

The effect of Leadership Styles and Behaviors in  
Employee's Affective Commitment to change

A study in the IT Industry

Nicole Vaz Loureiro

Dissertation submitted as partial requirement for the conferral of  
Master in Business Management

Supervisor:  
Nelson Ramalho, Assistant Professor, Human Resource and Organizational  
Behavior Department at ISCTE Business School

September 2018



The effect of Transformational, Entrepreneurial Leadership  
and Change Leadership Behaviors in Employee's Affective  
Commitment to change

A study in the IT Industry

Nicole Vaz Loureiro

Dissertation submitted as partial requirement for the conferral of  
Master in Business Management

Supervisor:  
Nelson Ramalho, Assistant Professor, Human Resource and Organizational  
Behavior Department at ISCTE Business School

September 2018

*"Some people don't like change,  
but you need to embrace change if the alternative is disaster."*

Elon Musk

## **ACKNOWLEDGMENTS**

Firstly, I would like to express my sincere gratitude to my advisor Professor Nelson Ramalho for his support in overcoming numerous obstacles I have been facing through my research, for his feedback, cooperation and immense knowledge.

I would like to thank all the survey respondents for their participation in the survey who supported my work in this way and helped me get the needed results.

I would like to thank my fellow classmates for their motivation and of course friendship.

Last but not the least, I would like to thank my friends and family, especially my husband for supporting me spiritually throughout writing this thesis and in my life in general.

## **RESUMO**

O presente estudo propõe um novo modelo de análise que relaciona os conceitos de liderança transformacional, liderança empreendedora e comportamentos de liderança para a mudança com o objetivo de analisar as suas associações com o compromisso afetivo à mudança. Este estudo pretende também perceber os efeitos moderadores entre os comportamentos de liderança para a mudança com a liderança transformacional e/ou com a liderança empreendedora.

A partir da análise de 166 respostas de empregados que trabalham no sector de IT e que tenham experienciado pelo menos uma mudança organizacional, os resultados indicam que a liderança transformacional, a liderança empreendedora e os comportamentos de liderança para a mudança estão positivamente relacionados com o compromisso afetivo à mudança. Por sua vez, verificou-se que os comportamentos de liderança para a mudança não se comportam como moderadoras da liderança empreendedora nem com a liderança transformacional para com o compromisso afetivo à mudança.

Em relação as variáveis sociodemográficas, com exceção da variável género, nenhuma das variáveis se relacionam significativamente com o compromisso afetivo à mudança.

**PALAVRAS-CHAVE:** liderança transformacional, liderança empreendedora, comportamentos de liderança para a mudança, compromisso afetivo à mudança.

**Classificações JEL:** M10, Y04

## **ABSTRACT**

This study suggests a new model of analysis that relates the concept of transformational leadership, entrepreneurial leadership and change leadership behaviours and their relationship with the construct of affective commitment to change. The present study also tries to shed some light into the moderating effects of change leadership behaviours with entrepreneurial leadership and/or transformational leadership.

A survey was conducted with followers that work in the IT industry and that have at least experienced one organizational change situation. The results from 166 responses suggest that Transformational leadership, entrepreneurial leadership and affective leadership behaviours are positively associated with affective commitment to change.

In addition, the study indicates no moderator effects of Entrepreneurial Leadership or Transformational Leadership with change leadership behaviours to predict affective commitment to change.

With reference to the sociodemographic variables, with exception of the variable gender, none seem to be significantly associated to affective commitment to change.

**Keywords:** transformational leadership, entrepreneurial leadership, change leadership behaviors, affective commitment to change.

**JEL Classifications:** M10, Y04

## TABLE OF CONTENT

1. Introduction .....	1
2. Literature Review .....	3
2.1. Organizational change .....	3
2.2. Models of change implementation process .....	6
2.3. Readiness for Change .....	10
2.3.1. Individual Change Readiness .....	11
2.3.2. Organizational change Readiness .....	12
2.4. Resistance to change.....	15
2.5. Commitment to change.....	18
2.5.1. Influencing Factors of Affective Commitment to change .....	19
2.4. Leadership .....	23
2.5. Entrepreneurial Leadership.....	26
2.6. Transformational Leadership.....	29
2.7. Change Leadership Behaviors .....	32
3. Overview of the Research Model .....	34
3.1. Research Problem .....	34
3.2. Research Variables and Hypotheses .....	35
3.2.1. Dependent Variable (DV).....	36
3.2.2. Independent Variables (IV) .....	36
4. Method.....	39
4.1. Sample .....	39
4.2. Procedure .....	41
4.3. Data analysis strategy .....	42
4.4. Measures .....	43
5. Results .....	49
6. Discussion.....	57
7. Study Considerations and Conclusion.....	62
8. References .....	65
<b>APPENDIX A – QUESTIONNAIRE AND SCALES .....</b>	<b>75</b>
<b>APPENDIX B – OUTPUT TABLE OF STATISTICAL TESTING .....</b>	<b>83</b>

## LIST OF FIGURES

<b>Figure 1:</b> Overall Research Model.....	38
<b>Figure 2:</b> Confirmatory Factor Analysis of Affective Commitment to Change .....	43
<b>Figure 3:</b> Confirmatory Factor Analysis of the 6 dimensions of Transformational Leadership: articulating a vision, providing a role model, communicating high performance expectations, providing individualized support, fostering the acceptance of group goals, and providing intellectual stimulation.....	45
<b>Figure 4:</b> Confirmatory Factor Analysis of Transformational Leadership as a single construct .....	46
<b>Figure 5:</b> Confirmatory Factor Analysis of Entrepreneurial Leadership.....	47
<b>Figure 6:</b> Confirmatory Factor Analysis of Change Leadership Behaviors .....	48



## LIST OF TABLES

<b>Table 1:</b> Overview and comparison of organizational change process models .....	7
<b>Table 2:</b> Descriptive and bivariate statistics .....	50
<b>Table 3:</b> Hierarchical Regression Results for Transformational Leadership predicting Affective Commitment to Change.....	51
<b>Table 4:</b> Hierarchical Regression Results for Entrepreneurial Leadership predicting Affective Commitment to Change.....	52
<b>Table 5:</b> Hierarchical Regression Results for Change Leadership Behaviors predicting Affective Commitment to Change.....	53
<b>Table 6:</b> Hierarchical Regression Results for the interaction between Change Leadership Behaviors and Transformational Leadership predicting Affective Commitment to Change	54
<b>Table 7:</b> Hierarchical Regression Results for the interaction between Change Leadership Behaviors and Entrepreneurial Leadership in predicting Affective Commitment to Change .....	55
<b>Table 8:</b> Summary of Hypotheses Testing.....	56

## **Glossary**

IT	Information and Technology
TL	Transformational leadership
EL	Entrepreneurial Leadership
CLB	Change Leadership Behaviors
CFA	Confirmatory Factor Analysis
CMIN/DF	The minimal value of the discrepancy, C, divided by the degrees of freedom
CFI	Comparative Fit Index
TLI	Tucker Lewis index
PCFI	Parsimonious Comparative Fit Index
RMSEA	Root Mean Square Error of Approximation

## 1. Introduction

One of the biggest challenges business leaders are facing today is how to stay competitive during times of changes (Greenwood and Hinings, 1996) as most hierarchical structures and processes that organizations have used for decades are no longer working as efficiently as before (Kotter, 2012). This means for organizations the need to change and to create new rules for business.

This pressure is amplified in the Information Technology (IT) industry as they experience an increased amount of pressure to be innovative and to adopt changes fast. This is a problem as it is nearly impossible for them to anticipate every new development in a market that changes at an increasing speed (Deloitte Development LLC, 2016). The IT industry has become an important economic factor in many western countries, but it is well known for suffering from skills shortages and high turnover rates (Gubler, Coombs and Arnold, 2018). We are currently experiencing a Fourth Industrial Revolution that is transforming the world in a much more significant way than any of the previous industrial revolutions (Schwab, 2016; Yoon, 2017). This revolution brought about a much more mobile internet, as well as better, smaller and cheaper sensors that are enabling the development of new technologies. It has also seen the rise of machine learning and artificial intelligence. However, this new industrial revolution is not just about smart machines (Caruso, 2017). It encompasses several different fields as well, from material science, nanotechnology, energy, biology. What really separates this fourth revolution from those that preceded it is that it merges these fields and connects them across digital, physical and biological platforms (Daemmrigh, 2017). This revolution is defined by speed and unprecedented returns to scale that allow businesses to produce the same or greater value with relatively fewer employment-associated costs. This change is driven by digitalization and automation of production.

One thing is certain, this Fourth Industrial Revolution brings change, and changes have become more technology driven than ever before and lead to an acceleration of changes in the business environment (Morrar, Arman and Mousa, 2017).

After all, and according to Pluta and Rudawska (2016: 294) *“the many technical, technological and process innovations cause numerous changes in the behaviors and expectations of employees, customers and other market players”*

To survive in this rapidly changing context, organizations need to implement anticipatory, as well as adaptive changes (Huy and Mintzberg, 2003). However, many change programs are considered complex in that they are continuous, long-term, unplanned, radical, emergent, iterative, and require learning during change processes (Edmondson, Haas, Macomber and Zuzul, 2015).

Furthermore, organizations experience the pressure to increase not only the frequency but also the extent and the impact of organizational changes to a point where the employee can no longer cope with them, and therefore provoking negative reactions to change. This imbalance is called excessive change and it seems to be occurring increasingly (Johnson, 2016).

These excessive changes have a cumulative effect on individuals in the organization (Herold, Fedor, Caldwell and Liu, 2008) causing, for instance, cynicism and burnout (Abrahamson, 2004).

In this context, a renewed approach to change management is imperative. However, around 50% to 70% of the change initiatives fail or do not achieve the results they intended (Beer and Nohria, 2000). This low success rate suggests that change management is a complex construct, where several variables may mediate and influence the outcome, as for example employee's commitment to change and leadership focus (Higgs and Rowland, 2005). Many studies (e.g. Kotter, 2012) have been conducted to understand what leaders should do when they face a specific change episode (e.g., create a sense of urgency, provide advanced notice, provide support, build coalitions, allow for inputs) but most of them don't link change related leader behaviors to broader theories of leadership.

Facing this gap, this thesis intends to bridge out the contrasting theories relating change-focused leadership styles with change behaviors.

## 2. Literature Review

### 2.1. Organizational change

The construct of change management, as a discipline, began to emerge from the 1980's onwards derived by the collaboration between leading consulting firms and Fortune 50 companies which resulted in early change management models such as General Electric's CAP - Change Acceleration Process (Immelt, 2017) and John Kotter's Eight Step Process for Leading Change (Kotter and Schlesinger 2008).

Change management is defined as the process by which an organization gets to its future state, its vision. Essentially, it is the act of managing change proactively and reducing resistance to organizational change by engaging the key stakeholders in the process (Lorenzi and Riley, 2000).

Organizational change is interdisciplinary in nature and fields like psychology, sociology, political science, economics, and management contributed to the knowledge in the field. Due to the complexity of political, regulatory, and technological changes that most organizations have been facing, organizational change and adaptation has been and will continue to be a central research issue (Greenwood and Hinings, 1996).

Armenakis and Bedeian (1999) divide research on organizational change into 4 different types:

**Content research:** is focused on defining factors such as strategy, structure and systems that influence the change process and relates these factors to organizational effectiveness.

**Contextual research:** attempts to identify forces or conditions present in an organizational environment (internal and external).

**Process research:** focuses on actions attempted during the implementation of the intended change.

**Criterion research:** addresses the outcomes of organizational change efforts.

Furthermore, not all organizational changes are equal and their impact on stakeholders are divergent, so there is a foundational responsibility of leaders today, to recognize and value the different types of organizational changes.

Ackerman (1986) identified three distinct types of organizational change: developmental changes, transitional changes, and transformational changes. These types generate different reactions and require different process and leadership.

**Developmental or incremental change refers to** small developmental steps leading to improved organizational systems, practices and processes. It is an improvement upon the current way of operating, whose aim is to do better or more. Enhancing technical expertise and communication skills, building teams, and expanding markets fall into this category. This type of change is the least threatening to the health of an organization, yet it requires system-level support to survive.

**Transitional change** is an implementation of a known, new state, and requires rearranging or dismantling old operating methods. Transitions usually occur over a set timeframe. Reorganizations, new technology, and new products and services may be transitional in nature, largely because the future state is deliberately chosen.

**Transformational change** is the type of organizational change that denotes a radical change to organizational strategies, business processes and practices, culture, and personnel.

It is somewhat out of direct control, and it produces a future state that is largely unknown until it evolves. It refers to significant changes in organizational business strategies and policy development (e.g., vision, mission and values), and in the reorganization of

employees, processes, systems, projects, structure, power, and culture (Robinson and Griffiths, 2005).

It is considered more profound and traumatic in comparison to transitional changes and occurs when an organization reaches a state in its life cycle and is not able to meet the demands of the environment. The organization reacts and struggles against these pressures until a breakdown occurs (Kotter, 1995).

Special skills are needed to deal with transformational change such as: managing ambiguity in leading an organization toward a moving target and clearly communicating a change strategy and vision (Ackerman, 1986).

Even if transformational change is extreme and sometimes traumatic, it has been positively linked to increased competitiveness, when correctly implemented (Denning, 2005).

Yet, and according to Kotter (1995), 70% of all major change efforts fail. However, there is some ambiguity surrounding this percentage (Tasler, 2017). In fact, according to a 2011 study in the Journal of Change Management led by Hughes (2016), there is no empirical evidence to support this statistic. Another survey conducted by McKinsey in 2009 surveyed 1,546 executives. The results of the survey showed that one third of the executives inquired believed that their change initiatives were total successes; another third believed that their change initiatives were more successful than unsuccessful and only about one in ten admit to having been involved in a transformation that was mostly or completely unsuccessful (Keller and Aiken, 2009).

Despite the controversy around how many change initiatives fail, whereas be 70% or less, it's undisputed that leading and implementing changes is a costly, arduous and an intellectually demanding exercise. It is full of challenges and thus remains highly problematic due to the many variables that interact and influence its outcome (Alijohani, 2016).

## 2.2. Models of change implementation process

The change implementation literature has been considered as one of the more developed areas in the field of organizational change and development. Research of change leadership behavior originated mainly from the change implementation literature, which focuses on recommending strategies and tasks for implementing organizational change with success.

The foundational framework of change implementation can be attributed to 1947 to Kurt Lewin's 3-stage model, which conceptualized change as being comprised of three stages: *unfreezing*, *changing*, and *refreezing*. In the unfreezing stage, the focus lies on activities that break down the status quo and develop a theory as to why the change is necessary. The changing phase is where the change is implemented and, at last, the refreezing stage where new ways of work are adopted, incorporated and institutionalized (Lewin, 1947).

During the 1990s, many stage-models focusing on internal managerial actions in change emerged for instance, Judson's (1991) 5-phase model, Kotter's (1995) 8-step model, and Galpin's (1996) wheel of 9 wedges. An overview of the different models is summarized in Table 1.



**Table 1:** Overview and comparison of organizational change process models

<b>Lewin (1989)</b>	<b>Unfreezing</b>	<b>Moving</b>	<b>Re-freezing</b>
Mohrman's and Cummings's (1989)	Laying the foundation/ Designing	Implementing and assessing	
Tichy and Devanna (1986)	Recognizing need for change / creating vision		Institutionalizing change
Cummings and Worley (1993)	Motivating change / creating vision / developing political support/	Managing the transition	Sustaining momentum
Judson (1991)	Analysing and planning change/ communicating change / gaining acceptance of new behaviors	Changing from the status quo to a desired state	Consolidating and institutionalising the new state
Goss, Pascale, Athos (1998)	Assembling a critical mass of key stakeholders / doing an organisational audit / creating urgency	Harnessing contention	Engineering organisational breakdowns
Greiner (1975)	Pressure on top management/ intervention at the top/ diagnosis of problem	Invention of new solutions/ experimentation with new solutions	Reinforcement of positive results
Beer, Eisenstat and Spector (1990)	Mobilise commitment / develop a shared vision / foster consensus	Spread revitalisation	Institutionalise revitalisation/ Monitor and adjust strategies
Kotter (1998)	Establishing a sense of urgency/ forming a powerful coalition/ creating a vision/ communicating the vision	Empowering/ short/term wins/ consolidating improvements	Institutionalise revitalisation/ monitor and adjust strategies
Galpin (1996)	Establishing the need for change / developing a vision / diagnosing and analysing the current situation / generating recommendations	Detailing the recommendations / pilot testing the recommendations/ preparing the recommendations for rollout/ rolling out the recommendations	Measuring, reinforcing, and refining the change

**Adapted from:** "Process model for organisational change: a study of Estonian companies" by Alas, R., 2004, *Journal of Business Economics and Management*, 5(3), p.112.

