

Resistance to Change as a Lever of Innovation: Case of Tangier, Tetouan and Hoceima Region, Morocco

Jihane Abdessadak, Hicham Achelhi, Kamal Reklaoui

Abstract—For any company or organization, change must be natural and binding in order to evolve its business, protect its durability and remain competitive. "Adapt or disappear". But how often managers, leaders or employees develop astonishing ideas that could improve several aspects of the organization and the feedback is less that encouraging and people give unrealistic judgments just to escape change. In this article, we will first provide a general introduction of different barriers to innovation, then we will focus on change and more precisely on the resistance to change which is one of the most critical barriers; in the end we will expose the models allowing to soften this phenomenon and, above all, the main steps that may follow an idea man in the delicate and decisive implementation of innovations.

Keywords—Innovation, change, resistance to change/innovation, barriers to innovation, levers of innovation.

I. INTRODUCTION

INNOVATION is one of the main drivers of a firm's competitive advantage. Innovation may, however, challenge the status quo, and force change and adjustment within the organization, and since the "world" is changing at a speed and an intensity of the unknown, the survival of companies, organizations or firms in general depends on their capability to adapt to change, and the ability of the commitment chief among these large organizations to manage these changes [1], [2].

Change can be defined as the set of transformations that take place in the various dimensions of organizations, produced by natural forces, such as the will of those who create new ideas or those who push and drive others to innovate and create change [3]. The change is permanent, planned and not necessarily because of an explicit intention to transform organizations. Overall, the change that can be generated in a company depends not only on internal factors, but external factors, such as technology or skills. However, no matter what type of change takes place, it is necessary for managers, who are set to lead the change, to answer at least these questions before implementing the change:

- Why would you want to make this change?
- How might you go about it in order to succeed?
- How important is it for you to make this change? And why?
- What do you think you will do?

Jihane Abdessadak, Hicham Achelhi, Kamal Reklaoui are with the Research in Engineering, Innovation and Management of Industrial Systems, Faculty of Science and Technology, P.B.416, Tangier, Morocco (E-mail: Jihane.abdessadak@gmail.com).

- Which categories and profiles of people am I dealing with?
- How confident could you say you are? [4]

In this way, innovation leaders can begin to learn how to recognize the negative feedback signals in themselves and their employees.

II. INNOVATION: DEFINITION, BARRIERS AND LEVERS

A. Definition

Following the "Lift with Fing" conference, held in Marseille in June 2015 and whose theme was "Do it Yourself," over 580 participants attended and shared visions and viewpoints on innovation. Here there are some of them:

- For the teacher: "Innovation is to transform a dream into reality. It's like a gift." Marc Giget;
- For the sociologist: "It's not the original idea that is innovative, but it becomes so through interaction with other viewpoints." Evan Semple, a specialist in social software;
- In politics: "It's the sharing that creates innovation." Nathalie Kociusko-Morizet, Secretary of State for Prospective and the digital economy;
- For the environmentalist: "Innovation is the response to an emergency." Dennis Pamlin
- The radical: "To speak of innovation, there must be a break, a rupture. This should not be the same after as before." Philippe Lemoine, Chairman of Lazer.

In fact, a simple definition of innovation would be: an idea that has found its market. Innovation is the fact that causes change by introducing something new [5].

Innovation concerns all business sectors today. It is at the same time a result (a new product, a new service, a new process, a new technology, a new know-how), and the process followed to reach this result (a project of innovation). Innovation can be defined as the whole process taking place, from the birth of an idea to its realization (product launch), through market research, prototype development and the early stages of production.

Companies innovate because it is the best way to maintain competitiveness and to take the path of sustainable development [6]. Innovation gives birth to new technologies and new products which help to solve different world problems, such as health or environment issues. By transforming the modalities of production, it can also stimulate productivity, create jobs and contribute to improved quality of life of the citizens [7].

There are, of course, innovations that spring from a flash of genius. Most innovations, however, especially the successful ones, result from a conscious, purposeful search for innovation opportunities, which are found in only a few situations.

B. Barriers to Innovation

The study of the obstacles of innovation is very recent. Several studies identify obstacles to innovation and to know their nature, origin, importance and impact on the innovation process. Its aim is to measure the effects and consequences [6]-[8].

