

# TO RESIST OR TO COOPERATE? ANALYZING THE FACTORS THAT INFLUENCE INDIVIDUAL REACTIONS TO ORGANIZATIONAL CHANGE

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## ABSTRACT

This research aims to identify how individual and organizational factors affect individual's reaction to resist or cooperate with organizational change. To test the research hypotheses, we investigated the implementation of the individual performance evaluation of the Minas Gerais state employees, by employing a survey in 679 public employees from the State Secretaries of Educations, Health, and Planning. The results indicate that the level of resistance to change is influenced largely by the difficulties in recognizing and understanding the organizational change process. Secondly, teamwork and the level of the perceived threat to the social environment influence individual resistance to change. Finally, regarding the organizational factors, previous unsuccessful changes and lack of organizational consistency seem to exert less influence on the individual decision to resist. The major contribution of this research to the theory and practice is to allow the identification of the main sources of resistance to the organizational change in the Brazilian public context. Therefore, it may be possible to enhance the organizational change processes in the public sector by meeting public employees' expectations. This study also offers empirical support to the public administration to implement changes in the personnel practices to improve the quality of services delivered to the population.

**Keywords:** Organizational change. Resistance to change. Public administration.

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# 1 INTRODUCTION

Organizational scientists have shown great interest in understanding the phenomenon of organizational change and its related behaviors and attitudes towards individual resistance. In the past organizational changes were considered episodic and less common. Lately, the literature started to consider organizational changes as continuous, incremental, and inexorable phenomena (ORLIKOWSKI, 1996). In this sense, the changes become part of the organizational routine, being a process which results from human interactions, related to the individual's reaction to new experiences at the workplace (TSOUKAS; CHIA, 2002).

Organizational change is defined as “[...] a structural, strategic, cultural, technological, human, or any other component capable of generating impact in parts or the whole of the organization” (WOOD Jr. *et al.* , 1994, p.64). Regardless of the nature of change implemented, these initiatives may fail if the employees are not open to change or if they believe that the change will not be successful (SEIJTS; ROBERT, 2011). Previous research revealed that individuals react every time they face intense organizational changes (JACOBS, 1995), even though they recognize the necessity of the proposed change (ARMENAKIS and BEDEIAN, 1999). Unconscious processes emerge as the individual confronts with possible threats brought by the changes (HALTON, 1994). Individuals use standard and well-developed defense mechanisms to protect themselves from the negative feeling caused by the change, such as anxiety and insecurity. According to Halton (1994), these defense mechanisms may limit the individual's ability to adapt to change.

Despite the importance of the change to the survival of the organizations, previous research reveals that the success rate of these initiatives does not always reach the expected standards. McKinsey Quarterly run a global survey (MCKINSEY & COMPANY, 2011) which revealed that only 6% of the respondents considered that the changes implemented in their companies were completely successful and only 32% evaluated the changes as successful. Other studies report similar results (MARK, 2006; JOHNSON-CRAMER; PARISE; CROSS, 2007). Ervin and Gorman (2010), who review the literature on the resistance to change, cite the results of a research conducted by Isern and Pung (2007) with 1,536 executives involved in a variety of changes in their organizations. The survey revealed that only 38% of respondents thought the changes were successful, and only 30% believed they had contributed to the sustainable improvement of their organizations. Armenakis and Bedeian (1999) argue that it is necessary to stimulate new behaviors in individuals to deal with resistance to change.

Research conducted by Waldersee and Griffiths (2004) in 500 large companies between 1993 and 1996 revealed that the main problem faced by managers to implement changes is related to employees' resistance. Near half of the companies surveyed had to deal with resistance problems. On the other hand, Ford, Ford and D'Amelio (2008) highlight the role of the organization as an agent of the change, and therefore, responsible for the occurrence of resistant behaviors. The authors add that, in the first place, it was the organization that broke the pre-established psychological contracts. In this perspective, the resistant behavior results ultimately from the organization's failure to restore trust and legitimize new contracts.

Several authors (ARENDDT; LANDIS; MEISTER, 1995; LEVINE, 1997; ULRICH; TISSINGTON, 2006) argue that organizations fail to perform changes because they manage these processes based on technical assumptions, without considering the influence of the human element. According to Schneider and Goldwasser (1998), even though when organizations consider the human element, they tend to manage it instrumentally. Simple actions such as investment in communication, training, and follow-up of the changes can reduce the likelihood of employees to

resist because they feel that their issues are not ignored (Hultiman, 1995 and Lines, 2005). In contrast to what employees expect, managers tend to use coercion, bureaucracy, and control to achieve adherence to the proposed changes (ARMENAKIS and BEDEIAN, 1999). The forceful strategies result in lack of confidence and resentment, which leads to a partial or total rejection towards the intended change. Choi (2011) conducted a literature review on resistance to change and identified that the ability of the organization to manage the change, the trust in peers and leaders, and the participation in the process of change implementation could help the employees' readiness to change. Workers are more likely to support new experiences and feel empowered in the workplace, raising the probability of organizational changes to be successful.