Among the models shown in table 1, Kotter's (1995) 8-Step model is regarded as the most popular change process model. This model identifies 8 phases in the change process as follows:

**1. Establishing a sense of urgency** by relating external environmental realities to potential and real crises and opportunities facing an organizational.

**2. Creating the Guiding Coalition** by putting together a group with enough power to lead the change. That group need to be able to rely on each other, to have a significant amount of trust and need to be able to work well together, to develop the right vision, to communicate that vision, to eliminate obstacles, to generate short term wins, to lead and manage change projects and to anchor new approaches deep in an organization's culture.

**3: Developing a Change Vision** to help direct the change effort and buildup strategies to facilitate the achievement of the that vision. A clear vision serves three important purposes; it simplifies decision; it motivates people to act in the right direction and it helps to coordinate the actions of different people in a swiftly and efficiently.

**4. Communicating the Vision for Buy-in** through diverse communication channels, repeatedly, powerfully and convincently. It is crucial to connect the visions with with all the fundamental aspects like performance reviews and training. In addition, it is fundamental to handle the concerns and issues of people with honesty and with involvement.

**5. Empowering** others to act on the vision by removing as many barriers as possible and unleashing people to do their best work, which means changing structures, systems and procedures that will facilitate implementation.

**6. Planning and creating Short-term wins** that must be visible, unambiguous and clearly related to the change effort. This increases the sense of urgency and the optimism of those

who are making the effort to change and serves to reward the change agents by providing positive feedback that boosts morale and motivation. In addition, short-term wins have a way of building momentum that turns neutral people into supporters, and reluctant supporters into helpers.

**7. Consolidating improvements and producing more change.** Change leaders need to continue to communicate the vision, to remove obstacles, and keep delivering benefits.

**8: Make It Stick** by institutionalizing the new approaches by articulating connections between the change effort and organizational success and by developing the means to ensure leadership development and succession.

According to Alas (2004), Kotter's model or all other theories presented in Table 1 could be compared with Lewin's three-step model. The comparison indicates that theorist had turn their focus mostly to Lewin's first step that emphasized on the preparation of the change. The main questions they targeted where: how to establish the need for change, how to motivate employees and how to mobilize their commitment to change. All these questions are crucial when it comes to organizational change because change is a crucial process in the pursuit of organizational competitiveness.

### 2.3. Readiness for Change

The theoretical foundation for change readiness can be traced to early studies on generating readiness by reducing resistance to change. In 1948, Coch and French through their experimental study involving garment workers, demonstrated how powerful participation can be. They found that the experimental groups who were conferred with an outright message regarding the need for change and who were given an opportunity to participate in the change process, showed increased productivity. Therefore, to create readiness, change agents attempted proactively to influence the beliefs, attitudes, intentions, and ultimately the behavior of organizational members.

Readiness for change is regarded as a critical factor in the success of change initiatives (Rafferty, Jimmieson and Armenakis, 2013). It leads to a smoother transition (Choi and Ruona, 2011) and plays a crucial role in mitigating resistance to change (Vakola, 2014) and therefore reducing the failure rate (Schein, 2004).

According to Armenakis, Harris and Mossholder (1993: 681) readiness is *“reflected in the organizational members’ beliefs, attitudes, and intentions regarding the extent to which changes are needed and the organization’s capacity to successfully make those changes in the environment.”*

Developing readiness for change takes place at two intricately interwoven levels: the individual and the organizational.

There are a significant number of factors that influence both individual and organizational readiness. Amongst them we can point out: a) individual perceptions, attitudes, and behaviors; b) organizational, leadership, and individual capacity for change; c) the work environment and culture; d) implementation of change (Choi and Ruona, 2011; Eby, Adams, Russel and Gaby, 2000)

### 2.31. Individual Change Readiness

Individual readiness for change can be defined as a *comprehensive attitude that is influenced simultaneously by the content (i.e., how the change is being implemented), the context (i.e., the circumstances under which change is occurring), and the individual (i.e., characteristics of those being asked to change/be involved)* (Holt, Armenakis, Field and Harris, 2007: 235).

Armenakis, Harris, Cole, Filmer and Self (2008) have identified five key change sentiments that influence individuals' support for change: discrepancy, appropriateness, efficacy, valence, and principal support.

For organizational members to accept a change, it is necessary for them to believe and understand that a change is needed to help bridge a **discrepancy** or performance gap (e.g., growth, achieving competitive advantage and survival) (Armenakis and Harris, 2002).

In addition to the recognition of the discrepancy, employees need also to believe that the specific organizational change proposed will effectively address the discrepancy to support the change, i.e. **appropriateness**. If a change initiative is appropriate, there should be some definitive evidence indicating why it is the correct one.

**Efficacy** is the third sentiment and is defined as confidence in one's personal and organizational abilities to successfully implement the organizational change. To be motivated to support a change, individuals must feel that success is possible. If a change is perceived as being personally or collectively impracticable, the support for the change will most likely be sparse (Weiner, 2009).

In addition to the sentiments above, **principal support** needs to occur. Hence, change agents, organizational leaders, managers and respected peers need to demonstrate that they support the organizational change and are motivated to see it through to success.

Lastly, for individuals to feel motivated for the change, they need to perceive **valence**. Valence refers to the attractiveness of the outcome (perceived or real) associated with an organizational change initiative. Individuals need to believe that the change will be personally beneficial (Liu and Perrewé, 2005).

### 2.3.2. Organizational change Readiness

Organizational readiness for change is a multi-faceted construct and refers to organizational members' change commitment and change efficacy to implement organizational change (Weiner, 2009). Whereas change commitment to change refers to organizational members' shared resolve to pursue the courses of action involved in change implementation, change efficacy refers to the members' judgment of perceived capability to implement the change.

Rafferty, Jimmieson and Armenakis (2013) and Vakola (2013) defined organizational readiness through organizational structure, organizational policies, organizational culture, communication and leadership.

**Communication** is considered one of the most important factors in creating readiness for change. One of its main purposes is its informative function to distribute and share information about the change (i.e. why it's needed, how it alters the work, what long-term benefits vs. short-term challenges it brings) (Thakur and Srivastava, 2018). Open and honest communication contribute to create change readiness. Communication triggers organizational identification of employees and increases their motivation to participate in the change (Cinite, Duxbury and Higgins, 2009). It also encourages trust in leaders and between employees, which positively affects change readiness (Vakola, 2013). The roles of leaders as communicators of intentions to and directions for subordinates have been considered a significant determinant of organizational success or failure during organizational changes (Gilley, McMillian and Gilley, 2009).

**Organizational Support and flexibility** has also been pointed out as a readiness factor. Organizations can improve change readiness by providing training and introducing information technology systems as well as reward and incentive systems as organizational support tools. With regards to flexibility, this parameter is often discussed in terms of organizational structure as it reflects value-based choices of an organization. According to Zammuto and O'Connor (1992), organizations with flexible structures and flexibility-oriented values initially are readier for change because they are more innovative and adaptable.

Another readiness Factor is the **organizational culture**. It brings together the individual and organizational readiness for change because organizational culture is embodied in each employee and shared collectively (Jones, Jimmieson and Griffiths, 2005).

Schein (2017: 17) defines organizational culture as *“a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.* In accordance with Jones, Jimmieson, and Griffiths (2005), organizations that have a culture that embraces innovation, risk-taking, and learning will support organizational readiness for change.

**Leadership** has also been considered an important factor to foster change readiness. Armenakis, Harris and Mossholder (1993) demonstrated that proactive managers who act as coaches and champions of change are more successful in preparing employees for the change. Contrarily, those who only monitor for signs of resistance to change are less effective. Leadership is important as it is a powerful instrument to mold employee's values, beliefs and attitudes towards the change if effective leaders can successfully provide the necessary support to get employees ready to accept and understand the change (Eisenbach, Watson and Pillai, 1999).

Even the leaders or change agent's attributes have an effect in generating readiness. Honesty, trustworthiness, sincerity and commitment are related to a leader's reputation and are essential to promote change readiness (Santhidran, Chandran and Borromeo, 2013). Moreover, empowerment through involvement and being sensitive to employees' needs enhances a climate of trust which contributes to an increased acceptance of change by employees (Herold, Fedor, Caldwell and Liu, 2008; Eby, Adams, Russel and Gaby, 2000).

Some authors argue that some Leadership styles are more efficient than others in fostering organizational change readiness. Tichy and Denevana (1990) claim that transformational leadership creates the vision and institutionalizes the change efforts. Transformational leaders facilitate the creation of necessary culture and shape the behavior of employees as they have the skills to diagnose and develop capacity for change (Bossidy and Charan, 2002).



## 2.4. Resistance to change

Employees confronted with an organizational change go through four stages (Mirvis, 1985):

- (1) Disbelief and denial
- (2) Anger and resentment
- (3) Emotional bargaining beginning in anger and ending in depression
- (4) Acceptance

Unless these different stages are recognized and dealt with, employees will resent change and will have difficulty reaching the acceptance stage. In case of non-acceptance and continued resistance, the risk of the change failure increases significantly (Belias and Koustelios, 2014).

Resistance to change is one of the most important causes of failure in the implementation of changes and it impairs joint efforts to improve performance at both the individual and the organizational levels (Kotter and Schlesinger, 2008). All people affected by change experience some emotional turmoil. Even a change that is perceived as “positive” involves feelings of loss and uncertainty. In addition, individuals or groups can react very differently to changes: they embrace it, they passively resist it, or they try to undermine it (Eriksson, 2004).

Kotter and Schlesinger (2008) pointed out four main reasons why people resist change:

- 1. Parochial self-interest:** People think that they will lose something of value as a result.
- 2. Misunderstanding and lack of trust:** People do not understand the implications of change and perceive that it might cost them more than they will gain.

**3. Different assessments:** People evaluate situation in a different way compared to their managers or change initiators. Most of the times people see more costs than benefits resulting from the change not only for them individually but also collectively on a company level.

**4. Low tolerance for change:** People fear that they will not be able to develop the new skills and behaviors that will be required of them.

Additional studies that were focused on cognitive and behavioral aspects suggest that factors such as: reluctance to lose control (Oreg, 2003); lack of psychological resilience (Judge, Thoresen, Pucik and Welbourne, 1999); reluctance in giving up old habits and lack of self-confidence (Gill, 2003) are also influencing factors of resistance to change.

Akhtar, Bal and Long (2016) showed, in their study, that resistance can occur also as a result from an employee's previous experiences with organizational change performance. If the organizational history supports a history of failed projects, a culture of desensitization is often the result of these failed initiatives. Consequently, employees will expect a similar outcome on subsequent change projects and are rarely motivated to change (Van der Smissen, Schalk, and Freese, 2013).

Another important variable related to this topic is the fulfillment of the psychological contract (Van den Heuvel, Schalk, Freese and Timmerman, 2016). The psychological contract relates to mutual beliefs, perceptions and informal obligations between an employer and an employee (Lee, Liu, Rousseau, Hui and Chen, 2011).

Empirical research has shown negative work-related outcomes of employees emanated from under-fulfillment (i.e. breaches) of that contract. These outcomes include emotional exhaustion (Suarthana and Riana, 2016), lower work engagement (Bal, Kooij and De Jong, 2013), higher turnover intentions (Heffernan and Rochford, 2017; Magano and Thomas, 2017) and lower job satisfaction (De Hauw and De Vos, 2010).

A handful of studies explored how the (under)fulfillment of the psychological contract influences employee responses to organizational changes. Pate, Martin and Staines (2000) found that breaches of the psychological contract resulted in a deterioration of trust relations, leading to increased cynicism about change toward the organizational change and its change agents, as well as unwillingness to cooperate with future changes. These findings are consistent with Alavi and Gill of their study in 2017.

## 2.5. Commitment to change

Given the speed and complexity of change in a global business environment, the commitment to change has assumed an increased importance in organizations as it has been considered the most important factor involved in employees' support for change initiatives (Conner and Patterson, 1982; Klein and Sorra, 1996).

A study conducted by Shin, Taylor and Seo (2012) surveyed both employees and managers at an information technology (IT) organization in South Korea that was undergoing structural change. The authors found a positive correlation between employees' affective commitment to the change and their support for the change. These results support the notion that increased employee affective commitment to a change may be associated with an increase in employee behavioral support for a change. Several other studies in the literature show consistent results (e.g. Machin, Fogarty and Bannon, 2009; Meyer, Srinivas, Lal and Topolnytsky, 2007; Herscovitch and Meyer, 2002; Ramdhani, Ramdhani and Ainisyifa 2017).

To understand what exactly commitment to change is, the literature points out two main points of view of the construct – **unidimensional vs. multidimensional**.

Armenakis and colleagues conceptualized commitment to change as a unidimensional construct that encompasses several factors that motivates employees to commit change. These factors are:

(a) discrepancy between the status quo and a desired state of affairs; (b) perceived change appropriateness; (c) change efficacy (can the employee and organization successfully implement the change?); (d) support for the change from leaders; and (e) perceived valence of the change for the employee (Armenakis and Bedeian, 1999; Armenakis and Harris, 2009).

Herscovitch and Meyer (2002) introduced the notion of commitment as a multilayered phenomenon. In their perspective commitment to change is a mind-set that binds an individual to a course of action that can reflect in:

- a) **Affective commitment** – this construct describes the wish for a person to provide support for a specific change based on their belief in the benefit of the change.
- b) **Continuance commitment to change** - relates to the acknowledgement that there are certain costs related with failure in providing support for the change.
- c) **Normative commitment to change** – is the construct that is related to the sense of obligation to deliver support for the change.

Despite their differences, both approaches see the construct commitment to change as an emotional state of mind that reflects in cognitions (Jaros, 2010). Although the multidimensional construct has been widely used in organizational research, some findings call in to question the predictive validity of the three-component model. Some authors suggest that affective commitment to change is the only powerful predictor of behavior (Parish, Cadwallader and Bush, 2008) and continuance commitment and normative commitment are better conceptualized as attitudes towards the decision in staying or leaving the organization (Solinger, Van Olffen and Roe, 2008). Having this in mind, it explains why most researchers in their studies focus mostly on the affective commitment to change rather on the whole construct when analyzing the effect on commitment to change (e.g. Herold, Fedor, Caldwell and Liu, 2008; Meyer and Hamilton, 2013; Neves, 2009).

#### 2.5.1. Influencing Factors of Affective Commitment to change

When it comes to affective commitment to change, we can find several factors that seem to contribute to building the desired commitment to a specific change situation that we will briefly introduce.

First, to generate support or commitment from employees, good communication about the change process to all employees is essential (Appelbaum *et al*, 2017). Communicating the logic of a change can produce commitment and decrease employee resistance on two levels.

First, it serves to reduce the effects of misinformation and poor communication and second, it helps “sell” the urge for change by wrapping it properly (Robbins and Judge, 2017).

Fiss and Zajac (2006), in a study of German companies, demonstrated that changes are most effective when a company communicates a rationale that balances the interests of various stakeholders (shareholders, employees, community, customers) rather than those of shareholders only. In addition, employee’s anxiety decreases when they have high quality information about the change, which leads to an increased commitment to it (Griffin, Phillips and Gully, 2017).

However, communication alone is not sufficient to create commitment as employees may only see value in the change if they believe they are being included in the process and if they perceive the process as fair. That leads to another factor: **perception of organizational justice**.

Employees who feel they have been treated respectfully during a specific change processes may be more open to a change and be better able to see the value in it. In this regard, employees seeing greater interpersonal justice in their organizations’ change processes may have higher affective commitment to change. Research has supported the connections between the different forms of justice perceptions and employee affective commitment to change (Kyootai, Sharif, Scandura and Kim, 2017; Michel, Stegmaier and Sonntag, 2010).