Innovation can be confronted to a lot of types of barriers related to cost, structure, process and human resources level [9]:

1. Financial Problems

Cost has been cited as one of the most significant barriers to innovation. The uncertainty associated with innovation can be a source of conflict with funders. This risk, as well as high monitoring costs and difficulty of assessing the viability of innovation, make the challenge of financing innovation even more difficult. Risk and financial exposure are directly linked through much of finance theory, with higher risk being associated with higher financial exposure and lower risk with lower financial exposure. Activities that increase financial exposure also increase risk, and activities that decrease financial exposure decrease risk. The role of financial exposure and cost of innovation may thus be important constraints on innovation [10].

2. Process Obstacles

First of all, information about a firm's external environment, such as market opportunities, changes in technology, and government policy, impact managers' adoption of innovation as a strategy to better meet customer needs and to help make the firm more competitive. Information about technology, markets, and government policy initiatives can reinforce the importance and potential advantages of becoming more innovative. A lack of information, however, can become a big obstacle to innovation, and uncertainty about government policy, can become a significant barrier to innovation.

Second, when people are thinking of creating an innovation, they do not take enough time to look at the assumptions that they are making about it, and so in general it would be a failure. And it constitutes a real barrier to innovation.

Finally, managing ideas into good currency is not an easy thing to do. Learning to understand the close connection between technical and administrative dimensions of innovations is a key part of understanding the management.

Innovation is often viewed as a good thing because the new idea must be useful-profitable, constructive, or solve a problem, but sometimes new ideas are not always perceived as useful; so they are not normally called innovations; they are usually called mistakes. Objectively, of course, the usefulness of an idea can only be determined after the innovation process is completed and implemented. Moreover, while many new ideas are proposed in organizations, only a very few receive

serious consideration and developmental effort. Since it is not possible to determine at the outset which new ideas are "innovations" or "mistakes," and since we assume that people prefer to invest their energies and careers on the former and not the latter, there is a need to explain (1) how and why certain innovative ideas gain good currency, and (2) how and why people pay attention to only certain new ideas and ignore the rest. These two questions direct our focus to the problem of managing ideas [11].

3. Structural Barriers

The spread of ideas, people and transactions with the passage of time is the dominant feature, and with it comes the complexity and interdependence, and bottom-line structural problems for the management of relations over time. Often observed in the dissemination of the ideas of one person is working on the development of innovation from concept to reality. Over time the individual develops a mosaic of views, revisions, extensions and innovative applications of the initial idea and accumulates a complex set of related options. However, innovation does not mean an individual activity but a collective achievement. As such, there is also a proliferation of people (with different skills, resources and interests) involved in the innovation process. These perceptions are amplified in different frames of reference and the dissemination of transactions or relationships between people and organizational units that occur where there is innovation [11].

To sum up, the centralization, the centralized decision-making is the central brake of structural problems. The more the processes of decision making are centralized and not participative, the less chance the company has to be innovative.

4. Human Resources Problems

The resistance to change: People and their organizations are largely designed to focus on, and protect existing practices rather than pay attention to developing new ideas. [12]-[15].

The lack of time: Innovation is considered a consumer of time, in particular time management. Indeed, according to company employees, innovation is time consuming, and in completing daily tasks and follow-up, they do not consider they have the time to innovate.

The lack of qualifications: The lack of knowledge and expertise on innovation also stands as an obstacle in the phases of developing new ideas and making decision.

The management obstacle: The main problems of management, which stalls innovation in a company, are the lack of closeness on the ground, the lack of communication and the lack of follow-up. The idea of closeness, is associated with becoming aware of the difficulties facing staff, and guiding and supporting them in the implementation of the new practices. While follow-up is more connected with checking and to make sure that the notion of innovation and development is understood (included) and practicable.

C. Levers of Innovation

Change management meets several challenges that the teams do not necessarily have answers to, whether in terms of methodology, tools and analysis practices, the use of external levers can solve some of these difficulties, such as knowledge management, leadership management or innovation methods.

Lagziri [8] identified several barriers to effectiveness in the process of innovation. Our work is to continue this study in focusing on three barriers.

A problem-solving group was formed by some academics, who have education and experiences in innovation, and few innovation experts. The group was asked to analyze the internal and external barriers to develop a list of barriers to study in the region of Tangier-Tetouan. In total 14 barriers were identified [8]:

1. The strategy of management
2. The economic risk
3. The high cost of innovation
4. Government policy
5. Non-Qualified staff
6. Problem of culture
7. Resistance to Change

8. Difficulty to find a partner
9. Lack of access to knowledge network
10. Lack of relationship with the university
11. Lack of results of R & D
12. Lack of information of technology
13. The lack of market information
14. Lack of protection of intellectual property rights policy.

