RESISTANCE TO CHANGE: A LITERATURE REVIEW AND EMPIRICAL STUDY

Authors: Pardo del Val, Manuela & Martínez Fuentes, Clara

Universitat de València, Spain

Facultad de Economía

Avda. Los Naranjos, s/n

46022 Valencia – SPAIN

Tel.: +34 96 382 8312

Fax: +34 96 382 8333

E-mail: Manoli.Pardo@uv.es; Clara.Martinez@uv.es

RESISTANCE TO CHANGE: A LITERATURE REVIEW AND EMPIRICAL

STUDY

Abstract: This paper examines organizational change, focusing on the distinction of

changes according to their scope and presenting a typology of evolutionary and strategic

changes. We also offer an in depth study of resistance to change. Through empirical

research, we have analyzed the importance of the sources of resistance to change

defined theoretically, also considering both types of changes. We have shown which

sources of resistance differ most, according to the scope of change, offering hints about

where organizations should pay special attention when initiating a change process.

Key words: change, resistance to change

2

RESISTANCE TO CHANGE: A LITERATURE REVIEW AND EMPIRICAL STUDY

Many authors (Lawrence, 1954; Maurer, 1996; Strebel, 1994; Waddell and Sohal, 1998, among others) stress that the reasons for the failure of many change initiatives can be found in resistance to change. Resistance to change introduces costs and delays into the change process (Ansoff, 1990) that are difficult to anticipate (Lorenzo, 2000) but must be taken into consideration. Resistance has also been considered as a source of information, being useful in learning how to develop a more successful change process (Beer and Eisenstat, 1996; Goldstein, 1988; Lawrence, 1954; Piderit, 2000; Waddell and Sohal, 1998). Undoubtedly, resistance to change is a key topic in change management and should be seriously considered to help the organization to achieve the advantages of the transformation.

Considering the importance of resistance to change, this paper aims to deepen in this field through a theoretical exposition of the concept. Later, we will offer the results of an empirical study of Spanish firms that had recently undergone a change process. In this study, we analyzed the main sources of resistance to change and their relationships with types of changes.

LITERATURE REVIEW

Organizational change is an empirical observation in an organizational entity of variations in shape, quality or state over time (Van de Ven and Poole, 1995), after the deliberate introduction of new ways of thinking, acting and operating (Schalk, Campbell and Freese, 1998). The general aim of organizational change is an adaptation to the

environment (Barr, Stimpert and Huff, 1992; Child and Smith, 1987; Leana and Barry, 2000) or an improvement in performance (Boeker, 1997; Keck and Tushman, 1993).

This definition encompasses many situations that should be distinguished by applying certain dimensions to establish 'typologies of change'. We will refer to the scope of change, because it is one of the most used variables in literature to design change typologies. That way, changes can be defined along a continuum starting in low-scope or evolutionary changes to high-scope or strategic ones. With the aim of making the use of this dimension (*scope*) easier, we will describe both extremes of the continuum, but we should always keep in mind that real changes are not a pure type but a mixture.

First, we will describe evolutionary, incremental, or first order changes. These are small changes that alter certain small aspects, looking for an improvement in the present situation, but keeping the general working framework (Blumenthal and Haspeslagh, 1994; Goodstein and Burke, 1991; Greiner, 1972; Levy, 1986; Mezias and Glynn, 1993; Nadler and Tushman, 1989; 1990). The second type of changes are strategic, transformational, revolutionary or second order ones. They are radical transformations, where the organization totally changes its essential framework (Blumenthal and Haspeslagh, 1994; Ghoshal and Bartlett, 1996; Goodstein and Burke, 1991; Marshak, 1993; Nadler and Tushman, 1989, 1990), looking generally for a new competitive advantage (Hutt, Walker and Frankwick, 1995) and affecting the basic capabilities of the organization (Ruiz and Lorenzo, 1999).