Although companies may take steps to ensure that they are being fair during an organizational change, an employee’s previous experiences with the organization may affect how fair the employee perceives the organization’s actions to be. If the organization has a history of well-implemented change processes, acted with integrity before, employees will recognize that in future change situations and are more willingly to provide their support to those change initiatives.

**Psychological empowerment** has also been linked to employee’s commitment to change during organizational change (Evangelista and Burke, 2003). Psychological empowerment

can be conceptualized from two different perspectives. The first one considers empowerment as a set of activities and practices by managers that provide power, control and authority to subordinates. According to this point of view, empowerment means an organization guarantees that a) employees receive information about organizational performance; b) employees have the expertise and skills to contribute to achieving the organization goals; c) employees have the power to make a considerable amount of decisions and (e) employees are rewarded based on performance.

Another perspective on empowerment comes from the point of view of the employees. In this perspective, empowerment reflects a personal sense of control in the workplace, as manifested in four beliefs about the person-work environment relationship: meaning, competence, self-determination and impact. According to (Spreitzer, 2007), *meaning* reflects a sense of purpose or personal connection to work whereas *competence* indicates that individuals believe they have the necessary abilities to perform their work well. *Self-determination* reflect a sense of freedom about how people do their own work. At last, *impact* relates to the degree to which an individual can influence strategic, administrative, or operating outcomes at work.

Some studies suggest that the four dimensions of psychological empowerment as defined by Spreitzer (2007), will lead to employees feeling more in control and increase their propensity to respond to change more actively.

Mangundjaya (2014) surveyed 539 employees working in financial state-owned organizations in Indonesia that had undergone organizational changes. Results showed the significant effect of Psychological Empowerment on commitment to change, i.e. all dimensions of psychological empowerment (meaning, competence, self-determination and impact) showed significant contribution to commitment to change. Other studies corroborated identical findings (Chen and Chen, 2008; Evangelista and Burke, 2003; Mangundjaya, 2015; Rana and Singh, 2016).

Additional factors that can improve employee commitment is a corporate culture that consists of teamwork, communication, training development and reward-recognition (Robbins and Judge, 2017).

**Training** increases employee's performance in terms of the quality of the services they provide, and several studies have demonstrated that training is positively linked to commitment to organizational change (e.g. Alsamman, Aldulaimi and Alsharedah, 2016; Newman, Thanacoody and Hui, 2011; Yang, Sanders and Bumatay, 2012).

**Team Reward and Recognition** have been linked successfully to higher levels of commitment during organizational change activities (Conway and Monks, 2008; Kinnie, Hutchinson, Purcell, Rayton and Swart, 2005). Awards can refer to different types of rewards like; a) money, prizes and gifts; b) recognition and praise awards and c) development/empowering work.

To be able to provide a foundation with all these factors, it is vital to have good leadership in organizations, as employees' motivation, performance and productivity should increase if they are treated with a good leadership quality (Fiaz, Su, Ikram and Saqib, 2017).



## 2.4. Leadership

According to Yukl (2010: 26), leadership is defined as “*the process of influencing others to understand and agree about what needs to be done and facilitating individual and collective efforts to accomplish shared objectives*”. The major goal of leadership research is to identify aspects of behavior that explain leader influence on the performance of a team, work unit, or organization.

Many scholars have attempted to catalog effective leadership behaviors and characteristics. McCall and Hollenbeck (2002) pointed out seven factors that create leadership success: (a) open-mindedness, (b) diversity, (c) dealing with complexity, (d) being optimistic, (e) having a stable personal life, (f) being honest, and (g) having integrity and talents.

According to Bodla and Nawaz (2010), leadership is based on acceptance of change, flexible behavior, influence, and providing support to subordinates. To be an effective leader, one needs to be able to help managers and subordinates to handle a variety of work challenges and tasks, as well as, to be able to adjust one’s behavior to different situations.

Another factor that has been linked to effective leadership is the ability to learn from the past. There are differences in leadership style among generations; leaders are the connection between past and future visions about how to improve quality. Consequently, successful leaders tend to learn from the past and implement necessary organizational changes with imagination, education, human relations, persuasion, and rational behavior (Kouzes and Posner, 2007; Salahuddin, 2010). In addition, they also need to master the following skills: (a) respecting others, (b) taking charge of a crisis or situation when others cannot, (c) taking responsibility for one’s actions, and (d) having a clear vision about the future. A leader must be a role model for being successful (Kouzes and Posner, 2007).

Yukl (2012), in an attempt to classify leadership behaviors, found four main categories, each with their own component behaviors and primary objective as summed up in the Table 1.

**Table 2:** Classification of Leadership Behaviors

Leadership Behavior	Primary Objective	Behaviors to achieve the main objective
Task-oriented	To accomplish work in an efficient and reliable way	Clarifying
		Planning
		Monitoring operations
		Problem-Solving
Relations-Oriented	To increase the quality of human resources and relations (human capital)	Supporting
		Developing
		Recognizing
		Empowering
Change-Oriented	To increase innovation, collective learning, and adaptation to the external environment.	Advocating change
		Envisioning change
		Encouraging innovation
		Facilitating collective learning
External	To acquire necessary information and resources, and to promote and defend the interests of the team/organization.	Networking
		External Monitoring
		Representing

**Adapted from:** “Effective Leadership Behavior: What We Know and What Questions Need More Attention” by Yukl, 2012, *Academy of Management Perspectives*, 26, p.68.

In addition to leadership behaviors, we can classify different styles of leadership, i.e. the way in which the followers are led. If effective, it can expand the performance of organizations and help in achieving the desired goals; otherwise, they can have adverse impacts on performance and employee attitudes (Hussain and Hassan, 2016).

This relationship between leadership styles and organizational performance has resulted in numerous leadership theories, each one with different set of leadership styles for

effectiveness of the leadership. Consequently, we will briefly try to describe some of those leadership styles in the following section.

## 2.5. Entrepreneurial Leadership

Entrepreneurial leadership exists at the intersection of entrepreneurship and leadership. The research in entrepreneurial leadership has grown significantly since the early 1990s as it has become evident that previous studies conducted in larger, more established organizations could not simply be transposed into the emerging venture and small business context (Leitch and Volery, 2017). Therefore, the demand to adapt organizational structures and processes rapidly calls for leadership behaviors, which can address numerous paradoxes and tensions (Volery, Müller and Von Siemens, 2015).

Entrepreneurial behaviors are increasingly important in the organizational context as they foster innovation and adaptation to changing environments. For businesses to seize new business opportunities and to remain viable, their employees must embrace entrepreneurial behaviors and attitudes. One way to champion these behaviors is through entrepreneurial leadership, defined as *“influencing and directing the performance of group members toward the achievement of organizational goals that involve recognizing and exploiting entrepreneurial leadership.”* (Renko, Tarabishy, Carsrud and Brännback, 2015: 55).

Entrepreneurial leaders themselves engage in opportunity-focused activities that are important for two reasons: they result in recognition and exploitation of new opportunities in an organization and influence the commitment of followers to behave themselves entrepreneurially (Renko, Tarabishy, Carsrud and Brännback, 2015).

Besides acting as role models, entrepreneurial leaders also openly encourage followers to work toward entrepreneurial goals and stimulate their followers to think and act in more innovative ways (Gupta, McMillan and Surie, 2004). They create a compelling vision for the future and instigate followers' personal involvement and pride in that vision. These leaders also empower followers to picture their identities in the company as drivers for its future innovations and success. Although the construct of entrepreneurial leadership is aligned with transformational leadership, it is a different construct. Both constructs overlap when it comes

to intellectual stimulation, but they are apart in the areas of charismatic role modeling and inspirational motivation. Despite entrepreneurial leaders lead with clear purpose and goals, they may not be described as charismatic or inspirational as often as transformational leaders (Renko, Tarabishy, Carsrud and Brännback, 2015). In addition, although a transformational leader uses charisma, inspirational appeals, dramatic presentations, to inspire respect, admiration and loyalty, an entrepreneurial leader acts as a role model in entrepreneurial behavior, inspiring imitation. Another point that differentiates both leadership styles is the individualized consideration. It is central in transformational leadership but not in entrepreneurial leadership. Transformational leaders recognize the needs and abilities of each of their employees, build one-to-one relationships with them, and understand and consider their differing skills. In the other hand, entrepreneurial leaders, predominantly, consider followers in terms of their entrepreneurial passion and self-efficacy. They enhance followers' beliefs in their own entrepreneurial skills and abilities and ignite passion for innovation and creativity (Cardon, Wincent, Singh and Drnovsek, 2009).

Another factor that distinguishes both leadership types is the focus on opportunity-oriented behaviors, exhibited by leaders and followers. This factor is essential to entrepreneurial leadership. Although transformational leadership contains some elements of these behaviors, they are not endemic.

Entrepreneurial leadership has been linked to employees' commitment. By having more autonomy and being involved in the decision making, followers have an increased feeling of control and of being treated more fairly (Haar and Spell, 2009), which enhances job satisfaction and their commitment to the organization (Froese and Xiao, 2012).

By empowering employees with more autonomy, employees feel trustworthy by the leader and gain more opportunities to make a significant impact with their work. Subsequently this can lead to a higher identification with the organization and therefore a higher commitment (Avolio, Zhu, Koh and Bhatia, 2004). In addition, when a manager encourages risk taking, trust needs to be high between employees and manager as trust is one of the primary

predictors for the willingness to take risk; simultaneously trust is positively correlated with affective commitment.

Although some studies (Gerdes, 2014) showed that entrepreneurial leadership on followers' commitment is partially moderated by the leader who can facilitate the development of commitment with different approaches (supply, transparency, trust and esteem, no force, no-blame culture) more studies are needed to take more conclusions on the effect of entrepreneurial leadership in employees' commitment to change.

## 2.6. Transformational Leadership

Burns (1978) introduced the concept of transformational leadership, to characterize those who stimulate and inspire followers to achieve extraordinary outcomes and, in the process, develop their own leadership skills (Bass and Riggio, 2006). This leadership style is recognized to prompt higher levels of morality and motivation. It moves beyond self-interest, focusing on organizational mission and vision (Kezar and Eckel, 2008).

Different authors suggest different dimensions of transformational leadership. According to Bass (1999), transformational leadership has four dimensions:

1. **Idealized influence or Charisma** – the degree to which the leader acts in a esteemed way that make the followers want to identify themselves with the leader.
2. **Inspirational motivation** – focuses on the leaders' capacity to motivate the people around him, to inspire people to work better by instilling a sense of meaning in the work.
3. **Intellectual stimulation** – the extent to which the leader takes risks, challenges stereotypes and constantly challenges followers to higher levels of performance.
4. **Individualized consideration.** – the extent to which a leader attends to each employee's needs and listens to their concerns; also, the leader is generally seen as a coach or a mentor.

On the other hand, Podsakoff, MacKenzie and Bommer (1996), described transformational leadership as a multidimensional construct with the six following sub-dimensions.

1. **Identifying and articulating a vision** – setting a vision is an important leverage of inspiration for employees which translates into higher confidence, more positive expectations about the organization and their future within it and consequently, higher long-term goal engagement.

2. **Providing an appropriate model** - Transformational leaders can foster employees' loyalty and respect through desired behaviors. If leaders provide a suitable role model for followers, they will respect and built up trust with their leader and feel themselves emotionally more involved with their leader and organization (Bass, 1998).
3. **Fostering the acceptance of group goals** - Transformational leaders foster teamwork among employees and inspire them to join forces towards a common goal and go beyond their own self-interest. In this way, transformational leaders can motivate followers to get more attached to the organization (Yukl, 2010).
4. **High performance expectations** - Transformational leaders expect followers excel for excellence and for high levels of performance. They expand and raise followers' goals and motivate them to achieve more than what is expected of them (Bass and Riggio, 2006). Through high performance expectations, this type of leadership can help their followers to achieve their full potential and become committed to perform at the highest levels.
5. **Providing individualized support** – Instead of relying on formal regulations which leads to impersonal relations, leaders invest on considering each individual as he or she is, with the respective needs, feelings and other idiosyncratic features. By understanding one is treated in accordance with one's own nature, employees are expected to have more positive engagement with leaders to reciprocate the consideration.
6. **Intellectual Stimulation** - Transformational leaders encourages employees to question beliefs, challenge the status quo, and actively develop new ways to deal with organizational problems. Through intellectual stimulation, these leaders create a safe environment at work where their followers are able to experiment innovative ways of resolving problems and therefore, become more committed to the organization.



Transformational leadership has been found to positively relate to a variety of outcomes including, job satisfaction or performance (Bass, 1998; Dvir, Eden, Avolio and Shamir, 2002; Pieterse, Van Knippenberg, Schippers and Stam, 2010). Transformational leadership has been mainly considered a critical element in fostering organizational commitment (Avolio, Zhu, Koh and Bhatia, 2004).

A study lead by Dvir, Eden, Avolio and Shamir (2002) showed that leaders that received transformational leadership training had a more positive impact on their immediate followers' development in terms of significant increases in critical independent thinking, extra effort, and self-efficacy when compared to those who did not received such training. They also found that the transformational leadership training increased the performance of the leaders' indirect followers (those who do not directly report to leader).

Herold, Fedor, Caldwell and Liu (2008) found a positive relationship between transformational leadership and employees' commitment to a specific change and found that transformational leadership related positively with change readiness (Santhidran, Chandran and Junbo, 2013).

In connection with leadership styles, several studies emphasized that transformational leadership is particularly effective during organizational change (Eisenbach, 1999; Herold, Fedor, Caldwell and Liu, 2008; Nemanich and Keller, 2007) by, for example, reducing employees' resistance (Oreg and Berson, 2011) and increasing followers' positive change appraisal (Holten and Brenner, 2015). It is also shown that leaders' charisma was positively related to followers' general openness to organizational change (Groves, 2005). This may be explained by the strongest relation between affective commitment and transformational leadership, due to a closer relation with the inspirational dimension of transformational leadership (Bycio, Hackett and Allen, 1995).

## 2.7. Change Leadership Behaviors

Just recently, Herold, Fedor, Caldwell and Liu (2008) developed a change leadership construct based upon practice-oriented recommendations, including specific leadership behaviors such as: visioning, enlisting, empowering, monitoring and helping with individual adaption. The main argument for this theory is that, by engaging in these change-specific leadership behaviors, change leaders can instigate employees' support for the change at hand, which will then lead to a successful change implementation.

The components of this construct can be associated to other leadership theories. For instance, the monitoring and feedback part is generally linked to transactional leadership whereas the visioning, empowering and the individual consideration can be linked to transformational leadership. Nevertheless, there are several distinctions. For instance, organizational changes are planned episodes, and the influence of change leadership is episodic, rather than enduring and cross-situational, yet in transformational and transactional leadership, the influence on followers' responses is across situations. In addition, the transformational leadership theory refers to a longer-term relationship established between the leader and followers. This relationship has been built up over many interactions and has a more organizational or strategic orientation. Transformational leadership intends to create a compelling future vision for the entire organization, or for a more distant future, as opposed to the change leadership where the articulating of the vision is focused on the change at hand (Herold, Fedor, Caldwell and Liu, 2008).

In Summary, by creating and communicating a change-related vision, involving employees in the change-specific decision-making, helping people deal with the challenges associated with the change, and providing regular feedback on the change process, change leadership can reduce feelings of uncertainty and enforces the change among employees. Additionally, change leadership behaviors are expected to increase employees' commitment to change by motivating and creating positive willingness among employees (Kotter, 1995; Kotter and Schlesinger, 2008).

Nowadays, the need for effective leadership may be greater than it has ever been in the past, due to a shift in competitive intensity and changes to the overall business environment such as technological advancements, globalization, product diversification, and organizational growth.

Conceivably, effective leadership, or the lack of it, has a significant impact on organization's ability to survive and to implement strategical necessary changes (Amagoh, 2009). As the success of the organization depend upon the development of future leaders, it is important for them to deploy leader development programs, able to increase knowledge and skills of their leaders (Block and Manning, 2007).