We conducted a detailed study (quantitative method: Survey and qualitative methodology: Interview) with employees, students and the unemployed, to analyze these obstacles in order to identify the most critical and to develop and make them as levers that can help innovation. This analysis allowed us to classify them as shown in Fig. 1. From this graph, we conclude that resistance to change (30 % of total responses) and the culture of innovation (20 % of total responses) are the two major barriers to innovation in the area of Tangier, Tetouan and Morocco. In the remainder of this paper, we have decided to focus on resistance to change as the title indicates.

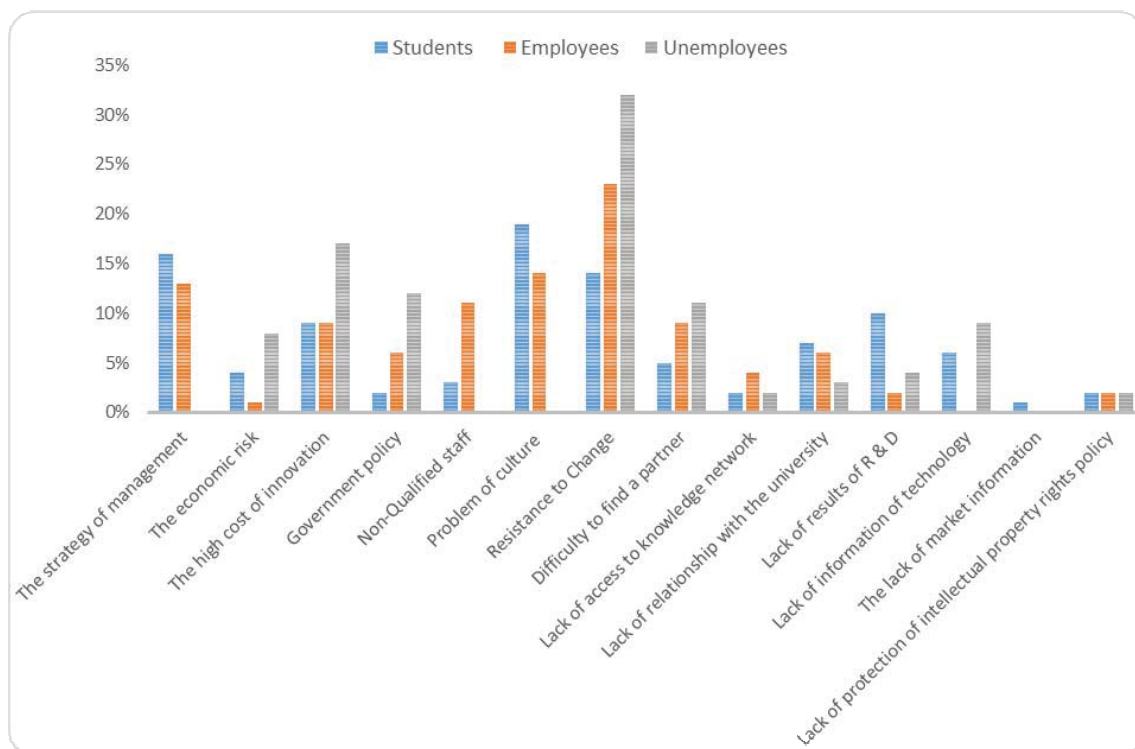


Fig. 1 Importance of barriers according to students, employees and unemployed persons

III. RESISTANCE TO CHANGE/INNOVATION

Resistance to innovation is a new concept that has appeared and, for the moment, has been rather difficult to define. A loose definition for consumer resistance to innovation would be that it represents the negative reaction toward innovation because of the potential changes made to a satisfactory status

quo or because it is in conflict with their belief structure. Therefore, we can say that resistance to innovation is how consumers react to new or improved products that come onto the market, whatever they may be [16].

The concept of resistance to change is rooted in unfreezing, moving, and freezing model of organizational change, which

stated that there are driving forces that seek to either bring about or resist change. Research in the areas of resistance to change often describes it on the individual level as three dimensions: cognitive, affective, and behavioral. The cognitive dimension refers to how employees think about the change, including their perceived capability to be effective in new work roles. The affective dimension is defined as the emotional and psychological reactions employees experience in how they feel about the change.

The behavioral dimension examines resistance in terms of employee action responses, and whereas the first two dimensions are often accepted as the sources or reasons causing resistance, the behavioral dimension is the actual manifestation of resistance in the form of observable conduct, deeds, and events. This study focuses exclusively on behavioral resistance to change due to the fact that it is the only directly observable dimension. Twelve specific types of resistive behaviors, shown in Table I, were observed in this study based upon definitions from the literature [17].