Once we have introduced the concept of organizational change and have presented a typology, we will analyze the term 'resistance to change'. On one hand, resistance is a phenomenon that affects the change process, delaying or slowing down its beginning, obstructing or hindering its implementation, and increasing its costs

(Ansoff, 1990). On the other hand, resistance is any conduct that tries to keep the *status quo*, that is to say, resistance is equivalent to inertia, as the persistence to avoid change (Maurer, 1996; Rumelt, 1995; Zaltman and Duncan, 1977). So, inertia and thus resistance are not negative concepts in general, since change is not inherently beneficial for organizations. Even more, resistance could show change managers certain aspects that are not properly considered in the change process (Waddell and Sohal, 1998).

Our research follows Rumelt (1995), and divides the sources of resistance into five groups. We have added certain sources of resistance to Rumelt's proposal, so we have also altered the names of the categories in order to include the new topics. Although Rumelt (1995) insists that inertia is a problem in the strategy formulation stage as well as in the implementation one, he does not distinguish the five groups of sources of inertia according to both stages. We have tried to make this distinction and suggest that the first, second and third group are sources of resistance that appear during the formulation stage, because they deal with factors that complicate the situation's analysis and the evaluation of the various change alternatives. Groups four and five correspond to the implementation stage, since they are an obstacle once the change strategy is already formulated. This classification and the list of sources of resistance/inertia can be seen in table 1.

Insert Table 1 about here

Sources of Resistance and Inertia in the Formulation Stage

Regarding the first group of sources of resistance, change starts with the perception of its need, so a wrong initial perception is the first barrier to change. We call this first group 'distorted perception, interpretation barriers and vague strategic priorities'. It includes: (a) myopia, or inability of the company to look into the future

with clarity (Barr *et al.*, 1992; Krüger, 1996; Rumelt, 1995); (b) denial or refusal to accept any information that is not expected or desired (Barr *et al.*, 1992; Rumelt, 1995; Starbuck *et al.*, 1978); (c) perpetuation of ideas, meaning the tendency to go on with the present thoughts although the situation has changed (Barr *et al.*, 1992; Krüger, 1996; Rumelt, 1995; Zeffane, 1996); (d) implicit assumptions, which are not discussed due to its implicit character and therefore distort reality (Starbuck, Greve and Hedberg, 1978); (e) communication barriers, that lead to information distortion or misinterpretations (Hutt *et al.*, 1995); and (f) organizational silence, which limits the information flow with individuals who do not express their thoughts, meaning that decisions are made without all the necessary information (Morrison and Milliken, 2000; Nemeth, 1997).

The second main group of sources of resistance deals with a low motivation for change. We have identified five fundamental sources: (a) direct costs of change (Rumelt, 1995); (b) cannibalization costs, that is to say, change that brings success to a product but at the same time brings losses to others, so it requires some sort of sacrifice (Rumelt, 1995); (c) cross subsidy comforts, because the need for a change is compensated through the high rents obtained without change with another different factor, so that there is no real motivation for change (Rumelt, 1995); (d) past failures, which leave a pessimistic image for future changes (Lorenzo, 2000); and (e) different interests among employees and management, or lack of motivation of employees who value change results less than managers value them (Waddell and Sohal, 1998).

The lack of a creative response is the third set of sources of resistance. There are three main reasons that diminish the creativeness in the search for appropriate change strategies: (a) fast and complex environmental changes, which do not allow a proper situation analysis (Ansoff, 1990; Rumelt, 1995); (b) reactive mind-set, resignation, or tendency to believe that obstacles are inevitable (Rumelt, 1995); and (c) inadequate

strategic vision or lack of clear commitment of top management to changes (Rumelt, 1995; Waddell and Sohal, 1998).

Sources of Resistance and Inertia in the Implementation Stage

Implementation is the critical step between the decision to change and the regular use of it at the organization (Klein and Sorra, 1996). In this stage, two more resistance groups can be found. The first of them deals with political and cultural deadlocks to change. It consists of: (a) implementation climate and relation between change values and organizational values, considering that a strong implementation climate when the values' relation is negative will result in resistance and opposition to change (Klein and Sorra, 1996; Schalk *et al.*, 1998); (b) departmental politics or resistance from those departments that will suffer with the change implementation (Beer and Eisenstat, 1996; Beer *et al.*, 1990; Rumelt, 1995); (c) incommensurable beliefs, or strong and definitive disagreement among groups about the nature of the problem and its consequent alternative solutions (Klein and Sorra, 1996; Rumelt, 1995; Zeffane, 1996); (d) deep rooted values and emotional loyalty (Krüger, 1996; Nemeth, 1997; Strebel, 1994); and (e) forgetfulness of the social dimension of changes (Lawrence, 1954; Schalk *et al.*, 1998).