Bovey and Hede (2001) found that when changes provoke feelings such as loss and sadness, individuals present less adaptation to the change. About that, Lines (2005) states that strong positive attitudes, such as cooperation, are seen as critical to the success of the change; while negative attitudes, such as resistance, are strongly manifested against the content or process of the change. Likewise, weakly positive or negative attitudes indicate that the members of the organization do not perceive the changes as important.

In the public sector, organizations are also changing as a result of the world economy restructuring and technological development. Governments are more responsible and concerned about the effective use of public resources and the quality of the public services (OSBORNE, GAEBLER, 1994, OECD, 2005). The Brazilian state of Minas Gerais is replacing a bureaucratic public administration nature with a managerial strategy (PENENGO, 1997; PEREIRA; FONSECA, 1997). One of the pillars of the new administration is the modernization of old personnel policies and practices. The state government adopted the individual performance evaluation, named ADI (*Avaliação de Desempenho Individual*) as an instrument necessary for the implementation of a meritocratic model of administration. The main objective of the ADI is to enable growth and development of the public employees to improve the quality of the public services delivered to the population (VILHENA et al., 2006).

This strategy was designed based on the principles of the New Public Management (NPM). The NPM advocates that public organizations must use managerial techniques and tools successfully developed and implemented in the private sector (BORGES, 2013). Denhardt and Denhardt (2000) draw attention to the use of the managerial techniques from the private sector to the public section. They add that public organizations must see the adoption of a set of private sector organizational values, such as the customer focus, with caution. The authors propose a citizen-centered approach as an evolution of the New Public Management, emphasizing the role of public employees as a facilitator of the citizens' needs, rather than acting as controller and boss of the social interests.

The individual performance evaluation (ADI) represented a milestone in the implementation of the new model of personnel management in the state of Minas Gerais. In this process, all the stable employees and employees who occupy public functions in the executive branch were evaluated. The state government established the expected behaviors and skills at the beginning of the implementation of ADI. For managers, for example, the behaviors and skills were: results orientation, systemic vision, sharing of information and knowledge, team leadership, people management, innovative ability, and competence technique. However, Silva, Mello, and Torres (2013) argue that the skills of personnel management in the public sector should include responsibilities associated with public agency or agent, as well as differentiate individuals about performance. As a result, the implementation of the ADI brought deep changes in the way Minas Gerais state stated to deal with working relations, and at the same time, it broke several established psychological contracts.

Considering this context, understanding the employees' reactions to the implementation of the individual performance evaluation system is important. Therefore, the objective of this research is to identify how individual and organizational factors affect the employees' reaction to resist or cooperate to the organizational change.

Although all the executive branch of the state implemented the ADI, this research does not aim to analyze the reaction to the change at the organizational level, but rather at the individual level. According to Oreg, Vakola, and Armenakis (2011), studies should focus on the individual's reaction to organizational change because these reactions would be decisive for the success of the change.

This study intends to contribute to the literature by providing empirical data regarding the understanding of the organizational change phenomenon in the Brazilian public administration context. Also, the main contribution of this research is to identify the main sources of resistant behaviors, which may improve the implementation of organizational changes in the public sector.

## 2 THEORETICAL FRAMEWORK

Resistance to change is a behavior that aims to protect the effects of a real or imaginary modification, constituting by any behavior that focuses on maintaining the *status quo* in response—in reaction—to a pressure to modify it (HERNANDEZ, CALDAS, 2001). Oreg *et al.* (2011) classify the reactions to organizational change in three dimensions: affective, cognitive and behavioral. The affective dimension deals with the individual's feeling about change, while the cognitive dimension reflects your thinking. The behavioral dimension, which is the focus of this article, addresses the explicit behaviors of individuals and their intentions to behave in the face of change. Research that explores the behavioral dimension, in general, analyzes the levels of cooperation or resistance to organizational change through the behaviors or intentions of individual's reactions (OREG *et al.*, 2011).

Armenakis and Bedeian (1999) noted there is an increasing number of research that analyzes the relationship between the success of organizational change and the reaction of individual workers. These researchers are defending that the reactions of the individuals who passed for the change are necessary for the change process itself. In this sense, the authors emphasize that further research on behavioral responses to change are necessary to understand how the organization can adopt strategies and tactics that maximize the chances of success on change.

Among the possible reactions to organizational change, resistance to change is the most problematic. It usually is the first obstacle to reach the effectiveness of the change (AVEY; WERNISING; LUTHANS, 2008) because it results of behavior that aims to maintain the *status quo* in response to pressure to change it (HERNANDEZ, CALDAS, 2001). Avey, Wernsing, and Luthans (2008) warn that resistance is manifested by dysfunctional attitudes and behaviors. According to Baron and Greenberg (1989), the perception of the threat to the *status quo* in the work environment can produce insecurity, fear of losing their job, and fear of the unknown. The changes, in general, require the individual to modify their work habits and behavior for new ways of working and acting.