TABLE I
RESISTIVE BEHAVIOR TYPES

Type of resistive behavior	Definition of the resistive behavior
Reluctant compliance	Doing the minimum required, lack of enthusiasm, guarded and doubtful
Delaying	Agreeing verbally but not following through, stalling, procrastinating
Lack of transparency	Hiding or withholding useful information during implementation
Restricting education	Avoiding or restricting the spread of the change message
Arguing & open criticism	Verbally opposing and/or finding fault with the change implementation
Obstructing & subverting	Openly sabotaging, blocking, undermining the change implementation
Spreading the negative word	Spreading negative opinions and rumors, appealing to fear in resistance
Termination	Voluntary or involuntary removal from the project or organization
Reversion	Changing back to traditional practices during the implementation
Misguided application	Changing the implementation beyond the stated process, goals, methods
Forcing the change	Striving for perfection at expense of implementation effort
External influence	Behavior in response to negative feedback from external sources

These characters can be grouped according to Miller and Rollnick, under the following four categories:

- Arguing: the person contests the accuracy, expertise or integrity of the counselor;
- Interrupting: the person breaks in and interrupts the counselor in a defensive manner;
- Negating: the person expresses an unwillingness to recognize problems, cooperate, accept responsibility, or take advice;
- Ignoring: people show evidence of ignorance or not following the change [18].

At this point, top management should make an effort to adopt behaviors and to understand the attitudes required by their team in the early stages of change.

Their struggle with behavior change will help support the renewal of businesses in three ways. It will promote attitudes and behaviors necessary to coordinate the various activities of the company; that give credibility to the search; and it will help the CEO to identify and develop the needs of his team in terms of new behaviors.

IV. RESISTANCE AS A LEVER OF INNOVATION

When change comes voluntarily, it is easier to absorb it because it is generally a positive attitude towards this change and to know what it entails and how the situation will be different. When the change is required by the organization, often the reaction is negative or more difficult to absorb because there are doubts about how it will affect the change in daily routine or in the future. Many workers feel threatened by change, the organization must eliminate this threat; otherwise, the organization will be affected. Therefore, change can be a lever of innovation if it is a well-planned change, which involves deliberate efforts to eliminate unsatisfactory situations by planning a series of steps, actions and strategies resulting from in-depth analysis of the whole system.

A. Steps to Follow to Overcome Resistance to Change

The implementation of change must begin with the establishment of an authoritarian management and flexible autonomous working groups, while promoting the implementation of tasks and a shared interest in the results of the company.

Secondly, we need the leadership to be effective: the leader must be visionary and must know how to communicate, how to delegate and must know himself well, that is to say, to know his own strengths and weaknesses.

Thirdly, management tools, communication and performance evaluation: information monitoring is a tool that before making any changes, help to collect, as part of an internal and external diagnosis, essential information for decision making. Information is a decision aid that allows the decision maker to make the most adequate decisions possible.

Finally, analysis of the performance is a very important step in the evaluation process of an organization, so as to assess individual performance (results of the individual), the team performance (results of the project group) and organizational performance (the overall results of the organization).

All these measures are designed to increase communication between stakeholders of change and motivating employees to successfully implement the innovation and enable better support and participation of the latter in the business plan.

According to Laural Porth-Jones, the Industrial Technology Advisor of the National Research Council of Canada, given the importance of communications as a pillar of change management, the five processes that underlie the strategy we advocate should not necessarily be used for linear or chronological order - although it is often logical to start with the planning. These processes can instead be used in parallel, as required, and in any order, so that a given process may be implemented at any time, depending on the circumstances. These processes are:

- Plan - Get the support of management and board; build a team and draw up a timetable.
- Listen - Communicate with stakeholders; create a place and a process for receiving feedback from employees.
- Share - Focus on transparency and awareness of the major changes.
- Celebrate - Encourage risk taking; mark major milestones and celebrate employee contributions.
- Learning - widely disseminate lessons learned; enhance employee contribution; share best practices recognized and create a legacy of change [19].

B. Application of These Steps with a Group of Students

The change is managed enthusiastically when:

1. We are involved in the model of change;
2. We are involved in the design of change;
3. We believe that our opinions and our views will be heard, to contribute to the new reality;
4. We personally enjoy the change;
5. The organization and all participants benefit from the change;
6. The change is made properly;
7. We do not like the status quo (mental attitude that shows some novelty as bringing more risks than benefits possible);
8. We are confident in our competence in the new context;
9. We trust and respect the person or group proposing the change;
10. We do not believe that other more urgent things to be changed;
11. We can see the whole picture and how change can contribute positively;
12. Support is provided to us and we have a reasonable time to adapt to changes;
13. We do not change too many things at the same time, it is necessary that the level of change is not too large to be easily assimilated;
14. Changes are spaced;
15. We understand the reasons and objectives of change;
16. We believe that the change is important;
17. We believe that change is needed;
18. We believe the time is ripe for this change.

