the context dimension relates to the complex paradigm). Learning acts on these two dimensions as a mechanism, which can regenerate its assets (learning dimension). The three-dimensional nature of change capacity supplies a framework for the analysis of the capacity of the company to carry out successful organizational changes. Change capacity is not therefore just a matter of the method of managing the change or of organizational learning capacity, but a combination of the two.

According to our findings, these theoretical contributions induce new ideas regarding the management of organizational change. It could not be restricted to an over-regulated approach, just as we could not lapse into suggestions of radical relativity. Our results direct us towards a strategic management of change capacity. First of all, the managers identify what transformational assets the organization

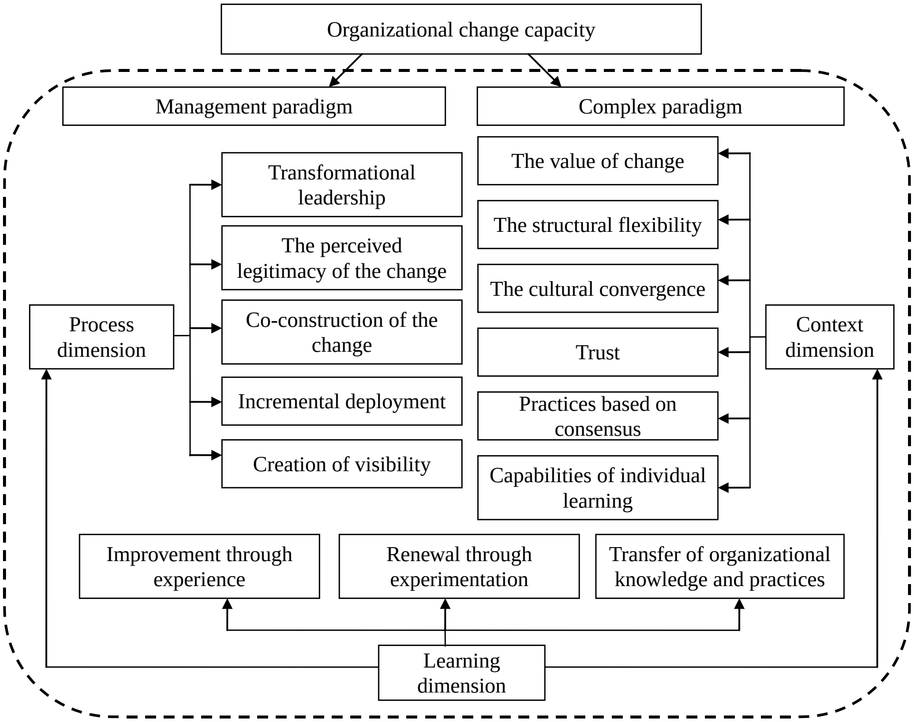

Figure 2.
A model of organizational change capacity

has at its disposal. This mapping stage enables an assessment to be made of how well the capacity can be used. After that, they try to shape it before committing to major reform by attempting to acquire or construct assets, which they do not yet have. They add to and cultivate the resources required to feed the change capacity. In this way, they limit the risks of becoming bogged down and failing in the transformation stages. Looked at in this way, the management of the change becomes an "atemporal" exercise. Stable periods become phases of preparation of the change, during which the organization sets up learning programmes, which will help it to structure the context in which the future change will be introduced. In this way, a favorable environment is constructed which will offer a time span for carrying out the changes. The organization starts off the change process by reducing any negative elements. This time management stage therefore implies managerial vision in which the past and the future are closely linked. Indeed, change management becomes a timeless exercise since the past creates the present; the context creates the action. They define each other and carry each other along. One step influences the other. The "time element" of the change is modified, opening the way to a strategic approach to the change.

The findings of this research do not however claim to be exhaustive and there is room for complementary research focused on the identification of the components of the capacity and its process of construction.

The single case, if it can be justified by the subject studied (Pettigrew, 1985), asks the delicate question about the statistical generalization of results. Therefore, in order to test our approach to change capacity, a replication strategy seems to be a promising avenue.

It consists in carrying out empirical tests on the model proposed in this article, using case studies. Then, in order to gain a better understanding of the construction process of the capacity, the replication consists in the selection of a case with a related context. Indeed, some elements of context structure our results and define the outline of a related context. The company studied belongs to a sector whose evolutions appear to influence the construction of the capacity to change. The project management strategy, Japanese management methods such as Kaizen and quality circles, alliance building, increased use of outsourcing, etc. are all elements of context which structure our results.

These lines of research will help to improve the overall quality of the proposed model and to put it into context in order to assess the influence of the characteristics and the sector changes on the construction of the change capacity, within a perspective of co-evolution.

Conclusion

Change capacity can therefore be defined as a capacity of adaptation and pro-action. However, it focuses more on the outcome of the capability than on the capability itself. In this respect, the study of theories on change has enabled us to propose an analysis framework for change capacity. The Renault case study has added to our initial results by showing that change capacity centers around three interlinked dimensions. These are made up of transformational assets which, if well managed by the organization, help with the implementation of the changes of adaptation and/or pro-action. The findings of this study are as much theoretical as managerial in nature. Transformational assets create the architecture of the change capacity and add to the conceptual framework in place at the time. They refresh the methods of managing the change and point to the adoption of a strategic approach to organizational change.

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