The greater the control of the individual on the evolution of the change, the less your resistance will be. Moreover, the greater the impact generated by the change, the greater the probability of obtaining high levels of resistance. If the individual does not adapt emotionally to change, incongruous thoughts may arise, resulting in resistant behaviors such as the tendency to blame others, inertia and omission, difficulty on facing life's challenges and lack of control over one's destiny (BOVEY, HEDE, 2001).

In addition to resistance to change, behavior in the face of change may also be of cooperation or indifference (JUDSON, 1980). It is a continuum that varies from active resistance to change, at one extreme, passing through indifference and following to acceptance and stated support for the intended change. Resistance to change behaviors are manifested in extreme cases by deliberate sabotage, intentional errors, decrease in work rate and aggressive retaliation behaviors (FORD *et al.* 2008) in the face of learning and reactive in the face of challenges. Indifference is identified by the passivity, apathy, and loss of interest at work. Cooperation is characterized by enthusiasm, and optimism in the face of organizational change processes (Pereira and Fonseca, 1997).

In general, researchers recognize that resistance to change has origins in both individual and organizational variables (KATZ, KAHN, 1978; JUDSON, 1980; NADLER, 1987). Some researchers reveal possible predictors of resistance to change, such as economic insecurity (OREG, 2006); fear of the unknown (NADLER, 1987; STEINBURG, 1992; COGHLAN, 1993); seeks for sensations of justice (OREG, 2003); threats to social interaction (NADLER, 1987; CHREIM, 2006; VAN DICK *et al.*, 2006); negative thinking (AVEY; WERNESING; LUTHANS, 2008; OREG *et al.*, 2011); cynicism (WANOUS, REICHERS, AUSTIN, 2000, CHOI, 2011); habits and routines (GIANGRECO; PECCEI, 2005; CHREIM, 2006); and difficulties in recognizing the necessity of change (VANBERG, BANAS, 2000, OREG, 2006). These research also point to organizational factors as determinants in the process of resistance to change, such as structural and group inertia (BARON, GREENBERG 1989, Van DICK *et al.*, 2006), a threat to the existing power (KATZ, KAHN, 1978; OREG, 2006) and experience (KATZ, KAHN, 1978, ARMENAKIS and BEDAIN, 1999).

The emergence of resistance also depends on leadership, on how the change is managed and how much people think positive and are committed with the organization (KRUGLANSKI *et al.*, 2007, AVEY; WERNESING; LUTHANS, 2008; OREG; VAKOLA; ARMENAKIS, 2011). In this case, the essential factors are the degree of involvement of people who will suffer the impacts of change and the kind of perception. These factors are related to the individual difficulty of dealing with change. Resistance to change can occur because in processes of change the individuals must leave a situation known for an unknown situation, generating feelings of insecurity (NADLER, 1987; STEINBURG, 1992; COGHLAN, 1993; OREG, 2003). Individuals also look for a level of psychological and emotional comfort and try to stay in this state (NADLER, 1987).

## **2.1 The causes of resistance to change**

The review of the literature indicates the individual and organizational factors are related to the individuals' reactions to organizational change, namely: indecision and inconclusiveness, threat to the social environment, workgroup pressure, organizational consistency, and previous experiences with unsuccessful change. These factors were initially identified in the Marques, Chaves, and Dias (2005), and later explored in the researches of Borges and Marques (2011) and Almada (2014).

Indecision and inconclusiveness occur when the individual has no sufficient information or do not adequately understand the impacts of the change. It occurs because the process of organizational change is not properly involved, generating difficulty for the individual to evaluate whether to support the change or not (ELIAS, 2007). The lack of information can lead the employee to judge changes as sometimes beneficial and sometimes bad for the employees and the organization. Indecision leads the individual to cooperate sometimes with the implementation of change, sometimes not. The more the individual has a need to have answers ready and finished and the less the company collaborates with it, the smaller it is the tendency of he/she to cooperate with the change, and more chances exist to resist this (KRUGLANSKI *et al.*, 2007).

The individual can create in his mind interpretations, irrational ideas about what will happen, about how others perceive it, and what others will think or do about the process of change, potentiating the resistance (BOVEY; HEDE, 2001). Also, the information passed on to stakeholders should be well planned and organized (ARMENAKIS; BEDEIAN, 1999). The important one is the content of the message and not the amount of information given (OREG, 2006; OREG; VAKOLA; ARMENAKIS, 2011). Therefore, the lack of adequate information generates fear of the unknown, which is a powerful factor of resistance to the implementation of changes (MOTTA, 1997; HERNANDEZ; CALDAS, 2001).