### 3. Overview of the Research Model

#### 3.1. Research Problem

When focusing on leadership and types of leaders most approaches seem to presume that certain types of leaders will handle any change situation better. Conversely, organizational change management approaches propose that appropriate behaviors can be identified, and that any leader can learn those to achieve positive change-related outcomes (Herold, Fedor, Caldwell and Liu, 2008). Unfortunately, there are few studies that intersect both approaches and the following question is still unanswered:

*Are change attitudes of employees more associated with the Leadership style of their leaders or are they more associated with employees' assessment of the change behaviors used by their leaders?*

Herold, Fedor, Caldwell and Liu (2008) published a popular and greatly cited paper that studied the relationship between transformational leadership, change leadership and employee's commitment to change. Their study showed that transformational leadership was more strongly related to followers' change commitment than change-specific leadership practices, specifically when the change had substantial personal impact. However, it showed as well that, for leaders who were not viewed as transformational, good change-management practices were found to be associated with higher levels of change commitment.

Although this model is very informative, in the current increasingly entrepreneurial business world where organizations are pressured to incorporate entrepreneurial culture into their daily operations, it would be interesting to adopt this sort of reasoning but with a focus on entrepreneurial leadership.

It would also be interesting to question the true nature of Change Leadership Behaviors. Is it really a moderator of Affective commitment to change or is it on its own a predictor of affective commitment to change?

Therefore, we propose to adapt the study from Herold, Fedor, Caldwell and Liu (2008) by adding the variable entrepreneurial leadership. We also believe that change leadership behaviors as a construct is associated with affective commitment to change and can by itself act a predictor of the same. Consequently, we would like to shed some light into the following relations:

- a) The relationship between Transformational Leadership and employee's affective commitment to change.*
- b) The relationship between Entrepreneurial leadership and employee's affective commitment to change*
- c) The relationship between change leadership behaviors and employee's affective commitment to change.*
- d) The relationship between change leadership behaviors in association with 1) transformational leadership and 2) with entrepreneurial leadership.*

### 3.2. Research Variables and Hypotheses

The methodology to be used in the present study is the correlational, observational and cross-sectional quantitative method.

It is correlational because the intention is to generalize the results from a sample, evaluating whether there is a relation between the independent variables and the dependent variable, not establishing criteria for cause and effect. In addition, it is a quantitative observational study, because there is no interference by the researcher in the presentation and administration of the variables.

Finally, the study is cross-sectional, because the intention is to evaluate the constructs at the time of the data collection. For the proposed research, we defined the variables below:

### 3.2.1. Dependent Variable (DV)

For the present study, the variable chosen for the outcome variable is the **affective commitment to change**. In other words, what drives the individual to engage in supportive behaviors for the successful implementation of the change initiative is their true desire based on their belief in its benefits. Many studies have been showing that affective commitment of change is a better predictor of specific change-related behaviors from employees (e.g. Ford, Weissbein and Plamondon, 2003; Herscovitch and Meyer, 2002; Herold, Fedor, Caldwell and Liu, 2008). Affective commitment to change has been regarded as a key to successful change initiatives in the research literature (Abrell-Vogel and Rowold, 2014; Jaros, 2010; Shum, Bove and Auh, 2008) and was, therefore, chosen to be the outcome variable in the present study.

### 3.2.2. Independent Variables (IV)

#### IV1 - Transformational Leadership

Transformational leadership is seen as a cross-situational leadership style whose success has been showed throughout different situations and contexts (Judge and Piccolo, 2004).

Resulting research suggested significant influence of leaders' transformational leadership behavior on followers' reactions in change situations, such as commitment to change (Ennis, Gong and Okpozo, 2016; Herold, Fedor, Caldwell and Liu, 2008; Michaelis, Stegmaier and Sonntag, 2010).

Transformational leadership behaviors activate several motivational processes in followers, which lead to the transformation of followers' self-interests towards an interest or commitment towards higher organizational targets, such as organizational change targets and increases performance and innovation (Amin, Akram, Shahzad and Amir, 2018; Shamir, House and Arthur, 1993). Therefore, we establish the following Hypothesis.

**Hypothesis 1:** *Transformational Leadership is positively associated with Affective commitment to change. That means the higher Transformational Leadership, the stronger employee's affective commitment to change.*

## **IV 2 - Entrepreneurial Leadership**

Entrepreneurial leadership has been linked to risk-taking, proactive and innovative behaviors (Chen, 2007). The personal competencies of entrepreneurial leaders enable them to develop an innovative vision for their organization. Few research studies have been conducted to understand their effect on change situations. Some studies in the Healthcare sectors show that functional competencies of these leaders empower them to influence and inspire their group members to abandon their conventional activities and to extend their efforts to perform innovative actions (Gupta, McMillan and Surie, 2004). Simultaneously, they involve their group members in developing innovative ideas increasing their confidence and commitment to implementing changes and new ways to work (Bagheri and Akbari, 2018; Leitch, McMullan and Harrison, 2013). Since confidence in one's ability is linked to higher commitment in organizational change (Strauss, Griffin and Alannah, 2009) and, consequently lower levels of resistance (Gill, 2003) we establish the following Hypothesis:

**Hypothesis 2:** *Entrepreneurial Leadership is positively associated with affective commitment to change. In other words, the higher Entrepreneurial Leadership, the stronger is employee's affective commitment to change.*

## **IV 3 - Change Leadership Behaviors**

By engaging in change-specific leadership behaviors, change leaders can stimulate employees' support for the change at hand, which will then lead to successful change implementation (Herold, Fedor, Caldwell and Liu, 2008). That means, by creating and communicating a change-related vision, involving employees in the decision-making, supporting people to deal with the challenges associated with the change, and by providing

regular feedback on the change process, change leadership can reduce change-related uncertainty. Simultaneously, it increases employees' commitment to the change initiative by motivating and creating a positive attitude among employees (Herold, Fedor, Caldwell and Liu, 2008; Kotter and Schlesinger, 2008). Therefore, we establish the following Hypothesis:

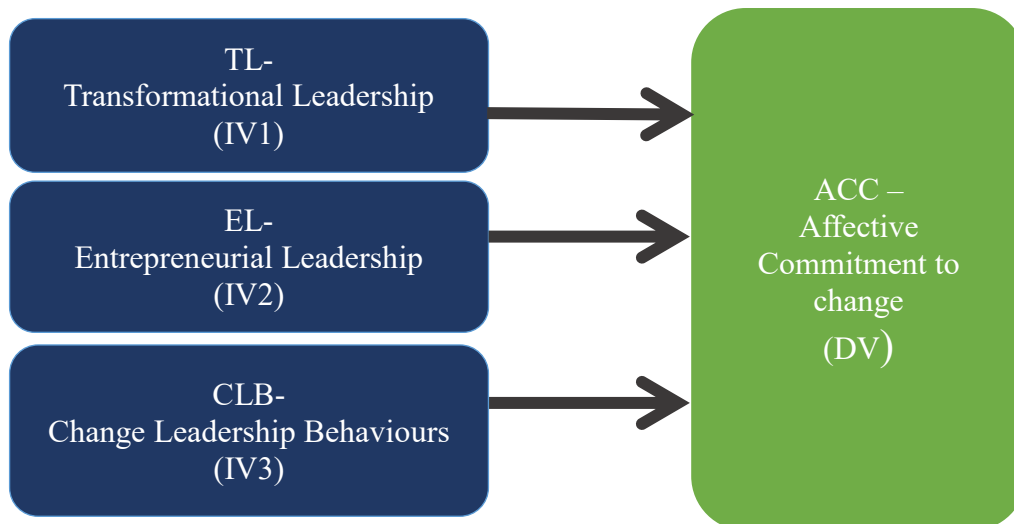
***Hypothesis 3:*** *variable change Leadership Behaviors is positively associated with Affective commitment to change.*

***Hypotheses 4:*** *Change Leadership Behavior is not a moderator in the model*

***Hypotheses 4a:*** *Change Leadership Behaviors is not a moderator between Transformational Leadership and Affective commitment to change.*

***Hypotheses 4b:*** *Change Leadership Behavior is not a moderator between Entrepreneurial Leadership and affective commitment to change.*

The overall model is depicted in Figure 1



*Figure 1: Overall Research Model*



## 4. Method

### 4.1. Sample

A total of 195 participants volunteered to take part in this study by filling out the online survey conducted from 10 June 2018 to 16 of July 2018. To be included in the study, the participant had to satisfy the following criteria: a) working in the IT Industry, b) had experienced at least one organizational change situation and c) completed the mandatory data for the study. Of the original 195 participants, 166 (85.12% of total responses) met the above inclusion criteria. Therefore, the sample used in the study is 166.

The following demographic variables were included in this study: gender, age, size of the company in terms of number of employees, size of the work team/unit, organizational tenure, and the length of working relationship with the direct manager.

With regards to the participants gender information, 94 (56.6%) were male and 69 (41.6%) were female. 3 individuals (1.8%) decided not to answer this question.

The average age of the sample was 36.2, being the oldest participant at age of 52 and the youngest 24.

With regards to the company information, more than half, 56.6% (N=94) of the 166 participants were working in companies with more than 500 employees. An equal number of participants (N=28, 16.9%) worked in companies with a range of 50 to 249 and 250 to 500 employees. 12 individuals (7.2%) worked in a company with a size between 12 and 49 employees. Only 2 participants (1.2%) worked in companies with less than 9 employees. A total of 2 participants decided not to disclose any information about the number of employees of their company (1.2%).

Classification by job tenure was as follows: 30.1% of the participants (N=50) worked with their companies for 4 to 6 years; followed by 26.5% (N=44) that worked at their companies for 1 to 3 years. 32 participants (19.3%) worked with their companies for less than 1 year. Only 17 people (10.2%) worked within their companies for 7 to 9 years and 20 people (12.0%) for more than 10 years. In total 3 individuals (1.3%) decided not to answer this question.

Most of the participants (N=100; 60.2%) worked in teams/units with a range of 10 to 49 people and about half of the remaining people (N=48; 28.9%) worked in small teams with up to 9 people. In total 3 individuals (1.3%) decided not to answer this question.

About half of the participants (N=79, 47.6%), when asked about how long they were working with their direct managers, reported a duration of under a year. 64 participants (38.6%) were working with their direct manager between 1 to 3 years. Only 4 people (2.4%) reported a duration of more than 10 years. From 166 participants in the survey, 2 decided not to answer this question (1.2%).

## 4.2. Procedure

Data collection was done online using Qualtrics, a subscription software for collecting and analyzing data. The relevant online survey was constructed on this software with the items of the relevant individual scales and the demographic questions, as well as information about the research purpose, the assurance of anonymity and confidentiality, and the voluntary nature of the participation. The survey included also the option to directly question the researcher by email in case of any doubt or questions about the survey. The link to the online survey was embedded in an invitation email and sent out to people working in the IT Industry. The study was also advertised on LinkedIn and Facebook so that people in the field could participate in the study.

The Data analysis was performed using IBM SPSS Statistics software version 22.

### 4.3. Data analysis strategy

Data analysis will follow several steps. At first, we will test for psychometric quality of the measures to guarantee they have the required validity and reliability for further use. Then, we will test the hypotheses as stated in the research model.

To test validity, we will conduct factorial analysis which are of a confirmatory nature (CFA) since the study is working with already existing measures with a theoretic ground. The validity of confirmatory factor analysis will be inferred from the joint analysis of fit indices, namely CMIN/DF (the minimal value of the discrepancy, C, divided by the degrees of freedom), Comparative Fit Index (CFI), Tucker Lewis index (TLI), parsimonious comparative fit index (PCFI) and Root Mean Square Error of Approximation (RMSEA).

Hu and Bentler (1999) considered a model valid if CMIN/DF showed values not much higher than 3 (with a non-significant p value), CFI above .90, TLI above .90, and RMSEA not over .08. PCFI is a parsimony test that has no cutoff established but offers guidance about the degree of overlap between items. The higher it is (up to 1.0) the lowest the overlap. In case the fit indices showed a not valid solution, it is advisable to use Lagrange Multipliers to detect items or covariances between errors that may be harming the model fit (Bentler, 1990). By removing those we expect measures to reach acceptable validity.

For reliability testing, we will use Cronbach's alpha which should be at least .70 although in emerging variables it is possible to accept values as low as .60 (Nunnally and Bernstein, 1994).

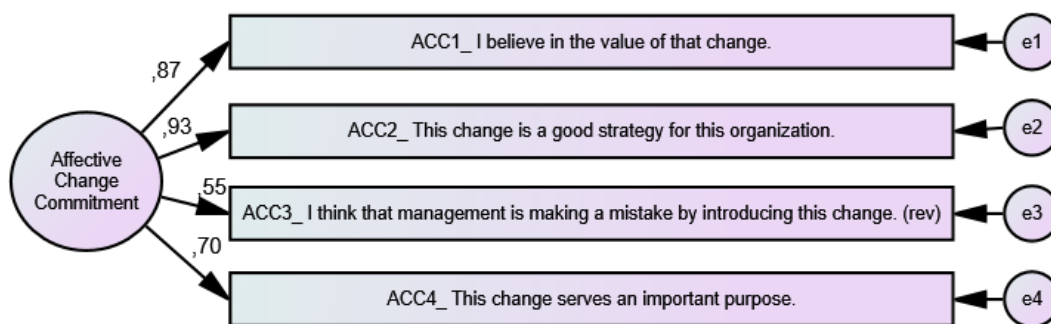
Once we are certain that we can trust our measures (that they are simultaneously valid and reliable) we can use them to test hypotheses. For this purpose, we will conduct hierarchical multiple regression analyses. Hierarchical Multi Linear Regression allows us to test control variables (namely those of sociodemographic nature) when testing the target relations between predictors and the dependent variable. In the case of testing moderator effects, we will use centered variables and their interaction terms to identify their association coefficients and if they have a significant p-value.

#### 4.4. Measures

The demographic information of the participants was gathered through our demographics questionnaire that included following data: gender, age, size of the company (number of employees), work group size, job tenure and the length of working relationship with the direct manager.

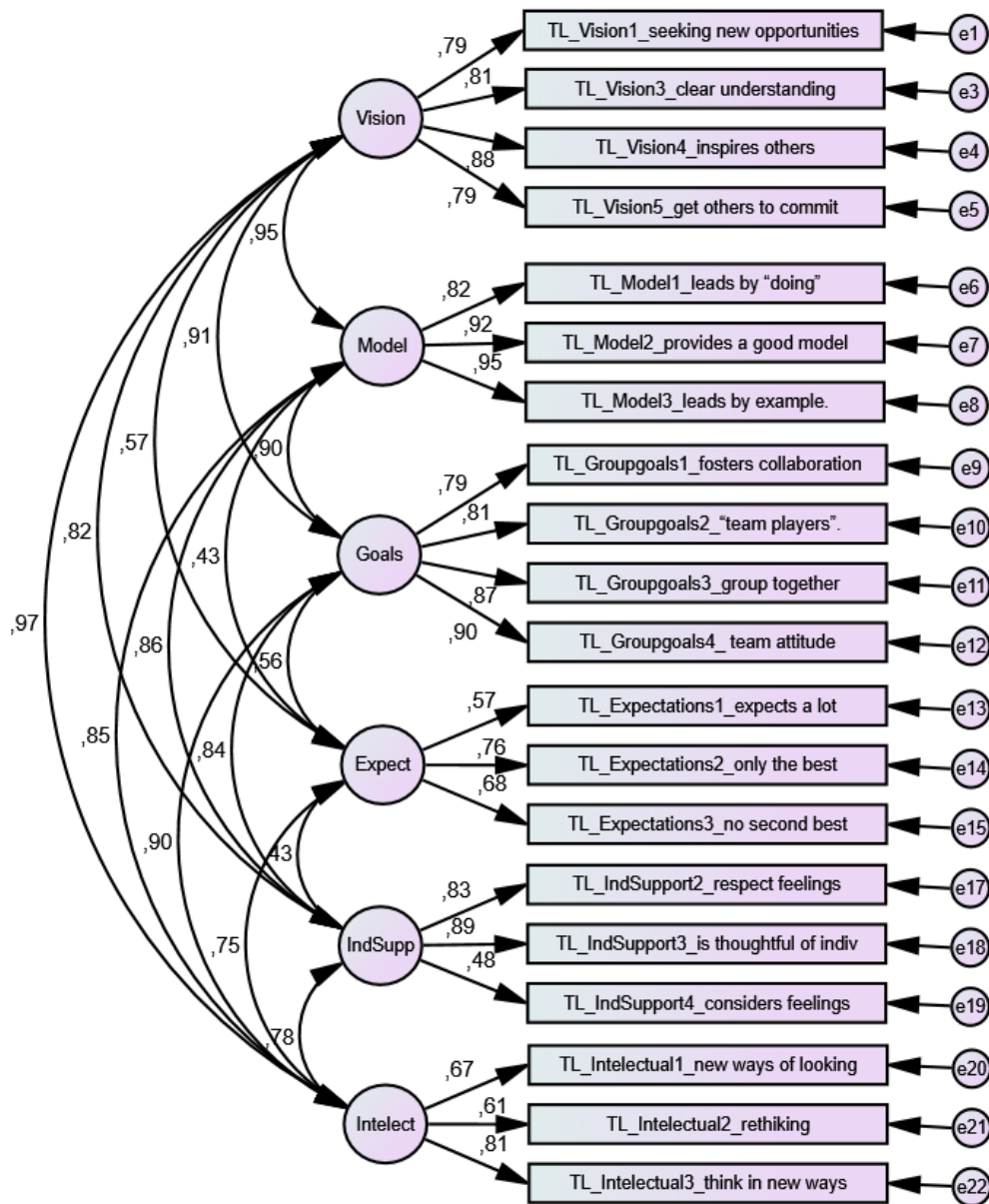
To measure the constructs in our conceptual framework - affective commitment to change, transformational Leadership, entrepreneurial leadership and change leader behaviors 4 scales with a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) were selected:

**Affective Commitment to Change** – In order to measure this dimension, we used **Herscovitch and Meyer's (2002) scale of affective change commitment**. This scale was originally measured with the full six item version which showed unacceptable fit indices (CMIN/DF=14.799,  $p < .001$ ; CFI=.799; TLI=.666; PCFI=.480; RMSEA=.289). From using Lagrange multipliers, we excluded two items and the single factor four-item resulting solution has acceptable fit indices (CMIN/DF=1.253,  $p = .286$ ; CFI=.998; TLI=.995; PCFI=.333; RMSEA=.039) while also good reliability (Cronbach's alpha =.844).