Last but not least, a set of five sources of resistance with different characteristics have been bunched together around the last group of sources of resistance: (a) leadership inaction, sometimes because leaders are afraid of uncertainty, sometimes for fear of changing the *status quo* (Beer and Eisenstat, 1996; Burdett, 1999; Hutt *et al.*, 1995; Kanter, 1989; Krüger, 1996; Maurer, 1996; Rumelt, 1995); (b) embedded routines (Hannan and Freeman, 1984; Rumelt, 1995; Starbuck *et al.*, 1978); (c) collective action problems, specially dealing with the difficulty to decide who is going to move first or

how to deal with free-riders (Rumelt, 1995); (d) lack of the necessary capabilities to implement change – capabilities gap – (Rumelt, 1995); and (e) cynicism (Maurer, 1996; Reichers, Wanous and Austin, 1997).

After this theoretical exposition, we will tackle the objectives of our empirical research. We will start with the methodology of our research and the description of our sample. Then, we will check if the sources of resistance resulting from the literature review agree with the ones observed in business practice. Finally, we will analyze the relationship between both types of changes described in the theoretical framework and the sources of resistance within each of them.

METHODOLOGY AND DESCRIPTION OF THE SAMPLE

We carried out our quantitative research at Spanish companies with more than fifty employees that had undergone a change process recently. According to the database Dun & Bradstreet 2000 (50.000 best Spanish companies) this population consisted of 12.656 organizations. Out of it, we extracted a random sample of 1.800, to whom we sent our questionnaire, both by electronic and ordinary mail, and obtained 86 valid answers. The questionnaire was designed according to theoretical considerations and it was later tested to check its suitability, first with a group of experts (university staff and several business people) and then with three personal interviews to managers in companies of the sample.

Out of the 86 respondents 15% are from top management, while the rest are middle managers. Most (70%) have a university degree. As far as the profile of the companies is concerned, almost two thirds of the respondents are from the industrial sector. About half of them have an annual turnover of less than 30 million Euros, and only 20% go over 90 million. One third of the sample has less than 100 employees, the

second third has between 100 and 300, and the last third has over 300. Regarding the types of changes that their answers address, 58.8% of the respondents consider the change faced by their institution as evolutionary, while 22.4% state it was more strategic and 18.8% of the companies express an intermediate situation.

This questionnaire aimed to serve as a tool to test two main hypotheses. Firstly, we wanted to check whether the list of theoretical sources of resistance to change were observable in our empirical research. Secondly, we wanted to test if resistance to change is higher in strategic than in evolutionary changes. We differentiated both types of changes through a continuum that described change as extremely strategic ('change has been radical and we are not the same company we were before') or extremely evolutionary ('we have modified certain specific aspects, but the company remains in essence as it was before changing'). Respondents had to indicate their position among five points on that continuum.

RESULTS OF THE EMPIRICAL RESEARCH

As stated in the methodology, the empirical research we have carried out in order to achieve our goals is based on a questionnaire, mailed to managers (middle and top managers). They had to answer several questions dealing with a change process that had happened in their companies. Among these questions, the one that allows us to establish our first planned comparison included a list describing the factors we have considered previously as sources of resistance to change. We asked managers to point out how much the before-mentioned sources of resistance had affected change, ranging from 1 to 5. Scoring 1 meant that it was not a source of resistance at all, and 5 meant that such source of resistance was so powerful that it forced the organization to rethink

the change strategy. The answers we obtained regarding the incidence of the sources of resistance to change are shown in table 2.