In this sense, we expected that the perception of the advantages and disadvantages of organizational change—in the case of this study, the implementation of the ADI by the Minas Gerais state government—will influence the reactions of the employees in the face of the change introduced. When the employees evaluate previously that the changes will be positive, they will tend to accept and cooperate with the process of organizational change. On the other hand, if they are still not sure—or they are undecided about the advantages of change—the employees will tend to react with indifference or even become resistant to the individual performance evaluation. Thus, we have the following hypothesis:

*Hypothesis 1:* The greater the indecision and inconclusiveness about the process of change, the greater the level of individual resistance to organizational change.

It is important to emphasize that people build important social ties with their colleagues in the organizational context. Many organizational changes, such as reallocation of functions and restructuring of teams, threaten the integrity of friendship groups. Since, the workplace is an important source of social recognition for employees (NADLER, 1987; CHREIM, 2006), it causes great impact on the social identity of the group (Van Dick *et al.* 2006). In this study, employees may fear to lose a co-worker who can be dismissed by poor performance in ADI. Therefore, if the employee perceives the change as a threat to the social interactions in the workplace, he/she will tend to resist.

The negative perception about change may be related, for example, to the change of workgroups, departments, or manager. In this case, the individual can resist because they fear to work with colleagues who are not pleasant or friendly to he/she. On the other hand, the individual can offer resistance by simply having to leave his/her current workgroup. The threat to social interaction can also be possible layoffs motivated by the low results presented in the assessment of individual performance. Therefore, when the employee realizes that the proposed change will threaten the social environment, he/she will tend not to accept and cooperate with organizational change. In this case, the following hypothesis is formulated:

*Hypothesis 2:* The greater the perceived threat of social environment, the higher the level of individual resistance to organizational change.

In an organizational change situation, employees fear the loss of status, prestige, and power (OREG, 2006). In change processes, the identity of the workgroup can be threatened. Anxiety caused by this threat generates great discomfort in the group and can become a major factor of resistance for the proposed change (VAN DICK *et al.*, 2006). The behavioral theory recognizes that important people and the structure of working groups interfere on the perception that the individual develops about their work (SALANCIK; PFEFFER, 1978; WOOD Jr., 2000). Group pressure is manifested when the individual is discouraged from innovating their work practices or accepts

the proposed innovations. If the individual feels too much pressure, it will tend to resist the change (NADLER, 1987). In counterpart, an employee's positive emotions and attitudes can facilitate the cooperation with the change in a group, minimizing resistance (AVEY; WERNING; LUTHANS, 2008).

The theoretical assumption is that when the individual perceives that the workgroup which he/she is part of has low resistance to the implementation of the change he/she is encouraged by the members of the group to accept and cooperate with the implementation of the proposed changes. From another side, when the group exerts a pressure in the sense of to resist the changes the probability of individual's resistance to change is greater. With that, here we have the third hypothesis of the research.

*Hypothesis 3:* The greater the pressure of the group to resist the process of change, the greater will be the level of individual resistance to organizational change.

The resistance or support to organizational change also originates from factors associated with the organization (NOGUEIRA et al., 1997). The perceived organizational consistency is related to how the members of the organization perceive how much the proposed change was drawn up by professionals with experience. Moreover, it is related to a perception of consistent organizational methodology and how leaders and managers support the proposed changes (MARQUES; CHAVES; DIAS, 2005).

At this point, the individual's perception of how the organization is capable of running a successful change process, how the change is necessary, and the benefits that both the organization and the employees can reach is what guides employees' reactions. Also, another factor that influences the level of cooperation is the perception of individuals about the confidence of leaders and co-workers that the organization is capable of managing change (CHOI, 2011). Recalling that the size of the change is not directly related to the perception of consequences for the individual (LINES, 2005).

The perception of consistency of the proposed change that can facilitate or constraint the process is related to the quality of communication, the level of understanding, the consistency of actions and goals, and the level of participation in the process of implementation (JUDSON, 1980; VANBERG; BANAS, 2000; LINES, 2005; OREG, 2006). The higher the perception of the quality of the information received on the changes, the lower the resistance of the individuals (LEWIS, 2006; OREG, VAKOLA; ARMENAKIS, 2011). Therefore, employees tend to support the proposed changes if they perceive there is organizational consistency.

On the other hand, if the employees perceive that the proposed change is not in good hands and does not receive support from the superiors, they will tend to be resistant or indifferent. Therefore, the perception of a low organizational consistency will positively influence the individual's resistance to change. Thus, the following hypothesis was formulated.

*Hypothesis 4:* The higher the perception of low organizational consistency, the greater the level of individual's resistance to the organizational change.

Previous experience of organizational change also influences possible reactions to change. According to Baron and Greenberg (1989), previous experience with unsuccessful changes may act as barriers to the acceptance of new changes. The central argument of the authors is that individuals, working groups, or the entire organizations that have failed to introduce changes in the past will be reluctant to accept the new change in the same organizational system. That reluctance is not unjustifiable because the organizations tend to rely on past experiences to guide the next ones (ARMENAKIS and BEDEIAN, 1999).