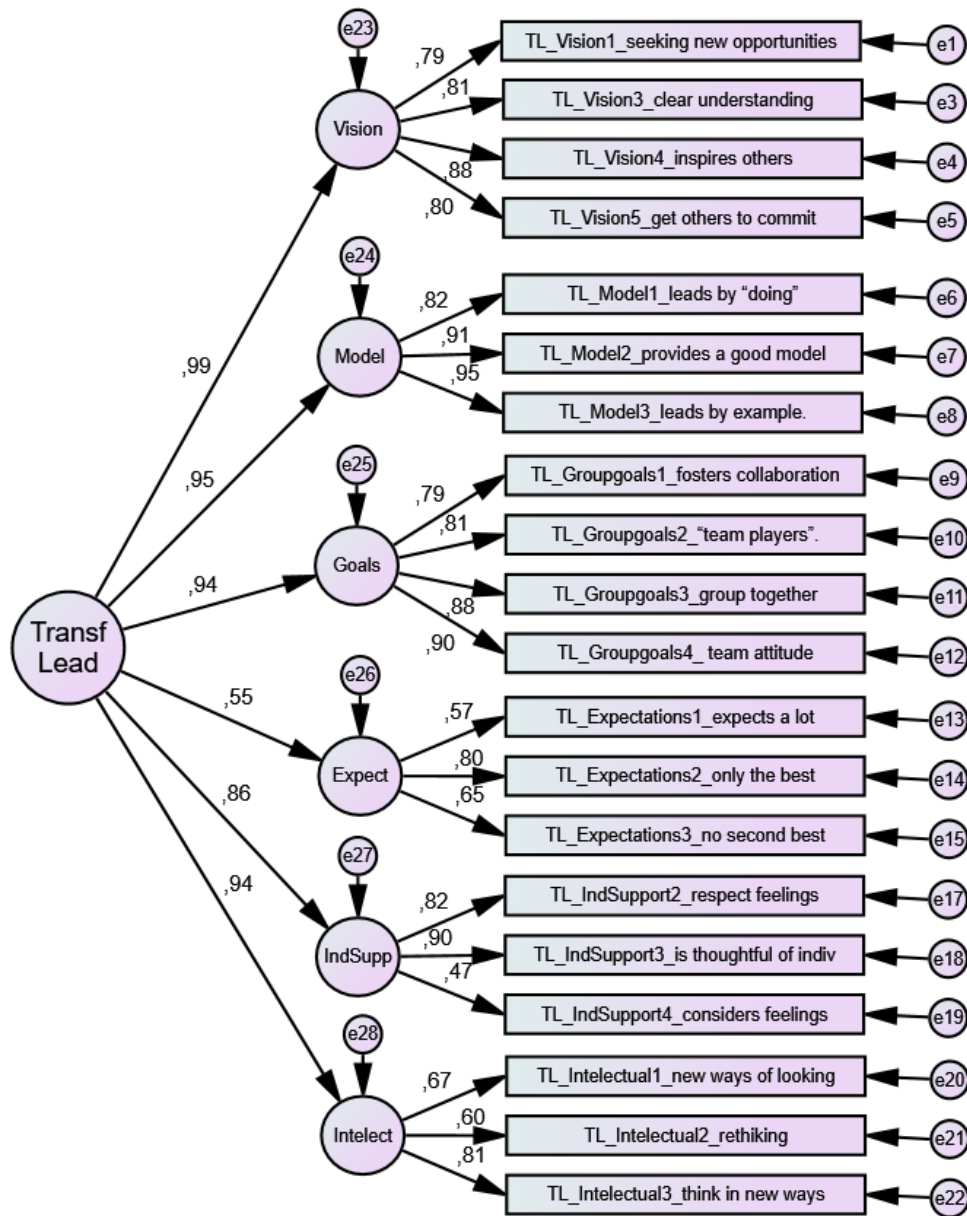
*Figure 2: Confirmatory Factor Analysis of Affective Commitment to Change*

**Transformational Leadership** – To measure this dimension we will use the **Transformational leadership behaviors Scale** originally developed by Podsakoff, MacKenzie and Bommer in 1996, later used by Rubin, Munz and Bommer (2005) and Herold, Fedor, Caldwell and Liu (2008) in similar studies. This scale consists originally of 22 items pertaining to six dimensions: articulating a vision, providing a role model, communicating high performance expectations, providing individualized support, fostering the acceptance of group goals, and providing intellectual stimulation. The CFA showed acceptable fit indices for this six-factor solution (CMIN/DF=1.836,  $p < .01$ ; CFI=.949; TLI=.938; PCFI=.774; RMSEA=.076) after removing two items that were harming the psychometric quality of the factorial structure. To the exception of communicating high performance expectations ( $\alpha = .693$ ) all factors show high levels of reliability (Articulating a vision  $\alpha = .893$ ; Providing a role model  $\alpha = .921$ ; providing individualized support  $\alpha = .763$ ; fostering the acceptance of group goals  $\alpha = .908$  and providing intellectual stimulation  $\alpha = .740$ ).



**Figure 3:** Confirmatory Factor Analysis of the 6 dimensions of Transformational Leadership: articulating a vision, providing a role model, communicating high performance expectations, providing individualized support, fostering the acceptance of group goals, and providing intellectual stimulation

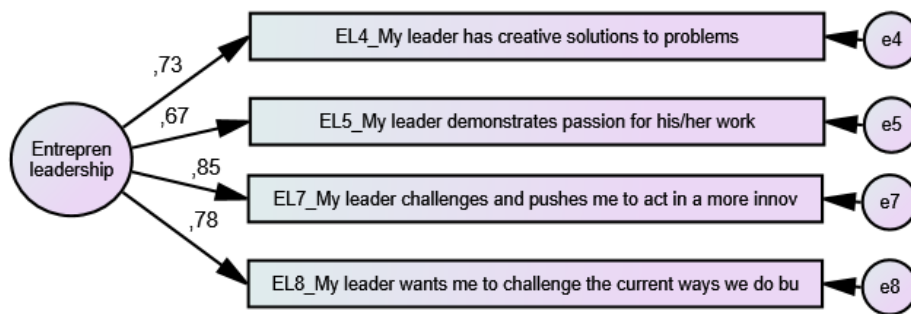
Because transformational leadership can be taken as a single construct we ran a model aggregating these factors into a second order factor. The resulting CFA showed marginally acceptable fit indices although RMSEA goes right on the cutoff (CMIN/DF=2.053,  $p < .01$ ; CFI=.932; TLI=.922; PCFI=.805; RMSEA=.08). The differences between both solutions are negligible and so for theoretic reasons we opt for the 2<sup>nd</sup> order factor that expresses the central construct of transformational leadership.



**Figure 4:** Confirmatory Factor Analysis of Transformational Leadership as a single construct

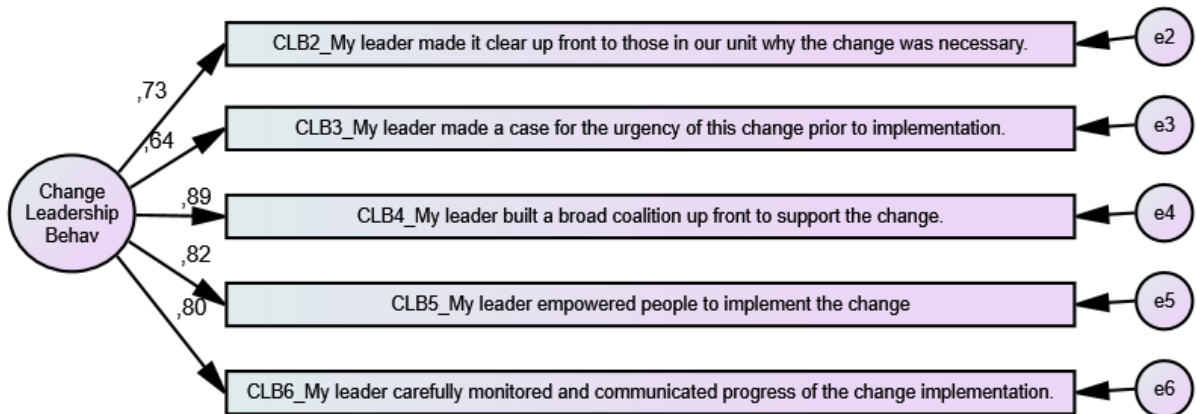


**Entrepreneurial Leadership** – this construct was measured using four items from the ENTRELEAD Scale developed by Renko, Tarabishy, Carsrud and Brännback (2015). The CFA showed acceptable fit indices for a single factor solution (CMIN/DF=1.494,  $p=.225$ ; CFI=.996; TLI=.989; PCFI=.332; RMSEA=.055) that also shows good reliability (Cronbach alpha=.843).



*Figure 5: Confirmatory Factor Analysis of Entrepreneurial Leadership*

**Change leadership behaviors.** This scale was constructed by Herold, Fedor, Caldwell and Liu, (2008) and was based on the organizational development literature on change leadership (e.g., Kotter, 1995), describing what leaders need to do to effectively implement change. This scale was originally measured with the full seven item version which showed unacceptable fit indices (CMIN/DF=5.308,  $p<.001$ ; CFI=.922; TLI=.883; PCFI=.614; RMSEA=.162). From using Lagrange multipliers, we excluded two items and the single factor five-item resulting solution has acceptable fit indices (CMIN/DF=1.216,  $p=.298$ ; CFI=.998; TLI=.995; PCFI=.499; RMSEA=.036) while also good reliability (Cronbach's alpha =.884).



*Figure 6: Confirmatory Factor Analysis of Change Leadership Behaviors*

For detailed insight into the Items of each scale please consult the Appendix A.

## 5. Results

The results of the study were reported in two parts. First, the descriptive and bivariate associations between the variables under study. Secondly, the results of the hierarchical regression analysis to show if variables of your interest explain a statistically significant amount of variance in our dependent variable, Affective Commitment to Change, after accounting for all other variables.

### *Descriptive and bivariate Statistics*

Table 2 shows the results. Among the variables included in our model, Affective Commitment to Change (ACC) has the highest median (3.82) while Change Leadership Behaviors (CLB) is closer to the midpoint of the scale (3.39). Sociodemographic variables are almost entirely not associated with any of these variables. The only exception is gender which has an  $r=0.200$  ( $p<0.05$ ) which means that male participants tend to report higher Affective Commitment to change compared to their female counterpart.

The high correlations found between transformational leadership (TL), entrepreneurial leadership (EL) and CLB are noticeable with magnitudes close to the 0.709 to 0.841  $r$  coefficient ( $p<0.01$ ). This suggests that they strongly share variance either because they may be logically linked or because they may simply be sharing conceptual meanings. Lastly, our dependent variable, Affective commitment to change, is positively correlated with all the leadership variables ranging from 0.393 to 0.445 suggesting that we proceed with testing our hypotheses.

**Table 2:** Descriptive and bivariate statistics

Variables	Min-max	Median	SD	1	2	3	4	5	6	7	8	9
1. Gender	1-2	-	-	1								
2. Age	24-56	36,2	6,29	,061	1							
3. Organizational size (employees)	1-5	4,22	1,05	-,075	,001	1						
4. Unit size	1-5	1,82	,65	-,042	-,186*	,206**	1					
5. Organizational tenure	1-5	2,69	1,25	,105	,446**	,189*	-,008	1				
6. Manager-employee tenure	1-5	1,71	,88	,134	,308**	-,130	-,091	,426**	1			
7. Transformational Leadership	1,22-4,94	3,54	,71	,042	,075	,079	-,044	,106	,040	1		
8. Entrepreneurial Leadership	1-5	3,59	,83	,138	,067	,105	-,045	,134	,069	,841**	1	
9. Change Leadership Behaviors	1-5	3,39	,86	,035	,063	,063	-,042	,083	,005	,755**	,709**	1
10. Affective Commitment to change	,200*	3,82	,73	,200*	,081	-,010	-,067	,047	,100	,445**	,393**	,432**

Notes: N=166; \* p<0.05; \*\* p<0.01

*Hierarchical Regression analysis*

We conducted a hierarchical regression analysis controlling for sociodemographic variables in step one, and the direct effect in step two, testing each hypothesis. Findings are shown in Tables 3 to 5.

The first analysis conducted was to test our first hypotheses (H1: Transformational Leadership (TL) is positively associated with Affective Commitment to Change (ACC). According to our results in table 3, 20.4% of the variance in ACC is explained is significantly explained by TL. The findings show a significant beta between transformational leadership and Affective commitment to change (Beta=.438,  $p < .01$ ). This supports H1.

**Table 3:** Hierarchical Regression Results for Transformational Leadership predicting Affective Commitment to Change

Model		ACC	
		Model 1	Model 2
<b>1</b>	<b>Step 1 control variables</b>		
	Gender	,187*	,172*
	Age	,052	,039
	Organizational size (employees)	,030	-,004
	Unit/Team size	-,049	-,026
	Organizational Tenure	-,032	-,064
	Manager-employee Tenure	,071	,071
<b>2</b>	<b>Step 2</b>		
	Transformational leadership		,438***
	F value	1,373	7,041***
	Adjusted R <sup>2</sup>	,013	,204***
	Delta R <sup>2</sup>	-	,189

Notes: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . All VIF values are  $< 1.535$

Concerning our second Hypotheses (H2: Entrepreneurial Leadership (EL) is positively associated with Affective commitment to change (ACC)), the results shown in Table 4 suggest that 14.8% of the variance in Affective commitment to change is significantly explained by Entrepreneurial Leadership.

Findings show a significant beta between Entrepreneurial Leadership and Affective commitment to change (Beta=.375,  $p < .001$ ) which renders support to H2 showing that there is a positive association between EL and ACC.

**Table 4:** Hierarchical Regression Results for Entrepreneurial Leadership predicting Affective Commitment to Change

Model		ACC	
		Model 1	Model 2
<b>1</b>	<b>Step 1 control variables</b>		
	Gender	,187*	,139
	Age	,052	,051
	Organizational size (employees)	,030	-,012
	Unit/Team size	-,049	-,027
	Organizational Tenure	-,032	-,064
	Manager-employee Tenure	,071	,062
<b>2</b>	<b>Step 2</b>		
	Entrepreneurial leadership		,375***
	F value	1,373	5,086***
	Adjusted R <sup>2</sup>	,013	,148***
	Delta R <sup>2</sup>	-	,135

Notes: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . All VIF values are  $< 1.537$

Concerning our third Hypotheses (H3: Change Leadership behavior (CLB) is positively associated with Affective commitment to change (ACC)), the results shown in Table 5 demonstrate that 19.4% of the variance in ACC is significantly explained by CLB.