Insert Table 2 about here

As can be observed, no mean is under 1.5; this indicates that all sources of resistance have had an influence, more or less, and in this way our theoretical exposition is supported and thus, we have achieved our first objective. The questionnaire also allowed managers to include other sources of resistance. Since none of them added any significant factor, our list is not only appropriate, but also complete.

Going more deeply into this first goal, we can use the information provided by table 2 to gain more insight about the incidence of the sources of resistance to change. Starting with the means, it is observable that the lowest mean is 1.65 and the highest 2.70, so resistance to change exists but it is generally not too strong to affect the change process seriously, considering that the scale allowed scores up to 5. So, changes always carried resistance, but no single source was pointed out as a severe difficulty to achieve the change goals.

The source of resistance to change with the highest mean is related to the difficulties created by the existence of deeply rooted values – inside the group of political and cultural deadlocks, in the implementation stage. It is followed by the lack of the capabilities needed to implement the change process, and then departmental politics. Resistance linked to costs and to incommensurable beliefs are next.

Regarding our second goal, we will now check our hypothesis. Specifically, we want to observe if resistance is higher in strategic than in evolutionary changes. Therefore, we will run the same descriptive analysis distinguishing both types of change. Next, in order to check if the differences are significant, we will run a typical deviation analysis, being the mean of the sources of resistance the dependent variable,

and the type of change being the factor. Since strategic changes are just 22.4%, this figure is too small to support significant results; however, the analysis shows some interesting findings that we would like to stress and that encourage further research to expand on them.

Resistance to change seems to be always more powerful in strategic changes than in evolutionary ones, except in one source of resistance that it remains the same ('forgetfulness of the social dimension of changes due to forgetting supervisors'). So, data suggests that the more radical and transformational change is, the more powerful resistance to change is. This conclusion answers our second planned comparison, and it is the first step to examine which sources of resistance are comparatively stronger. This result makes it fundamental for organizations to pay special attention to those sources of resistance to change. Table 3 presents the list of the main apparently significant differences between resistance in evolutionary and strategic change.

Insert Table 3 about here

The last column shows the F statistic and its significance. It exhibits which sources of resistance present a higher variation considering evolutionary and strategic changes. Through the value of F we can observe that the highest differences are in the difficulty to find a creative answer, either for resignation or for the fast and complex environment. The source related to deep rooted values that hinder change is also highly different. Next, the two sources of resistance that present high variation are the different interests between employees and managers, and the existence of change values that are against organizational values.

It is also interesting to have a look at the relative position of the sources of resistance according to their importance for companies. That way, the analysis of the

essential differences between types of change is rounded off with the information about their higher or lower importance for any change, as well as for both types of changes.

Comparing the degree of importance of the sources of resistance in general change, and the degree in evolutionary and strategic changes, we could observe that in evolutionary changes the progression of the importance of the sources of resistance is almost the same as in changes in general. However, in strategic changes such hierarchy is altered, specially because the sources of resistance with the highest differences between both types of changes increase their importance and rise to the first places on the list. For example, the lack of a creative response due to the fast and complex environment was eleventh in general changes and thirteenth in evolutionary changes, but it moves up to the fourth place of importance in strategic changes. A similar movement happens with the lack of a creative answer due to resignation, which was fifteenth and sixteenth and is sixth in strategic changes.

The resistance related to the existence of deep-rooted values that make change difficult remains unaltered. It is both the most powerful for any change and one of the sources that increases its mean most by comparing evolutionary and strategic changes. We should bear in mind that such source of resistance is linked to a strong culture that stresses loyalty and cohesion as key values, limiting at the same time the innovation and creative capability by not allowing the existence of dissident people inside the organization. These characteristics show that it is a serious source of resistance, thus obviously its incidence is higher in changes that seek a fundamental transformation in the organization. Therefore, companies should consider the existing values as one of the most important possible sources of resistance and that concern should increase the more strategic the change is.

Similarly, both sources of resistance with the highest differences, related to the difficulty of finding creative answers, seem to be comparatively much more dangerous in strategic changes. So, the results of a fast and changing environment that obstructs the adoption of appropriate decisions, or the feeling of resignation by considering that the organization's problems are inevitable, will be probably more devastating the more radical the change is.