Negative experiences with changes inflate individual's attitudes of disbelief and resistance to new projects, given that he/she does not believe anymore that the proposed changes will achieve their objectives (KATZ; KAHN, 1978; ARMENAKIS; BEDEIAN, 1999; CHOI, 2011). According to Meyer and Allen (1997), to reduce cognitive dissonance individuals tend to see their context as consistent with their previous beliefs and experiences. In the public sector, the problems of administrative discontinuity may be conditioning behavior of disbelief on the employees that the new policies and practices, especially the ADI, are not consistently implemented and managed. Thus, the last hypothesis is posed:

*Hypothesis 5:* The greater the perception of previous unsuccessful experiences with the processes of organizational change, the greater the level of individual resistance.

In short, the possible reactions of the individual to an organizational change can vary from an active collaboration, in which the individual acts as an agent of the change, to active resistance, in which the individual opposes and tries to block the process of change. Within these extremes, there are other possible reactions, for example, neutrality in the face of change, passive collaboration, and passive resistance. Individual and organizational factors may influence these reactions. Regarding the individual factors, this research highlights the previous indecision and inconclusiveness (employees have not yet defined how they will react), workgroup pressure, and perceived a threat to the social environment in the workplace. Regarding the organizational factors, this study explores the organizational consistency and the previous experiences with organizational change processes.

### 3 METHODOLOGY

The process of change addressed in this work includes the implementation of the individual performance evaluation by the Minas Gerais government. Therefore, the unit of analysis of this study is all the employees of the state of Minas Gerais submitted to individual performance evaluation (ADI). The ADI was implemented in later 2004 and early 2005, simultaneously, in 61 agencies and entities with different organizational structures, culture and technical capacity (VILHENA *et al.*, 2006).

The ADI consisted of eleven assessment factors, which are: quality of work; work productivity; initiative; promptness; participation in training programs; attendance; punctuality; time management; use of equipment and facilities; use of resources and rationalization of processes; and the ability to work in teams. The factors were assessed based on four concepts, which are: excellent, good, regular, and unsatisfactory (MINAS GERAIS, 2003, Supplementary Law 71, 2003). The performance evaluation for public managers was regulated by Decree 44.986, of December 19, 2008.

The executive power of the state of Minas Gerais has 16 secretaries of state that employ approximately 335,000 servants. This research includes the three state secretariats of the Government of Minas Gerais: Secretary of State for Education (SEE), Secretary of State for Health (specifically the units of the Hospital Foundation of the State of Minas Gerais) and Secretariat of Planning and Management (SEPLAG). These units were chosen by the highest number of employees in all occupational categories in the state. We also considered the strategic importance of these secretaries of state. The population surveyed in these three secretaries are approximately 137,300 servants.

The stratified random sampling process was adopted by the Secretariat to ensure that the selected servants represent the population by position or function of each agency involved in the research. The sample obtained was 679 respondents, distributed as follows: 262 at the Secretary of State for Education, 202 at the Secretary of State for Planning and Management, and 215 at the State Department of Health. For a margin of error of 5%, with the 95% confidence interval, considering the population of 137,300 servants on the secretariats, it was estimated that the minimum sample should be 384 respondents. For 679 respondents, this research reached a confidence interval of 99%.

### 3.1 Variables operationalization and data collection

In the literature review, this study identified the individual and organizational factors critical to the individual's reaction to organizational change, which is: indecision and inconclusiveness; the level of threat to the social life; group pressure; organizational consistency; and previous experiences.

The items that measure the variables of this study were developed from the of the instrument developed and validated for the Brazilian reality by Marques, Chaves, and Dias (2005), and the research carried out by Borges and Marques (2009) and Almada (2014). These surveys reported composite reliability indexes higher than 0.90. The variables are individual resistance to organizational change, indecision and inconclusiveness, a threat to social life, group pressure, organizational consistency, and previous experiences unsuccessful. *Likert* scale was used, ranging from 1 to 6, where 1 'totally disagrees' represents the acceptance and active cooperation with organizational change, and 6 'strongly agree' that represents the active resistance to organizational change. Although less common, the 6-point type scales the advantage of having the respondents commit themselves to the positive aspect or of the measured item. Table 1 relates the items of the questionnaire to the variables measured.