The findings show a significant positive relation between Change Behaviors Leadership and Affective Commitment to change (Beta=.426,  $p < .001$ ) which renders support to H3.

**Table 5:** Hierarchical Regression Results for Change Leadership Behaviors predicting Affective Commitment to Change

Model		ACC	
		Model 1	Model 2
<b>1</b>	<b>Step 1 control variables</b>		
	Gender	,187*	,173*
	Age	,052	,039
	Organizational size (employees)	,030	,006
	Unit/Team size	-,049	-,028
	Organizational Tenure	-,032	-,061
	Manager-employee Tenure	,071	,085
<b>2</b>	<b>Step 2</b>		
	Change Leadership Behaviors		,426***
	F value	1,373	6,686***
	Adjusted R <sup>2</sup>	,013	,194***
	Delta R <sup>2</sup>	-	,250

Notes: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . All VIF values are  $< 1.535$

To test the fourth Hypotheses (Change Leadership Behaviors (CLB) is not a moderator in the model) we need to complete two analyses first: one to understand the interaction between CLB and TL (H4a) and another to understand the interaction between CLB and EL (H4b).

Testing the interaction between CLB and TL (H4a: Change leadership Behaviors (CLB) does not moderate the relation between Transformational Leadership (TL) and Affective commitment to change (ACC)), as demonstrated in Table 6, results show a non-significant beta coefficient for the interaction between TL and CLB (Beta=.115,  $p > .05$ ) which supports H4a.

**Table 6:** Hierarchical Regression Results for the interaction between Change Leadership Behaviors and Transformational Leadership predicting Affective Commitment to Change

Model	ACC		
	Model 1	Model 2	Model3
<b>1 Step 1 control variables</b>			
Gender	,187*	,170*	,165*
Age	,052	,037	,027
Organizational size (employees)	,030	-,004	,001
Unit/Team size	-,049	-,024	-,038
Organizational Tenure	-,032	-,067	-,076
Manager-employee Tenure	,071	,078	,088
<b>2 Step 2</b>			
Transformational leadership		,269*	,315**
Change Leadership Behaviors		,225*	,226*
<b>3 Step 3</b>			
Interaction TL*CLB			,115
F value	1,373	6,876***	6,414***
Adjusted R <sup>2</sup>	,013	,222*	,228
Delta R <sup>2</sup>	-	,210	,011

Notes: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . All VIF values are  $< 1.535$



When testing the H4b (Change Leadership Behaviors (CLB) does not moderate the relationship between entrepreneurial leadership (EL) and Affective Commitment to Change (ACC)) as demonstrated in Table 7, results show a non-significant beta coefficient for the interaction between EL and CLB (Beta=.013;  $p > .05$ ) which supports H4b.

**Table 7:** Hierarchical Regression Results for the interaction between Change Leadership Behaviors and Entrepreneurial Leadership in predicting Affective Commitment to Change

Model	ACC		
	Model 1	Model 2	Model3
<b>1 Step 1 control variables</b>			
Gender	,187*	,159*	,159
Age	,052	,042	,041
Organizational size (employees)	,030	-,004	-,004
Unit/Team size	-,049	-,025	-,027
Organizational Tenure	-,032	-,066	-,067
Manager-employee Tenure	,071	,079	,080
<b>2 Step 2</b>			
Entrepreneurial leadership		,137	,142
Change Leadership Behaviors		,331**	,330
<b>3 Step 3</b>			
Interaction EL*CLB			,013
F value	1,373	6,111***	5,402***
Adjusted R <sup>2</sup>	,013	,199***	,194
Delta R <sup>2</sup>	-	,188***	,001

Notes: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . All VIF values are  $< 2.294$

These results from H4a and H4b support our Hypotheses 4, showing that Change Leadership Behaviors does not act as a moderator in our model.

In Summary, and as per Table 8, all hypotheses are supported by our findings.

**Table 8:** Summary of Hypotheses Testing

H1	TL is positively associated with ACC	✓
H2	EL is positively associated with ACC	✓
H3	CBL is positively associated with ACC	✓
H4	CBL is not a moderator in the model	✓
H4a	CBL is not a moderator between TL and ACC	✓
H4b	CBL is not a moderator between EL and ACC	✓

## 6. Discussion

Transformational leadership is considered important during times of change because of the ability of transformational leaders to engage followers and motivate them to support the leader's chosen direction. Multiple studies have been conducted to understand the relationship between transformational leadership and affective commitment to change. However, there is scarcity of studies conducted on the entrepreneurial leadership style and affective commitment to change. There is also a gap in the research literature concerning the effectiveness of change leadership behaviors as predictors of affective commitment to change.

Overall, extant research has not examined the degree to which these three concepts have similar, dissimilar, or complementary effects when it comes to shaping affective commitment to a specific change initiative.

This study tried to shed some light into these relations by examining these concepts together to see their direct relationship as predictors of affective commitment to change and how the change behaviors act or not as moderate variable regarding affective commitment to change. In addition, most studies on change focus on one organization, or one change (e.g. Michaelis, Stegmaier and Sonntag, 2009; Straatmann, Nolte and Seggewiss, 2018). However, this study is in keeping with a series of studies (e.g. Fedor, Caldwell and Herold, 2006; Herold, Fedor, Caldwell and Liu, 2008; Ouedraogo and Ouakouak, 2018) investigating cross-organization relationships so as to obtain and examine variance in critical variables, such as change leadership styles, sociodemographic variables, or change behaviors. By including many changes in one study it is possible to examine relationships that otherwise would not be possible when studying a single change or a single organization. Therefore, it increases the generalizability of our findings.

Concerning our sociodemographic variables, the study showed that they are almost entirely not associated with any of these variables. The only exception is gender which has an  $r=0.200$  ( $p<0.05$ ) which means that male participants tend to report higher Affective Commitment to change compared to their female counterpart which means that men that took part in this

study tend to see more value in the change than woman. This is arguably explained by the tendency that women a) commonly earn less than their male counterparts in similar positions and b) they generally believe that their gender will make it harder for them to advance in the future (Ziman, 2013).

Since the perception of justice has shown to be associated with higher affective commitment to change (Kyootai, Sharif, Scandura and Kim, 2017; Michel, Stegmaier and Sonntag, 2010), one could argue that it could be a possible explanation for these results.

Comparing these results with previous findings on this topic shows that there is no consensus. Some studies show no significant gender difference on affective commitment to change (Spreitzer and Mishra, 2002) and some research drew results similar to ours showing that male employees are more committed than their female counterparts (Kanchana and Panchanatham, 2012) The influence of demographic factors on organizational commitment. *Journal of Applied Psychology*, 2(5), 1-13. 2012: Hornung and Rousseau, 2007). More research is needed to gain better insight on this topic.

All other sociodemographic variables: age, size of the company regarding number of employees, size of the work team/unit, organizational tenure, and the length of working relationship with the direct manager did not show any significant associations with affective commitment to change. This is an interesting result as it goes against some studies that suggested that aged employees had higher organizational commitment (Kumar & Giri 2009). Especially interesting is the result concerning organizational tenure and the affective commitment to change. One might expect a significant and positive relationship between organizational affective commitment to change and organizational tenure as shown in other studies (e.g. Herscovitch and Meyer, 2002; Newstrom, 2007). However, our study shows this association is not supported. Maybe because our sample shows an average tenure of only 1.7 years with a range of 1 to 3 years. In other words, because the subjects of our study are not yet long enough within the organization, they had not yet sufficient time to build up feelings of responsibility for outcomes relevant to them and the results could have been different if we had more people with longer tenures within their company.

Concerning the variable transformational leadership, our study indicates it is positively associated with affective commitment to change. It seems that, by articulating a vision, these types of leaders are able to inspire employees in such a way that their confidence and expectations increases. They can foster employees' loyalty and promote support among employees, encourage them to join forces towards a mutual goal and motivate them to become more committed to the organization. These leaders are also able to help their followers reaching their full potential and become committed to generate the highest levels of performance. Lastly by showing respect for followers' individual needs and features transformational leaders can count on their engagement with higher focus on affective commitment to change.

Concerning both entrepreneurial leadership and affective commitment to change, our study suggests also a positive association. Entrepreneurial leaders create a compelling vision for the future and instigate followers' personal involvement and pride in that vision. These leaders also empower followers to picture their identities in the company as drivers for its future innovations and success. Entrepreneurial leaders, by considering followers in terms of their entrepreneurial passion and self-efficacy, enhance followers' beliefs in their own entrepreneurial skills and abilities and ignite passion for innovation and creativity (Cardon, Wincent, Singh and Drnovsek, 2009). In addition, entrepreneurial leadership encourages risk taking. Therefore, trust needs to be high between employees and manager as trust is one of the primary predictors for the willingness to take risk; simultaneously trust is positively correlated with affective commitment.

This study shows that entrepreneurial leadership has been linked to employees' commitment. Although this leadership style is different from the transformational leadership, both constructs have similarities in certain aspects that seem to foster affective commitment to change. For instance, both constructs overlap when it comes to intellectual stimulation, but they are apart in the areas of charismatic role modeling and inspirational motivation. Despite entrepreneurial leaders lead with clear purpose and goals, they may not be described as charismatic or inspirational as often as transformational leaders (Renko, Tarabishy, Carsrud and Brännback, 2015).

Lastly, our study found that Change Leadership Behaviors (CLB) are positively associated with affective commitment to change, meaning, CLB on its own can predict affective commitment to change which is consistent with other studies (Kotter and Schlesinger, 2008; Kotter, 1995).

It also shows that CLB does not moderate the relationship between entrepreneurial leadership (EL) and Affective Commitment to Change (ACC), i.e. it does not affect the strength of the relationship between EL and ACC or between TL and ACC. This finding is particularly interesting because it diverges from the findings of Herold, Fedor, Caldwell and Liu's study of 2008, where change leadership operates as a moderator of the transformational leadership-change commitment relationship. They found that transformational leadership is only positively related to change commitment when change leadership is rated as low. In contrast, when change leadership is high, the level of transformation leadership does not appear to matter.

The findings of our study are important because they show that by engaging in change-specific leadership behaviors, change leaders can instigate employees' support for the change at hand, which will then lead to a successful change implementation. TL and EL suggest an enduring and cross-situational influence whether those of a change leader is rather episodic. Transformational or entrepreneurial leadership theories refer usually to a longer-term relationship established between the leader and followers. The intention is to create a compelling future vision for the entire organization, or for a more distant future, as opposed to change leadership where the articulating of the vision is focused on the change at hand (Herold, Fedor, Caldwell and Liu, 2008). This is especially important nowadays due to the increase of competitive intensity and changes to the overall business environment such as technological advancements, globalization, product diversification, and organizational growth. It is particularly important for the IT industry that is in nature a very dynamic and fast-paced industry that has one of the highest talent turnover rates according to data gathered by employment-focused social network LinkedIn (2018). If companies have high turnover rates and people do not establish long-term relationships with their leaders, it is important

that these leaders have good change specific leadership skills to foster commitment of their employees during change situations.

Despite all limitations and possible corrections future studies may conduct on options we made in this study, and that we shall review in more detail in the next section, we think findings strongly suggest that transformational leadership, entrepreneurial leadership and change leadership behaviors are all predictors of affective commitment to change and that the status of change leadership may more properly be that of a predictor than a moderator. Also, findings suggest that some blurred frontiers between these classifications of leadership may benefit from future research.

## 7. Study Considerations and Conclusion

Like all studies, this one has positive attributes as well as limitations and opportunities for further development. On the positive side this study has been made by investigating cross-organizations. Including many changes in one study allows for the examination of relationships that are not possible when studying a single change or a single organization. Besides this, it increases also the generalizability of our findings. However, and as with most organizational studies, these results need to be interpreted with certain limitations.

First, our sample is rather limited. We only got 166 valid responses across organizations in one sector. Follow-up research is needed to validate our results in a bigger population, over more companies and sectors. I believe that a bigger and a more diverse sample could strengthen our findings to enhance the understanding of Leadership styles and behaviors in the context of organizational change perceptions.

Second, for convenience reasons, we gathered cross-sectional quantitative data. However, it would be beneficial for researchers to use mix methods (quantitative and qualitative) to get more insight on change antecedents and the actual affective commitment to change of employees. It would also provide more detail into the associations of the sociodemographic variables with affective commitment to change.

Third, by building a model with simultaneously measured variables of a subjective nature we may be facing some biasing due to common method variance. In such circumstance, we may not be certain the relations actually operate or if they are a product of the participants' implicit theory about how they should relate. We believe this might be an overstated issue transversally to management research (Fuller *et al.*, 2016) especially because we built the questionnaire in a way that broke the sequenced logical flow between variables. Another limitation we should keep in mind concerns the level of measurement of variables. It is possible to measure some of these concepts at the group level because they may be taken as a product of the interaction of individuals inside a team or group. Likewise, they may have a



shared nature to the point of being taken as group-originated more than individual-originated. However, we contend that group-level constructs are necessarily also a reality at the individual level (i.e. all group-level constructs must have its counterpart at the individual level) although the opposite is not true (as long as a concept has not a shared reality, it cannot be by definition a group production, e.g. psychological climate). This means we may have made choices that prevent us from understanding the full dynamics of the model. As we did find logically sustained relations, we think that at least some of the effective dynamics are uncovered with this model although we accept that not all the dynamics are in this way comprehended.

Fourth, future studies should investigate change leadership and outcomes over time using longitudinal designs, especially because change leadership and implementation theories have argued that different sequences of implementation steps and strategies can alter their effectiveness. In addition, different contingencies may also lead to different outcomes of alternative change sequences. Therefore, it would be beneficial to explore the sequential effects of change leadership behaviors and their potential contingencies (Pettigrew, Woodman and Cameron, 2001).

For future studies, it would be beneficial to extend the analysis to the other two types of change commitment (i.e. continuance and normative commitment) to see if there are significant differences in the outcome. Although some authors suggest that continuance commitment and normative commitment are better conceptualized as attitudes towards the decision in staying or leaving the organization rather than with the decision in providing support to a change (Parish, Cadwallader and Bush, 2008; Solinger, Van Olffen and Roe, 2008), it would have been interesting to see if that would alter in any form our results. Future research may also benefit from considering a more precise psychometric study on the true nature of transformational, change and entrepreneurial leadership.

Despite all these limitations we believe this study demonstrates the importance of leaders and their change leader skills and styles. Successful change management requires followers'

attention, which appears to come, at least in part, from either leaders' behavior or leadership style. More important, as the results of this study suggest, high affective organizational commitment is a critical factor in gaining commitment to a change through either transformational, entrepreneurial leadership or change leadership behaviors.