On the other hand, results show that the second most powerful source of resistance for any change, dealing with departmental politics, does not present a statistically significant difference for each type of change. The fourth source, related to the lack of motivation due to cannibalization costs and cross subsidy comforts, deserves similar consideration. That is to say, both sources of resistance have to be seriously considered for any organization facing a change process, independently of the scope of such change.

CONCLUSIONS

Resistance to change is an essential factor to be considered in any change process, since a proper management of resistance is the key for change success or failure. By resistance to change we understand any phenomenon that hinders the process at its beginning or its development, aiming to keep the current situation. Therefore, we will establish a similarity between the concepts of resistance and inertia.

Literature offers many studies with sources of resistance to change. This paper follows the five-group classification of Rumelt (1995), completing it with other authors' contributions. In the empirical research, our theoretical list has been supported by our investigation of Spanish companies undergoing a change process.

Furthermore, our research has also allowed us to order the importance of the sources of resistance to change. Later, we have distinguished how they affect changes according to their scope, that is to say, how they affect evolutionary and strategic changes. We arrived to the conclusion that resistance to change is generally higher in strategic changes than in evolutionary ones.

Looking closer at the results, it is fundamental to note that the source of resistance identified as most powerful for any type of change, dealing with the existence of deep-rooted values, is also one of the sources that presents the highest differences between evolutionary and strategic changes. Moreover, four more of the top-ranked overall resistance factors present high variations when considering change as evolutionary or strategic. These factors are the different interests among employees and management, communication barriers, organizational silence, and capabilities gap. This conclusion leads to the suggestion that these are the most significant issues managers leading a strategic change process should be aware of.

Could change leaders do anything to deal with those sources of resistance? There might not be universal advice to avoid resistance to change, however, according to these results, we would suggests that managers should pay special attention to certain topics. First, to reduce resistance caused by deep-rooted values, managers should consider how much organizational culture fits with change objectives and what could be done to improve such fit before the change process starts. This cultural consideration would also help to bring employees and management interests closer and to avoid organizational silence. Another key aspect in change seems to point towards training. Training would be a good tool to surpass communication difficulties and thus avoid resistance caused by communication barriers, as well as to help reduce the gap between the present situation and the capabilities required for the change process.

This paper adds valuable insights to both the academic and the business community. From the academic point of view, our research contributes to the knowledge of resistance to change by a compendium of previous works, which has been later tested with an empirical study. Furthermore, we insist on the difference of resistance to change according to both types of changes. The business world, on the other hand, will find in this paper a set of reflections that will help to determine which aspects should be specially considered at an organizational change.

REFERENCES

- Ansoff, I.H. (1990), Implanting Strategic Management, Prentice Hall International, Ltd.

 London
- Barr, P.S., Stimpert, J.L. and Huff, A.S. (1992) "Cognitive Change, Strategic Action, and Organizational Renewal", Strategic Management Journal, 13 (Special Issue), pp. 15-36.
- Beer, M. and Eisenstat, R.A. (1996) "Developing an organization capable of implementing strategy and learning", Human Relations, 49 (5), pp. 597-617.
- Beer, M. Eisenstat, R.A. and Spector, B. (1990) "Why Change Programs Don't Produce Change", Harvard Business Review, 68 (6), pp. 158-166.
- Blumenthal, B. and Haspeslagh, P. (1994) "Toward a Definition of Corporate Transformation", Sloan Management Review, 35 (3), pp. 101-106.
- Boeker, W. (1997) "Strategic change: The influence of managerial characteristics and organizational growth", Academy of Management Journal, 40 (1), pp. 152-170.
- Burdett, J.O. (1999) "Leadership in change and the wisdom of a gentleman", Participation & Empowerment: An International Journal, 7 (1), pp. 5-14.
- Child, J. and Smith, C. (1987) "The context and process of organizational transformation Cadbury Limited in its sector", Journal of Management Studies, 24 (6), pp. 565-593.
- Ghoshal, S. and Bartlett, C.A. (1996) "Rebuilding Behavioral Context: A Blueprint for Corporate Renewal", Sloan Management Review, 37 (2), pp. 23-36.
- Goldstein, J. (1988) "A Far-from-Equilibrium Systems Approach to Resistance to Change", Organizational Dynamics, (Autumn), pp. 16-26.
- Goodstein, L.D. and Burke, W.W. (1991) "Creating Successful Organization Change", Organizational Dynamics, 19 (4), pp. 5-17.