**Table 1 - Variables and Questionnaire Items**

<b>Variables</b>	<b>Items</b>
Individual resistance to organizational change	Q1: You have actively cooperated with the implementation of the ADI organization through spontaneous suggestions on how it could do right. Q2: You spontaneously disclosed the benefits brought by ADI. Q3: You consider that although you have not actively participated in the implementation process, it was good for the employees and the organization. Q4: You have accepted, without opposing, the ADI rules, as being good for the organization.
Individual indecision and inconclusiveness	Q5: You have not yet been able to conclude whether ADI will be good or bad for the organization. Q6: Sometimes you supported the deployment of ADI, other times not. Q7: You have considered some aspects of ADI acceptable, while other aspects are in your view unacceptable.
The threat to social life	Q8: You are afraid that, with ADI's results, you could be fired from the organization or you would have to work in another sector. Q9: You are afraid to relocate to other sectors where you have to work with employees you do not like or do not like you.
Group Pressure	Q10: Your colleagues criticize you when you try to change your practices. Q11: During the implementation of ADI, your colleagues pressured you to continue doing their work in the old way.
Organizational consistency	Q12: In fact, you think the implementation of the ADI served more to a political needs rather than to improve individual and organizational results. Q13: You believe that other employees in this organization knew more about what is better for the organization than the ones that participated in the implementation of the ADI.

Previous experiences unsuccessful	Q14: Previous experiences of implementing performance evaluation that was unsuccessful made you disbelieve about this ADI. Q15: You believe that the ADI is another attempt to change that will change to worse or stay in the same place at the end.
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Source: Research Data

We performed a *survey* to obtain the quantitative data. The instrument used was the standardized questionnaire. Data were collected in different agencies of each secretary to meet the representativeness of the sample. The first part of the questionnaire accesses the demographic data. The second part of the questionnaire consists of the items that measure the other variables of the study. The questionnaires were applied in each secretary by a team of researchers. The selected staff members received the invitation to answer the questionnaire on a day and time, previously scheduled, in the auditorium of each institution. Upon arrival, it was given a brief explanation to the servants about the research purpose, and they were informed about the voluntary and anonymous character of the participation.

## 4 ANALYSIS AND RESULTS

The PLS (*Partial Least Squares*) method was used to test the hypotheses because it is adequate to estimate the relationship between the variables, insofar as it considers the error of estimation (CHIN, 1998). Also, the PLS does not require normality assumptions, which is indicated for highly complex predictive models. We used the software *SmartPLS version 2.0M3* to analyze the model of and the structural model. For determining the level of significance of the paths (*paths*) hypothesized in the proposed model, the *bootstrap* resampling method was performed.

The measurement model, that is, the consistency and quality in which the items represent the proposed variables was determined based on the reliability and convergent validity. According to Hair *et al.* (2005), item loads should exceed the limit of  $\pm 0.50$  so that the significance values are reached, although values above of  $\pm 0.30$  and  $\pm 0.40$  are acceptable for exploratory research. With this, an item referring to the measure of organizational consistency was excluded from the model because it presented a standardized of 0.31. Hair *et al.* (2011) add that for the average variance extracted (AVE) to be equal to or greater than 0.50, the values of the factor loads must be greater than 0.70. The convergent validity, that is, the extent to which the items of a specific variable converge or divide into large proportions of variance, is adequate when variables obtain at least 50% of variance extracted. All variables had variance extracted greater than 0.50 after exclusion of one of the items that measure *organizational consistency*. The lowest value for the extracted variance was 63% for the variable *previous unsuccessful experience*.

Table 2 shows the standard values of the load for each item and, then, for each variable, the mean of the extracted variance and the *Cronbach's* alpha reliability measure.

**Table 2 - Results of the Measurement Model**

Variables	Items	Standardized charge	Variance extracted	Alpha of Cronbach
Individual resistance to organizational change	Q132	,88	,83	,93
	Q133	,95		
	Q134	,91		
	Q135	,90		
Individual indecision and inconclusiveness	Q136	,81	,75	,84
	Q137	,94		
	Q138	,85		

Threat to social life	Q139 Q140	,89 ,93	,83	,80
Group Pressure	Q143 Q144	,90 ,96	,87	,85
Organizational consistency	Q142	1,00	-	-
Previous experiences unsuccessful	Q145 Q146	,52 ,99	,63	,75