## 8. References

- Abrahamson, E. (2004). Avoiding repetitive change syndrome. *MIT Sloan Management Review*, 45(2), 93-95.
- Abrell-Vogel, C., & Rowold, J. (2014). Leaders' commitment to change and their effectiveness in change - a multilevel investigation. *Journal of Organizational Change Management*, 27(6), 900-921.
- Ackerman, L. S. (1986). Change Management: Basics for Training. *Training and Development Journal*, 40(4), 67-68.
- Akhtar, M., Bal, M., & Long, L. (2016). Exit, voice, loyalty, and neglect reactions to frequency of change, and impact of change. A sensemaking perspective through the lens of psychological contract. *Employee Relations*, 38(4), 536-562.
- Alas, R. (2004). Process model for organisational change: a study of Estonian companies. *Journal of Business Economics and Management*, 5(3), 109-117.
- Alavi, S., & Gill, C. (2017). Leading Change Authentically: How Authentic Leaders Influence Follower Responses to Complex Change. *Journal of Leadership & Organizational Studies* 24(2), 157-171.
- Alijohani, M. (2016). Change Management. *International Journal of Scientific & Technology Research*, 5(5), 319-323.
- Alsamman, A., Aldulaimi, S., & Alsharedah, M. (2016). Training Effectiveness and Commitment to Organizational Change: Saudi Arabian ARAMCO. *Management and Administrative Sciences Review*, 5(3), 128-142.
- Amagoh, F. (2009). Leadership development and leadership effectiveness. *Management Decision*, 47(6), 989-999.
- Amin, W., Akram, U., Shahzad, F., & Amir, M. (2018). Impact of Transformation Leadership on Affective Employee's Commitment. *European Online Journal of Natural and Social Sciences: Proceedings*, 7(1), 48-57.
- Appelbaum, H., Cameron, A., Ensink, F., Hazarika, J., Attir, R., Ezzedine, R., & Shekhar, V. (2017). Factors that impact the success of an organizational change: a case study analysis. *Industrial and Commercial Training*, 49(5), 213-230.
- Armenakis, A., & Bedeian, A. (1999). Organizational change. a review of theory and research in the 1990s. *Journal of Management*, 25(3), 293-315.
- Armeankis, A., & Harris, S. (2002). Crafting a change message to create transformational readiness. *Journal of Organizational Change Management*, 15(2), 169-183.
- Armenakis, A., & Harris, S. (2009). Reflections our journey in organizational change research and practice. *Journal of Change Management*, 9(2), 127-142.
- Armenakis, A., Harris, S., Cole, M., Filmer, J., & Self, D. (2008). A Top Management Team's Reactions to Organizational Transformation: The Diagnostic Benefits of Five Key Change Sentiments. *Journal of Change Management*, 7(3), 273 - 290.
- Armenakis, A., Harris, S., & Mossholder, K. (1993). Creating readiness for organizational change. *Human Relations*, 46(6), 681-703.

- Avolio, B., Zhu, W., Koh, W. & Bhatia, P. (2004), Transformational Leadership and Organizational Commitment: Mediating Role of Psychological Empowerment and Moderating Role of Structural Distance. *Journal of Organizational Behavior*, 25(8), 951– 968.
- Bagheri, A., & Akbari, M. (2018). The Impact of Entrepreneurial Leadership on Nurses' Innovation Behavior. *Journal of Nursing Scholarship*, 50(1), 28–35.
- Bal, P., Kooij, D., & De Jong, S. (2013). How do developmental and accommodative HRM enhance employee engagement and commitment? The role of psychological contract and SOC strategies. *Journal of Management Studies*, 50(4), 545-572.
- Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bass, B. M. (1999). Two Decades of Research and Development in Transformational Leadership. *European Journal of Work and Organizational Psychology*, 8(1), 9-32.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational Leadership* (2nd ed.). London: Lawrence Erlbaum Associates Publishers.
- Beer, M., & Nohria, N. (2000). Cracking the code of change. *Harvard Business Review*, 78(3), 133-141.
- Belias, D., & Koustelios, A. (2014). The impact of leadership and change management strategy on organizational culture. *European Scientific Journal*, 10(7), 451-470.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246.
- Block, L., & Manning, L. (2007). A systemic approach to developing frontline leaders in healthcare. *Leadership in Health Services*, 20(2), 85-96.
- Bodla, M., & Nawaz, M. (2010). Comparative study of full range leadership model among faculty members in public and private sector higher education institutes and universities. *International Journal of Business and Management*, 5(4), 208-214.
- Bossidy, L., & Charan, R. (2002). *Execution: the Discipline of Getting Things Done*. New York: Crown Business.
- Burns, J.M. (1978) *Leadership*. New York. Harper & Row.
- Bycio, P., Hackett, R.D. & Allen, J.S. (1995). Future assessment of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology*, 80(4), 468-78.
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The Nature and Experience of Entrepreneurial Passion. *Academy of Management Review*, 34(3), 511–532.
- Caruso, L. (2017). Digital innovation and the fourth industrial revolution: epochal social changes? *AI & SOCIETY - Journal of Knowledge, Culture and Communication*. Retrieved November 04, 2017, from <https://link.springer.com/content/pdf/10.1007/s00146-017-0736-1.pdf>.
- Chen, H., & Chen, Y. (2008). The impact of work redesign and Psychological Empowerment on Organizational Commitment in a changing environment: An Example From Taiwan's State-Owned Enterprises. *Public Personnel Management*, 37(3), 279-302.
- Chen, M. (2007). Entrepreneurial Leadership and New Ventures: Creativity in Entrepreneurial Teams. *Creativity and Innovation Management*, 16(3), 239-249.

- Choi, M., & Ruona, W. (2011). Individual readiness for organizational change and its implications for human resource and organization development. *Human Resource Development Review*, 10(1), 46–73.
- Cinite, I., Duxbury, L., & Higgins, C. (2009). Measurement of Perceived Organizational Readiness for Change in the Public Sector. *British Journal of Management*, 20(2), 265–277.
- Coch, L., & French, J. (1948). Overcoming resistance to change. *Human Relations*, 1(1), 512-532.
- Conner, D. R., & Patterson, R. W. (1982). Building commitment to organizational change. *Training and Development Journal* 36(4), 18–30.
- Conway, E., & Monks, K. (2008). HR practices and commitment to change: an employee-level analysis. *Human Resource Management Journal*, 18(1), 72–89.
- Daemmrch, A. (2017). Invention, Innovation Systems, and the Fourth Industrial Revolution. *Technology and Innovation*, 18(4), 257-265.
- De Hauw, S., & De Vos, A. (2010). Millennial’ career perspective and psychological contract expectations: Does the recession lead to lowered expectations? *Journal of Business and Psychology*, 25(2), 293-302.
- Deloitte Development LLC. (2016). *2017 Technology Industry Outlook*. Retrieved from <https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/technology-industry-outlook.html>.
- Denning, S. (2005). Transformational innovation. *Strategy & Leadership*, 33(3), 11-16.
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, 45(4),735-744.
- Eby, L., Adams, D., Russel, J., & Gaby, S. (2000). Perceptions of organizational readiness for change: Factors related to employees’ reactions to the implementations of team-based selling. *Human Relations*, 53(3), 419-442.
- Edmondson, A., Haas, M., Macomber, J., & Zuzul, T. (2015). The role of multiplier firms and megaprojects in leading. In R. Henderson, R. Gulati, & M. Tushman (Eds.), *Leading sustainable change: An organizational perspective*: 273-297. Oxford: Oxford University Press.
- Eisenbach, K. (1999). Transformational leadership in the context of organizational change. *Journal of Organizational Change Management*, 12(2), 80-89.
- Eisenbach, R., Watson, K., & Pillai, R. (1999). Transformational leadership in the context of organizational change. *Journal of Organizational Change Management*, 12(2), 80–88.
- Ennis, M., Gong, T., & Okpozo, A. (2016). Examining the Mediating Roles of Affective and Normative Commitment in the Relationship between Transformational Leadership Practices and Turnover Intention of Government Employees. *International Journal of Public Administration*, 41(3), 203-215.
- Eriksson, C. B. (2004). The effects of change programs on employees’ emotions. *Personnel Review*, 33(1), 110 - 126.
- Evangelista, A., & Burke, L. (2003). Work redesign and performance management in times of downsizing,. *Business Horizons*, 46(2), 71-76.

- Fedor, D., Caldwell, S., & Herold, D. (2006). The effects of organizational changes on employee commitment: A multilevel investigation. *Personnel Psychology*, 59(4), 1-29.
- Fiaz, M., Su, Q., Ikram, A., & Saqib, A. (2017). Leadership Styles and employees' motivation: perspective from an emerging economy. *Journal of Developing Areas*, 51(4), 143-156.
- Fiss, P., & Zajac, E. (2006). The Symbolic Management of Strategic Change: Sensegiving via Framing and Decoupling. *Academy of Management Journal*, 49(6), 1173-1193.
- Ford, J., Weissbein, D., & Plamondon, K. (2003). Distinguishing organizational from strategy commitment: Linking officers' commitment to community policing to job behaviors and satisfaction. *Justice Quarterly*, 20(1), 159-185.
- Froese, F. J., & Xiao, S. (2012). Work values, job satisfaction and organizational commitment in China. *International Journal of Human Resource Management*, 23(10), 2144-2162.
- Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8), 3192-3198.
- Galpin, T. (1996). *The human side of change: A practical guide to organization redesign*. San Francisco: Jossey-Bass.
- Gerdes, S. (2014) *Entrepreneurial leadership: trigger or obstacle for employees' organizational commitment?* 3rd IBA Bachelor Thesis Conference. Enschede, Netherlands. University of Twente, Faculty of Management and Governance. Retrieved from [http://essay.utwente.nl/65308/1/Svenja%20Gerdes\\_BA\\_MB.pdf](http://essay.utwente.nl/65308/1/Svenja%20Gerdes_BA_MB.pdf).
- Gill, R. (2003). Change management - or change leadership? *Journal of Change Management*, 3(4), 307-318.
- Gilley, A., McMillian, H., & Gilley, J. (2009). Organizational change and characteristics of leadership effectiveness. *Journal of Leadership & Organizational Studies*, 16(1), 38-47.
- Greenwood, R., & Hinings, C. R. (1996). Understanding Radical Organizational Change: Bringing together the Old and the New Institutionalism. *The Academy of Management Review*, 21(4), 1022-1054.
- Griffin, R. W., Phillips, J., & Gully, S. (2017). *Organizational behavior: managing people and organizations*. Boston: Cengage Learning.
- Groves, K. S. (2005). Linking leader skills, follower attitudes and contextual variables via an integration of charismatic leadership. *Journal of Management*, 31(2), 255-277.
- Gubler, M., Coombs, C., & Arnold, J. (2018). The gap between career management expectations and reality – empirical insights from the IT industry. *Gruppe. Interaktion. Organisation. Zeitschrift für Angewandte Organisationspsychologie (GIO)*, 18(71), 1-11.
- Gupta, V., McMillan, I. C., & Surie, G. (2004). Entrepreneurial leadership: developing and measuring. *Journal of Business Venturing*, 19(2), 241-260.
- Haar, J. M., & Spell, C. S. (2009). How does distributive justice affect work attitudes? The moderating effects of autonomy. *International Journal of Human Resource Management*, 20(8), 1827-1842.

- Heffernan, M., & Rochford, E. (2017). Psychological contract breach and turnover intention: the moderating effects of social status and local ties. *Irish Journal of Management*, 36(2), 99-115.
- Herold, D. M., Fedor, D. B., Caldwell, S. D., & Liu, Y. (2008). The effects of transformational leadership and change leadership on employees' commitment to a change: A multi-Level study. *Journal of Applied Psychology*, 93(2), 346-357.
- Herscovitch, L., & Meyer, J. P. (2002). Commitment to Organizational Change: Extension of a Three-Component Model. *Journal of Applied Psychology*, 87(3), 474-487.
- Higgs, M., & Rowland, D. (2005). All changes great and small: Exploring approaches to change and its leadership. *Journal of Change Management*, 5(2), 121-151.
- Holt, D., Armenakis, A., Feild, H., & Harris, S. (2007). Readiness for Organizational Change: The Systematic Development of a Scale. *The Journal of Applied Behavioral Science*, 43(2), 232-25.
- Holten, A. L., & Brenner, S. O. (2015). Leadership style and the process of organizational change. *Leadership & Organization Development Journal*, 36(1), 2-16.
- Hornung, S., & Rousseau, D. M. (2007). Active on the job—proactive in change: How autonomy at work contributes to employee support for organizational change. *Journal of Applied Behavioral Science*, 43(4), 401-426.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Hughes, M. (2016). Leading changes: Why transformation explanations fail. *Leadership*, 12(4), 449-469.
- Hussain, M., & Hassan, H. (2016). The leadership styles dilemma in the business world. *International Journal of Organizational Leadership*, 5(4), 411-425.
- Huy, Q., & Mintzberg, H. (2003). The rhythm of change. *MIT Sloan Management Review*, 44(4), 79-84.
- Immelt, J. R. (2017). How I remade GE and what I learned along the way. *Harvard Business Review*, 95(5), 42-51.
- Jaros, S. (2010). Commitment to Organizational Change: A Critical Review. *Journal of Change Management*, 10(1), 79-108.
- Johnson, K. (2016). The dimensions and effects of excessive change. *Journal of Organizational Change Management*, 29(3), 445-459.
- Jones, R., Jimmieson, N., & Griffiths, A. (2005). The Impact of Organizational Culture and Reshaping Capabilities on Change Implementation Success: The Mediating Role of Readiness for Change. *Journal of Management Studies*, 42(2), 361-386.
- Judge, T. A., Thoresen, C. J., Pucik, V., & Welbourne, T. M. (1999). Managerial coping with organizational change: a dispositional perspective. *Journal of Applied Psychology*, 83(1), 107-122.
- Judge, T., & Piccolo, R. (2004). Transformational and transactional leadership: a meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-68.
- Judson, A. (1991). *Changing behavior in organizations: Minimizing resistance to change*. Cambridge, MA: Basil Blackwell.
- Kanchana, P. & Panchanatham, P. (2012). The influence of demographic factors on organizational commitment. *Journal of Applied Psychology*, 2(5), 1-13.

- Keller, S., & Aiken, C. (2009). The Inconvenient Truth about Change Management. Why it isn't working and what to do about it. *McKinsey Quarterly*. Retrieved from <http://www.stybelpeabody.com/pdf/mckinseychangemanagementinconvenienttruth.pdf>.
- Kezar, A., & Eckel, P. (2008). Advancing diversity agendas on campus: Examining transactional and transformational presidential leadership styles. *International Journal of Leadership in Education*, 11(4), 379-405.
- Kinnie, N., Hutchinson, S., Purcell, J., Rayton, B., & Swart, J. (2005). Satisfaction with HR practices and commitment to the organisation: why one size does not fit all. *Human Resource Management Journal*, 15(4), 9–29.
- Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of Management Review* 21(4), 1055–1080.
- Kotter, J. (1995). Leading Change: Why Transformation Efforts Fail. *Harvard Business Review* 73(4), 59-67.
- Kotter, J. (2012). Accelerate! *Harvard Business Review*, 90(11), 45–58.
- Kotter, J., & Schlesinger, L. (2008). Choosing strategies for change. *Harvard Business Review* 86(7), 106-114.
- Kouzes, J., & Posner, B. (2007). *The leadership challenge*. (4rd ed.). San Francisco: Wiley.
- Kumar, B. P. & Giri, V. N. (2009). Effect of age and experience on job satisfaction and organizational commitment. *ICFAI Journal of Organizational Behavior*, 8 (1), 28-36.
- Kyootai, L., Sharif, M., Scandura, T., & Kim, J. (2017). Procedural justice as a moderator of the relationship between organizational change intensity and commitment to organizational change. *Journal of Organizational Change Management*, 30(4), 501-524.
- Lee, C., Liu, J., Rousseau, D., Hui, C., & Chen, Z. (2011). Inducements, contributions, and fulfillment in new employee psychological contracts. *Human Resource Management*, 50(2), 201-226.
- Leitch, C., McMullan, C., & Harrison, R. (2013). The Development of Entrepreneurial Leadership: The Role of Human, Social and Institutional Capital. *British Journal of Management*, 24(3), 347–366.
- Leitch, C., & Volery, T. (2017). Entrepreneurial leadership: Insights and directions. *International Small Business Journal*, 35(2), 147-156.
- Lewin, K. (1947). Frontiers in Group Dynamics. Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, 1(1), 5-41.
- LinkedIn (2018). These 3 Industries Have the Highest Talent Turnover Rates. Retrieved from <https://business.linkedin.com/talent-solutions/blog/trends-and-research/2018/the-3-industries-with-the-highest-turnover-rates>.
- Liu, Y., & Perrewé, P. (2005). Another look at the role of emotion in the organizational change: A process model. *Human Resource Management Review*, 15(4), 263-280.
- Lorenzi, N. M., & Riley, R. T. (2000). Managing Change: An Overview. *Journal of the American Medical Informatics Association*, 7(2), 116–124.
- Machin, M. A., Fogarty, G. J. & Bannon, S. F. (2009). Predicting Employees' Commitment to and Support for Organizational Change. *Journal of Organizational Psychology*, 2(1), 10-18.