These steps were applied in a group of students from Abdelmalek Essaadi University and to a company in Tangier.

C. Conclusion and Discussions

In this article, we first of all presented the barriers to innovation. Following our investigation, we presented the importance of these obstacles. Then, we concluded that dealing with resistance requires challenges and a change in perceptions or beliefs of the individual and their colleagues. Changes are not easy to achieve and efforts to reduce barriers must be proportionate to the expected results.

In our next paper, we are going to deal with the problem of the culture of innovation in Morocco, especially in region of Tangier, Tetouan and Hoceima.

ACKNOWLEDGMENT

We are immensely grateful to the group of students, teachers and employees who help us with the survey and the case study.

REFERENCES

- [1] A. Fosfuri, and T. Ronde. "Leveraging resistance to change and the skunk works model of innovation". Journal of Economic Behavior & Organization, vol. 72, pp. 274-289, 2009.
- [2] H. Makkonen, W.J. Johnston, RRG Javalgi. "A behavioral approach to organizational innovation adoption". Journal of Business Research, 2016.
- [3] M. García Rubiano, P. Andrea Rubio, and L. Bravo. "Relación entre los factores de riesgo psicosocial y la resistencia al cambio organizacional en personal de seguridad de una empresa del sector económico terciario". Diversitas, vol. 3, no 2, pp. 301-315. 2007.
- [4] W. Miller, and S. Rollnick. "Motivational interviewing: Helping people change." Guilford Press, 2012.
- [5] June 2015, "Lift with Fing" conference, available: <http://blog.usinenouvelle.com/innovation/tag/definition/>.
- [6] A. Segarra-Blasco, J. Garcia-Quevedo and M. Teruel-Carrizosa, "Barriers to innovation and public policy in Catalonia", International Entrepreneurship and Management Journal, pp 431-451, 2008.
- [7] T. Davila, M. Epstein, and R. Shelton. "Making innovation work: How to manage it, measure it, and profit from it". FT Press, 2012.
- [8] N. Lagziri, H. Achelhi, M. Bennouna. "Les barrières comme déterminants de l'innovation au Maroc: Cas de la région de Tanger-Tétouan" International journal of innovation and applied studies, vol. 4, pp. N1Sep. 2013.
- [9] G. J. Tellis, J. C. Prabhu, and R. K. Chandy. "Radical innovation across nations: The preeminence of corporate culture". Journal of Marketing, vol. 73, no 1, pp. 3-23, 2009.
- [10] A. Madrid Guijarro, D. Garcia, and H. van Auker. "Barriers to innovation among Spanish manufacturing SMEs". Journal of Small Business Management, vol. 47, pp. 465-488, 2009.
- [11] A.H. van de Ven. "Central problems in the management of innovation". Management science, vol. 32, pp. 590-607, 1986.
- [12] G. Watson. "Resistance to change". The American Behavioral Scientist (pre-1986), vol. 14, pp. 745, 1971.
- [13] Dejours, Christophe, Dessors, Dominique, et Molinier, Pascale. "Comprendre la résistance au changement". Documents du médecin du travail, vol. 58, pp. 112-117, 1994.
- [14] Duffy, Francis M. "I think, therefore I am resistant to change". Journal of Staff Development, vol. 24, pp. 30-37, 2003.
- [15] Ford, Jeffrey D., Ford, Laurie W., et D'Amelio, Angelo. Resistance to change: The rest of the story. Academy of management Review, vol. 33, pp. 362-377, 2008.
- [16] V. Cornescu, and C. R. Adam. "The Consumer Resistance Behavior towards Innovation". Procedia Economics and Finance, vol. 6, pp. 457-465, 2013.
- [17] B. C. Lines, K. T. Sullivan, J. B. Smithwick, and J. Mischung. "Overcoming resistance to change in engineering and construction: Change management factors for owner organizations. International". Journal of Project Management, vol. 33, p. 1170-1179, 2015.
- [18] W. Miller, and S. Rollnick. "Motivational interviewing: Preparing people for change". Journal for Healthcare Quality, vol. 25, no 3, p. 46, 2003
- [19] December 2015, L. Porth-Jones. Available: http://www.nrc-cnrc.gc.ca/fra/pari/ppatn/ressources/livreblanc_02.html.