Note: All standardized loads are significant with  $p < .05$

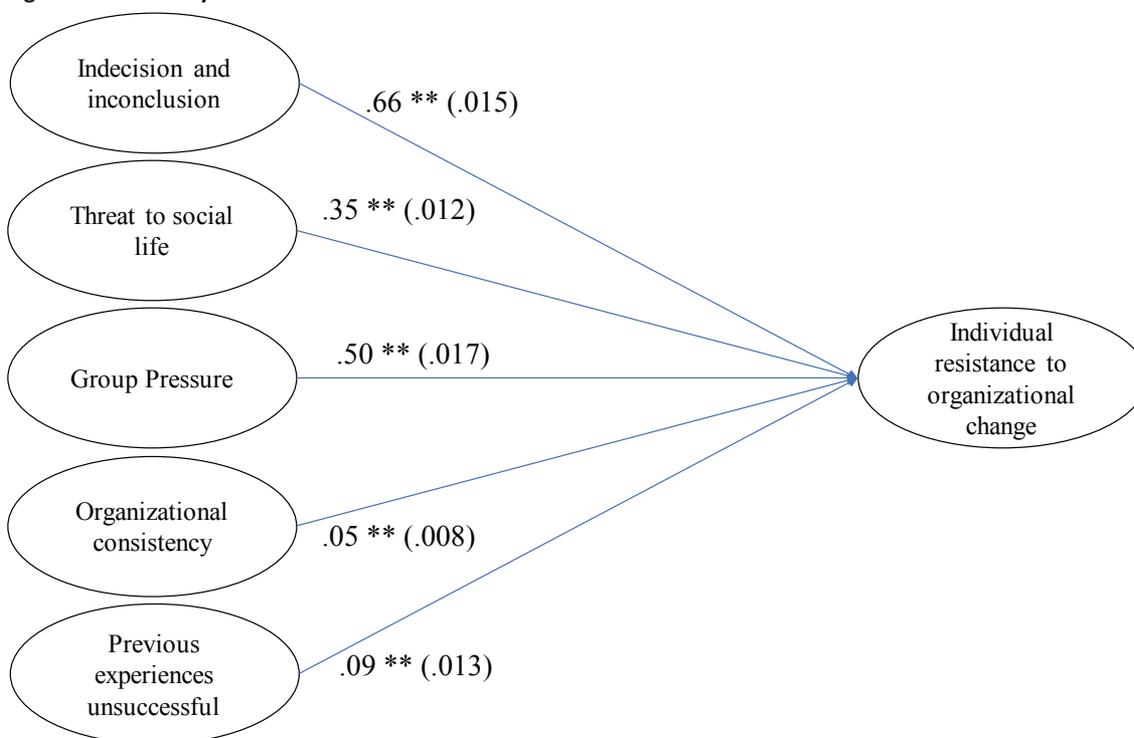
Source: Research Data

The degree of reliability, which the measure represents the degree of consistency between the multiple items of a variable, must exceed the minimum value of 0.70 to be considered good, although Hair *et al.* (2005) state that the minimum value of 0.60 can be adopted in exploratory research. All variables of the model proposed in this study exceeded the 0.70, with the lowest value obtained for *Cronbach's alpha* was 0.75 for *previous unsuccessful experience*, indicating a good internal consistency. Chin (1998) suggests other measures should also be considered to evaluate the measurement model, for example, the  $R^2$ .  $R^2$  is the coefficient of determination that indicates the precision with which the variables are estimated. The measurement of the coefficient of determination of the proposed model is 0.969, indicating an optimal estimation of the measurement model.

The correlations of the independent variables, indecision and inconclusiveness, social interaction, group resistance, organizational consistency, and previous experience, and the variable dependent acceptance and individual cooperation are significant at  $p < 0.05$ . For the respondents, the concern about the threat to social interaction is evident ( $M = 4.37$ ,  $SD = 1.09$ ) followed by pressure exerted by the group ( $M = 4.36$ ,  $SD = 1.12$ ). Previous organizational experiences ( $M = 3.45$ ,  $SD = 1.29$ ), as well as indecision and inconclusiveness ( $M = 3.41$ ,  $SD = 1.09$ ) obtained high averages. Finally, organizational consistency ( $M = 2.87$ ,  $SD = 1.52$ ) presented the worst mean, indicating that the respondents perceive that the organization is not prepared to make the changes in question. Regarding the dependent variable, the respondents presented, in general, an average degree of resistance ( $M = 3.24$ ,  $SD = 1.19$ ).

The analysis of the paths is a method that consists in breaking up the correlations in different parts to interpret its effects. Paths are represented by arrows which indicate the cause and effect relationship. To analyze the paths of the model proposed, it is necessary to consider not only the statistical significance but also the intensity. Chin (1998) states that *standardized paths* should have values around 0.20, although values above 0.30 are preferable. Figure 1 shows the estimation results of the paths, represented by hypotheses. The values of the standardized errors are in parentheses.

Figure 1 - Path analysis result



N = 679

\* significant at  $p < .05$ , \*\* significant at  $p < .01$

Source: Research Data

The results of the confirmatory analysis indicate that the indecision and inconclusiveness about the process of change positively influence individual resistance with organizational change,  $\lambda = 0.66$ ,  $t(679) = 42.64$ ,  $p < 0.001$ , confirming hypothesis 1. The greater the employee's indecision and inconclusiveness with the process of change greater the level of individual resistance to organizational change. Hypothesis 2 was also confirmed, suggesting that the greater the threat to perceived social interactions by the public servant greater the individual resistance with the organizational change,  $\lambda = -0.35$ ,  $t(679) = 28.41$ ,  $p < 0.001$ .