- Greiner, L.E. (1972) "Evolution and revolution as organizations grow", Harvard Business Review, (July/Aug.), pp. 37-46.
- Hannan, M.T. and Freeman, J. (1984) "Structural Inertia and Organizational Change", American Sociological Review, 49, pp. 149-164.
- Hutt, M.D., Walker, B.A. and Frankwick, G.L. (1995) "Hurdle the Cross-Functional Barriers to Strategic Change", Sloan Management Review, 36 (3), pp. 22-30.
- Kanter, R.M. (1989) "The New Managerial Work", Harvard Business Review, 67 (6), pp. 85-92.
- Keck, S.L. and Tushman, M.L. (1993) "Environmental and Organizational Context and Executive Team Structure", Academy of Management Journal, 36 (6), pp. 1314-1344.
- Klein, K.J. and Sorra, J.S. (1996) "The challenge of innovation implementation", Academy of Management Review, 21 (4), pp. 22-42.
- Krüger, W. (1996) "Implementation: The Core Task of Change Management", CEMS Business Review, 1, pp. 77-96.
- Lawrence, P.R. (1954) "How to Deal with Resistance to Change", Harvard Business Review, (May/June), pp. 49-57.
- Leana, C.R. and Barry, B. (2000) "Stability and Change as Simultaneous Experiences in Organizational Life", Academy of Management Review, 25 (4), pp. 753-759.
- Levy, A. (1986) "Second-Order Planned Change: Definition and Conceptualization", Organizational Dynamics, (Summer), pp. 5-20.
- Lorenzo, J.D. (2000) "Barreras en los procesos de cambio en las organizaciones: estudio de un caso", Paper presented at the X Congreso Nacional de ACEDE, Oviedo (Spain).

- Marshak, R.J. (1993), "Managing the Metaphors of Change", Organizational Dynamics, 22 (1), pp. 44-56.
- Maurer, R. (1996) "Using resistance to build support for change", The Journal for Quality and Participation, 19 (3), pp. 56-66.
- Mezias, S.J. and Glynn, M.A. (1993) "The three faces of corporate renewal: institution, revolution, and evolution", Strategic Management Journal, 14, pp. 77-101.
- Morrison, E.W. and Milliken, F.J. (2000) "Organizational silence: a barrier to change and development in a pluralistic world", Academy of Management Review, 25 (4), pp. 706-725.
- Nadler, D.A. and Tushman, M.L. (1989) "Organizational Frame Bending: Principles for Managing Reorientation", Academy of Management Executive, 3, pp. 194-204.
- Nadler, D.A. and Tushman, M.L. (1990) "Beyond the Charismatic Leader: Leadership and Organizational Change", California Management Review, 32 (2), pp. 77-97.
- Nemeth, C.J. (1997) "Managing innovation: When less is more", California Management Review, 40 (1), pp. 59-74.
- Piderit, S.K. (2000) "Rethinking resistance and recognizing ambivalence: a multidimensional view of attitudes toward an organizational change", Academy of Management Review, 25 (4), pp. 783-794.
- Reichers, A.E., Wanous, J.P. and Austin, J.T. (1997) "Understanding and managing cynicism about organizational change", Academy of Management Executive, 11 (1), pp. 48-59.
- Ruiz, J. and Lorenzo, J.D. (1999) "Cambio estratégico y renovación organizativa: utilización de las capacidades latentes y periféricas", Revista Europea de Dirección y Economía de la Empresa, 8 (4), pp. 71-82.

- Rumelt, R.P. (1995), "Inertia and transformation", in Montgomery, C.A., Resource-Based and Evolutionary Theories of the Firm, Kluwer Academic Publishers, Massachusetts, pp. 101-132.
- Schalk, R., Campbell, J.W. and Freese, C. (1998) "Change and employee behaviour", Leadership & Organization Development Journal, 19 (3), pp. 157-163.
- Starbuck, W., Greve, A. and Hedberg, B.L.T. (1978) "Responding to crisis", Journal of Business Administration, 9 (2), pp. 111-137.
- Strebel, P. (1994) "Choosing the right change path", California Management Review, 36 (2), pp. 29-51.
- Van de Ven, A.H. and Poole, M.S. (1995) "Explaining development and change in organizations", Academy of Management Review, 20 (3), pp. 510-540.
- Waddell, D. and Sohal, A.S. (1998) "Resistance: a constructive tool for change management", Management Decision, 36 (8), pp. 543-548.
- Zaltman, G. and Duncan, R. (1977), Strategies for Planned Change, Wiley, Toronto.
- Zeffane, R. (1996) "Dynamics of strategic change: critical issues in fostering positive organizational change", Leadership & Organization Development Journal, 17 (7), pp. 36-43.

TABLE 1. SOURCES OF RESISTANCE OR INERTIA

		Муоріа
	Distorted perception,	Denial
	interpretation barriers	Perpetuation of ideas
	and vague strategic	Implicit assumptions
	priorities	Communication barriers
		Organizational silence
INERTIA IN THE	Low motivation	Direct costs of change
FORMULATION		Cannibalization costs
STAGE		Cross subsidy comforts
		Past failures
		Different interests among employees and management
		Fast and complex environmental changes
	Lack of a creative	Resignation
	response	Inadequate strategic vision
		Implementation climate and relation between change
		values and organizational values
		Departmental politics
	Political and cultural deadlocks	Incommensurable beliefs
INERTIA IN THE		Deep rooted values
IMPLEMENTATION		Forgetfulness of the social dimension of changes
STAGE		Leadership inaction
		Embedded routines
	Other sources	Collective action problems
		Capabilities gap
		Cynicism

TABLE 2. RESULTS OF THE SOURCES OF RESISTANCE, ORDERED BY $$\operatorname{\mathsf{MEANS}}$$

Sources of resistance or inertia to change		
Deep-rooted values	2.70	
Capabilities gap		
Departmental politics		
Low motivation due to cannibalization costs and cross subsidy comforts	2.31	
Incommensurable beliefs		
Different interests among employees and management		
Communication barriers	2.23	
Organizational silence	2.20	
Low motivation due to direct costs of change	2.15	
Myopia, denial, perpetuation of ideas, implicit assumptions	2.11	
Lack of a creative response due to fast and complex environmental changes		
Lack of a creative response due to inadequate strategic vision		
Change values opposite to organizational values		
Forgetfulness of the social dimension of changes due to obsession of promoter	2.01	
Lack of a creative response due to resignation	1.96	
Leadership inaction, embedded routines, collective action problems	1.94	
Cynicism		
Forgetfulness of the social dimension of changes due to forgetting supervisors		
Low motivation due to past failures		

Note: some of the factors generated (Table 1) were merged, as in the pilot test we found the list of factors was too long.

TABLE 3. MAIN RESULTS OF THE SOURCES OF RESISTANCE,
DISTINGUISHING TYPES OF CHANGE

Resistance or inertia		Strateg.	
	change	change	F
Lack of a creative response due to resignation	1,68	2,74	13,82***
Deep-rooted values	2,18	3,42	13,01***
Different interests among employees and management	1,96	2,79	7,68***
Lack of a creative response due to fast and complex environmental changes	1,80	2,79	7,62***
Communication barriers	2,00	2,63	4,98**
Change values opposite to organizational values	1,80	2,56	4,92**
Myopia, denial, perpetuation of ideas, implicit assumptions	1,94	2,58	4,70**
Organizational silence	1,90	2,53	4,33**
Capabilities gap	2,16	2,95	4,29**

Note: ** p < 0.05 ** p < 0.01