The data suggest that the individual's perception that his or her work group high resistance to the process of change positively affects their decision to resist the organizational change, confirming hypothesis 3,  $\lambda = -0.50$ ,  $t(679) = 6.09$ ,  $p < 0.001$ . Hypothesis 4 was confirmed,  $\lambda = 0.05$ ,  $t(679) = 29.79$ ,  $p < 0.001$ , indicating that the perception of low organizational consistency positively influences individual resistance to organizational change. The fifth hypothesis was also confirmed,  $\lambda = 0.09$ ,  $t(679) = 6.39$ ,  $p < 0.001$ . This result suggests that prior unsuccessful experiences with organizational change positively influence resistance to change organizationally. However, although the results are significant, they suggest the need to cautious in its interpretation, since the positive influence of successful previous experiences in resistance to change is very small when compared to the other three factors analyzed: prior decision, social interaction, organizational consistency.

## 5 DISCUSSION AND CONCLUSIONS

Data analysis indicates that the factor indecision and inconclusiveness about the process of organizational change have the greatest impact on individual resistance to change. This result confirms the assumption that the first step in the implementation of any change is to involve the employee in this process (ELIAS, 2007) so that he/she get fast access to objective responses (KRUGLASKI et al., 2007) and can understand, in depth, potentialities, and limitations.

The second factor to have a greater impact on individual resistance to change organizational is the pressure of the group. The working group exerts a strong influence on the individual's decision on resisting to organizational change. This result reinforces the importance of social relations at work and their relation to organizational performance. Perhaps that's why the third most influential factor is the perceived threat to the social environment. This result suggests that when the employees realize that the change will bring negative consequences for the integrity of social groups, they tend to resist to organizational change, as Baron and Greenberg (1989) argued.

The data also suggests that the organizational factors influence less the individual decision to resist change than individual factors. The low organizational consistency, which is the perception of unprofessionalism regarding planning and implementation of the organizational change, influences less the individual decision to resist change. Finally, previous experiences with processes of organizational change, even if unsuccessful, influence to a lesser extent resistance with implemented organizational change.

### 5.1 Contributions

The main contribution of this research is to offer empirical data that allow the understanding of how the individual and organizational factors identified in this research influence employees' reaction to organizational change. The results related to organizational factors deserve special attention, although future research may investigate the role of Brazilian culture as moderator of cause and effect relations. This study proposes and validated an evaluation model of individual's reactions to change to understand how these factors influence the levels of resistance to organizational change. This model does not intend to be definitive or finished, but rather, it is an initial effort to measure the individual's reactions to organizational change in the Brazilian context. Therefore, the measurement instrument still needs to be largely testes and improved.

This research contributes to the literature by broadening the understanding of the factors that influence individual's reactions to organizational change processes. To the public management literature, this study offers a framework as a start point for the assessment of the organizational change processes. For managers and professionals who work in public administration, this research offers empirical data that can guide decision-making regarding the implementation of organizational changes, which reaffirms the claiming of Pereira, Lobler, Simonetto (2010, p.268) that "a decision-making process is a system of relationships between elements of objective and subjective elements."

This study has some limitations. The first refers to the common method variance known as a systematic error that can be added during measurement phase because of the method of data collection and the instrument used. Some sources of common method variance are: a) self-administered questionnaires as they can be correlated and subjected to social influence because they can increase observed correlations; b) negativism because the negative emotions of the respondents can point to negative influences between variables, which do not necessarily

exist; and c) compliance which is the tendency to agree to items regardless of their content (MALHOTRA; KIM; PATIL, 2006).

The second limitation is related to the representativeness of the sample. Although this study had a large number of respondents, it is important to consider that Minas Gerais is a large state with its regional characteristics. Therefore, any generalization should be performed with caution. It is necessary to investigate to what extent the three secretariats the other Secretaries of Government of the state of Minas Gerais and how the Minas Gerais State Government can represent public employees as a whole.

The variables selected in this research constitute the last limitation pointed out in this study. Although they are anchored in the literature review, other variables can be incorporated to the model to offer a better understanding of the phenomenon studied, such as perceived justice of the proposed change and support of the immediate leadership. The work of Paiva and Andrade (2013) has identified the relevance of leadership influence on resistance to change, among others, as the influence of power relations, reinforcing the need to explore other variables. The model could also be revised with the objective of investigating why one of the items of the variable "organizational consistency" does not present acceptable results and had to be excluded from the analysis.

Future research may overcome the limitations pointed out in this study, first, adopting measures that minimize the likelihood that the variance of the common method will occur. Further research could also replicate this study to validate the proposed model and obtain another sample to evaluate the representativeness of the results obtained. Researchers could investigate why the individual variables overlapped the organizational variables. One explanation that needs to be analyzed would be the influence of paternalistic culture still rooted in the Brazilian public sector. Perhaps that is why the influence of working groups and the concern to the social environment have been featured in comparison with the other factors. This study also suggests the importance of studying the dynamics of social networks in the context of public administration.

Finally, other studies could investigate why the low organizational consistency perceived, and previous experiences unsuccessful with the organizational change had low influence on individual resistance levels to organizational change. This last one can be explained by the natural tendency to think that each case is a case and that the organizational change is a phenomenon which is naturally difficult to accumulate expertise due to its complexity. Moreover, organizational change deals with different environments and with different factors.

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