- Magano, K., & Thomas, A. (2017). Organisational change and the psychological contract at a pharmaceutical company. *SA Journal of Human Resource Management*, 15(1), 01-10.
- Mangundjaya, W. (2015). People or trust in building commitment to change. *The Journal of Developing Areas*, 49(5), 67-78.
- Mangundjaya, W. (2014). Psychological empowerment and organizational task environment in commitment to change. *International Journal of Business and Management*, 2(2), 119-126.
- McCall, M., & Hollenbeck, G. (2002). *Developing global executives: The lessons of international experience*. Boston, MA: Harvard Business School Publishing.
- Meyer, J., & Hamilton, L. (2013). Commitment to organizational change: Theory, research, principles, and practice. In S. Oreg, & A. Michel (Eds.), *The psychology of organizational change: Viewing change from the employee's perspective*: 43-64. New York: Cambridge University Press.
- Meyer, J. P., Srinivas, E. S., Lal, J. B. & Topolnytsky, L. (2007). Employee Commitment and Support for an Organizational Change: Test of the Three-Component Model in Two Cultures. *Journal of Occupational and Organizational Psychology*, 80(2), 185-211.
- Michaelis, B., Stegmaier, R., & Sonntag, K. (2009). Affective Commitment to Change and Innovation Implementation Behavior: The Role of Charismatic Leadership and Employees' Trust in Top Management. *Journal of Change Management*, (9)4, 399–417.
- Michaelis, B., Stegmaier, R., & Sonntag, K. (2010). Shedding light on followers' innovation implementation behavior: The role of transformational leadership, commitment to change, and climate for initiative. *Journal of Managerial Psychology*, 25(4), 408-429.
- Michel, A., Stegmaier, R., & Sonntag, K. (2010). I scratch your back – you scratch mine. Do procedural justice and organizational identification matter for employees' cooperation during change? *Journal of Change Management*, 10(1), 41-59.
- Mirvis, P. H. (1985). Negotiations after the sale: the roots and ramifications of conflict in an acquisition. *Journal of Occupational Behaviour*, 6(1),115–136.
- Morarr, R., Arman, H., & Mousa, S. (2017). The Fourth Industrial Revolution (Industry 4.0): A Social Innovation Perspective. *Technology Innovation Management Review*, 7(11), 12-20.
- Nemanich, L. A., & Keller, R. T. (2007). Transformational leadership in an acquisition: A field study of employees. *Leadership Quarterly*, 18(1), 49-68.
- Neves, P. (2009). Readiness for change: Contributions for employee's level of individual change and turnover intentions. *Journal of Change Management Employee's Level of Individual Change and Turnover Intentions*, 9(2), 215–231.
- Newman, A., Thanacoody, R., & Hui, W. (2011). The impact of employee perceptions of training on organizational commitment and turnover intentions :a study of multinationals in the Chinese service sector. *The International Journal of Human Resource Management*, 22(8), 1765-1787.
- Newstrom, J. W. (2007). *Organizational Behaviour-Human Behaviour at work* (12th ed). New York: McGraw Hill International Edition

- Nunnally, J. C. & Bernstein, I. (1994). *Psychometric Theory* (3<sup>rd</sup> ed.) New York: McGraw Hill.
- Oreg, S. (2003). Resistance to change: developing an individual differences Measure. *Journal of Applied Psychology*, 88(4), 680-693.
- Oreg, S., & Berson, Y. (2011). Leadership and employees' reactions to change: The role of leaders' personal attributes and transformational leadership style. *Personnel Psychology*, 64(3), 627–659.
- Ouedraogo, N. & Ouakouak, M. L. (2018). Impacts of personal trust, communication, and affective commitment on change success. *Journal of Organizational Change Management*, 31(3), 676-696.
- Parish, J., Cadwallader, S., & Bush, P. (2008). Want to, need to, ought to: employee commitment to organizational change. *Journal of Organizational Change Management*, 21(1), 32-52.
- Pate, J., Martin, G., & Staines, H. (2000). Exploring the relationship between psychological contracts and organizational change: a process model and case study evidence. *Strategic Change*, 9(8), 481-493.
- Pettigrew, A. M., Woodman, R. W., & Cameron, K. S. (2001). Studying organizational change and development: Challenges for future research. *Academy of Management Journal*, 44(4), 697-713.
- Pieterse, N.A., Van Knippenberg, D., Schippers, M. & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: the moderating role of empowerment. *Journal of Organizational Behavior*, 31(4), 609-23.
- Pluta, A., & Rudawska, A. (2016). Holistic approach to human resources and organizational acceleration. *Journal of Organizational Change Management*, 29(2), 293-309.
- Podsakoff, P.M., MacKenzie, S.B. & Bommer, W. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management*, 22(2), 259-98.
- Rafferty, A., Jimmieson, N., & Armenakis, A. (2013). Change readiness: A multilevel review. *Journal of Management*, 39(1), 110-135.
- Ramdhani, A., Ramdhani, M. A., & Ainisyifa, H. (2017). Conceptual Framework of Corporate Culture Influenced on Employees Commitment to Organization. *International Business Management*, 11(3), 826-803.
- Rana, S., & Singh, V. (2016). Organizational Commitment and Empowerment-An Empirical Study of IT industry in NCR. *European Academic Research*, 4(3), 2522-2542.
- Renko, M., Tarabishy, A. E., Carsrud, A. L., & Brännback, M. (2015). Understanding and Measuring Entrepreneurial Leadership Style. *Journal of Small Business Management*, 53(1), 54–74.
- Robbins, S., & Judge, T. (2017). *Organizational behavior* (17<sup>th</sup> ed.). Boston: Pearson.
- Robinson, O., & Griffiths, A. (2005). Coping With the Stress of Transformational Change in a Government Department. *The Journal of Applied Behavioral Science*, 41(2), 204-221.
- Rubin, R. S., Munz, D. C., & Bommer, W. H. (2005). Leading from within: the effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal*, 48(5), 845–858.

- Salahuddin, M. (2010). Generational differences impact on leadership style and organizational success. *Journal of Diversity Management*, 5(2), 1-6.
- Santhidran, S., Chandran, V. R., & Junbo, B. (2013). Enabling organizational change – leadership, commitment to change and the mediating role of change readiness. *Journal of Business Economics and Management*, 14(2), 348-363.
- Santhidran, S., Chandran, V., & Borromeo, J. (2013). Enabling organizational change – leadership, commitment to change and the mediating role of change readiness. *Journal of Business Economics and Management*, 14(2), 348-363.
- Schein, E. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco: Jossey-Bass.
- Schein, E. (2017). *Organizational Culture and Leadership* (5th ed.). San Francisco: Jossey-Bass.
- Schwab, K. (2016). *The Fourth Industrial Revolution*. Geneva: World Economic Forum.
- Shamir, B., House, R., & Arthur, M. (1993). The Motivational Effects of Charismatic Leadership: A Self-Concept Based Theory. *Organization Science*, 4(4), 577-594.
- Shin, J., Taylor, M. S. & Seo, M. (2012). Resources for Change: The Relationships of Organizational Inducements and Psychological Resilience to Employees' Attitudes and Behaviors toward Organizational Change. *Academy of Management Journal*, 55(3), 727-748.
- Shum, P., Bove, L., & Auh, S. (2008). Employees' affective commitment to change: The key to successful CRM implementation. *European Journal of Marketing*, 42(11/12), 1346-1371.
- Solinger, O. N., Van Olffen, W., & Roe, R. A. (2008). Beyond the Three-Component Model of Organizational Commitment. *Journal of Applied Psychology*, 93(1), 70–83.
- Spreizer, G. (2007) Giving peace a chance: Organizational leadership, empowerment, and peace. *Journal of Organizational Behavior*, 28(8), 1077-1095.
- Spreitzer, G., & Mishra, A. (2002). To stay or to go: Voluntary survivor turnover following an organizational downsizing. *Journal of Organizational Behavior*, 23(6), 707–729.
- Straatmann, T., Nolte, J.K. & Seggewiss, B. J. (2018). Psychological processes linking organizational commitment and change-supportive intentions. *Personnel Review*, 47(2), 403-424.
- Strauss, K., Griffin, M., & Alannah, E. (2009). Proactivity Directed Toward the Team and Organization: The Role of Leadership, Commitment and Role-breadth Self-efficacy. *British Journal of Management*, 20(3), 279–291.
- Suarthana, J., & Riana, G. (2016). The Effect of Psychological Contract Breach and Workload on Intention to Leave: Mediating Role of Job Stress. *Procedia - Social and Behavioral Sciences*, 219(31), 717-723.
- Tasler, N. (2017). Stop Using the Excuse "Organizational Change Is Hard". *Harvard business review*, 2-5. Retrieved from <https://hbr.org/2017/07/stop-using-the-excuse-organizational-change-is-hard>.
- Thakur, R., & Srivastava, S. (2018). From Resistance to Readiness. Role of Mediating Variables. *Journal or Organizational Change Management*, 31(1), 230-247.
- Tichy, N., & Denevana, M. (1990). *The Transformational Leader*. New York: John Wiley.
- Vakola, M. (2013). Multilevel readiness to organizational change: A conceptual approach. *Journal of Change Management*, 13(1), 96-109.

- Vakola, M. (2014). What's in there for me? Individual readiness to change and the perceived impact of organizational change. *Leadership and Organization Development Journal*, 35(3), 195–209.
- Van den Heuvel, S., Schalk, R., Freese, C., & Timmerman, V. (2016). What's in it for me? A managerial perspective on the influence of the psychological contract on attitude towards change. *Journal of Organizational Change Management*, 29(2), 263-292.
- Van der Smissen, S., Schalk, R., & Freese, C. (2013). Organizational change and the psychological contract: How change influences the perceived fulfillment of obligations. *Journal of Organizational Change Management*, 26(6), 1071-1090.
- Volery, T., Müller, S. & Von Siemens, B. (2015). Entrepreneurs' ambidexterity: A study of entrepreneurs' behaviours and competencies in growth-oriented SMEs. *International Small Business Journal* 33(2): 109–129.
- Weiner, B. (2009). A theory of organizational readiness for change. *Implementation Science*, 19(4), 67-75.
- Yang, H., Sanders, K., & Bumatay, C. (2012). Linking perceptions of training with organizational commitment: the moderating role of self-construals. *European Journal of Work and Organizational Psychology*, 21(1), 125-149.
- Yoon, D. (2017). What We Need to Prepare for the Fourth Industrial Revolution. *Healthcare Informatics Research*, 23(2), 75-76.
- Yukl, G. (2012). Effective Leadership Behavior: What We Know and What Questions Need More Attention. *Academy of Management Perspectives*, 26(4), 66-85.
- Yukl, G. (2010). *Leadership in Organizations* (7th ed.). New York: Pearson.
- Zammuto, R., & O'Connor, E. (1992). Gaining advanced manufacturing technologies' benefits: The roles of organization design and culture. *Academy of Management Review*, 17(4), 701-728.
- Ziman, R.L (2013). Women in the Workforce: An In-Depth Analysis of Gender Roles and Compensation Inequity in the Modern Workplace. *Honors Theses and Capstones*. 157. Retrieved from: <https://scholars.unh.edu/honors>

## APPENDIX A – QUESTIONNAIRE AND SCALES

### **The effect of Transformational and Entrepreneurial Leadership in Employee's Affective Commitment to change. A study in the Information Technology Industry.**

Q1 My name is Nicole Loureiro, I am a student at ISCTE-IUL Business School in Lisbon. I am inviting you to take part in my thesis Research project for my Master's in Business Management. How important are leadership styles to you and the way leaders behave when facing organizational change? I intend to understand this in the Information Technology Industry and how it affects the commitment to change.

So, if you work in the Information Technology Industry (independently of your role or company you work for) and went through any kind of change situation (process changes, organizational changes, department changes etc.), you are eligible for this study. I would like to invite you to participate in this survey that will take only 10 minutes.

All surveys will be treated with absolute **confidentiality** and **anonymity**. The data gathered in this survey will only be used for my thesis.

Please answer the questions truthfully and to the best of your understanding – all answers will be invaluable to this study.

If you have any questions, please do not hesitate to contact me [REDACTED] or my thesis coordinator: Professor Nelson Ramalho, from ISCTE, Lisbon through his email address [REDACTED]

Thank you very much for your time and collaboration!

#### **Eligibility Questions:**

Q2 Do you work in the Information Technology Industry?

- ☐ Yes (1)
- ☐ No (2)

-----

Q3 How much would you say your organization is continuously changing? Please consider changes such as the way people work, processes, structural changes, targets etc).

- ☐ Zero changes (1)
- ☐ Minor changes (2)
- ☐ Moderate changes (3)
- ☐ Major changes (4)
- ☐ Key critical changes (5)

### Evaluating Impact

Q4 Think about the intensity and rhythm of changes in your job. How would you rate the changes in your daily life (both professionally and personally)?

- ☐ No impact (1)
- ☐ Little impact (2)
- ☐ Medium impact (3)
- ☐ High impact (4)
- ☐ Very high impact (5)

### Change Leadership Items:

Q5 Thinking of a recent change situation you went through or you are going through; please evaluate the following statements:

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
My leader developed a clear vision for what was going to be achieved by our work unit. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader made it clear up front to those in our unit why the change was necessary. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader made a case for the urgency of this change prior to implementation. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader built a broad coalition up front to support the change. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader empowered people to implement the change (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader carefully monitored and communicated progress of the change implementation. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader gave individual attention to those who had trouble with the change implementation. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Affective Commitment to Change Items

Q6 Thinking of a recent change situation you went through or you are going through; please tell us what you think:

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I believe in the value of that change. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This change is a good strategy for this organization. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that management is making a mistake by introducing this change. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This change serves an important purpose. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Things would be better without this change. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This change is not necessary. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Entrepreneurial Leadership Items

Q9 Think of your direct manager (or team leader). How well do the following statements describe him/her? (If you have more than one direct manager, please pick the most relevant in your daily work).

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
My leader often comes up with radical improvement ideas for the products/services we are selling/offering. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader often comes up with ideas of completely new products/services that we could sell/offer (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader takes risks (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader has creative solutions to problems (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader demonstrates passion for his/her work (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader has a vision of the future of our business (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader challenges and pushes me to act in a more innovative way (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader wants me to challenge the current ways we do business (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



### Transformational Leadership Items

Q8 Think of your direct manager (or team leader). How well do the following statements describe him/her?  
(If you have more than one direct manager, please pick the most relevant in your daily work).

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
My leader is always seeking new opportunities for the unit/ department/organization. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader paints an interesting picture of the future for our work group. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader leads by “doing” rather than simply by “telling.” (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader fosters collaboration among work groups. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader shows subordinates that he/she expects a lot from them. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader acts without considering individuals’ feelings. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader provides individuals with new ways of looking at things which are puzzling to them. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader has a clear understanding of where we are going. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader provides a good model to follow. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader encourages employees to be “team players”. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader insists on only the best performance from us. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader shows respect for individual’s feelings. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader has ideas that have forced individuals to rethink some of their own ideas. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My leader inspires others with his/her plans for the future. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader leads by example. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader gets the group to work together toward the same goal. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader does not settle for second best from subordinates. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader behaves in a manner that is thoughtful of individuals' personal needs. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader stimulates individuals to think about old problems in new ways. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader is able to get others to commit to his/her dream(s) for the future. (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader develops a team attitude and spirit among his/her employees. (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My leader treats people without considering their personal feelings. (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Just for characterization purposes of the sample as a whole, please answer the following sociodemographic questions. This will take less than a minute!

Q10) Gender

- ☐ Female (1)
- ☐ Male (2)

Q11 Age?

\_\_\_\_\_

Q12 How many employees work in your company?

- ☐ Up to 9 (1)
- ☐ 10 to 49 (2)
- ☐ 50 to 249 (3)
- ☐ 250 to 500 (4)
- ☐ More than 500 (5)

Q13 How many People work in your team/ work unit?

- ☐ Up to 9 (1)
  - ☐ 10 to 49 (2)
  - ☐ 50 to 249 (3)
  - ☐ 250 to 500 (4)
  - ☐ More than 500 (5)
- 

Q14 For how long are you working with your company?

- ☐ Less than 1 year (1)
  - ☐ 1 to 3 years (2)
  - ☐ 4 to 6 years (3)
  - ☐ 7 to 9 years (4)
  - ☐ 10 or more years (5)
- 

Q15 How long are you working with your current direct manager:

- ☐ Less than 1 year (1)
  - ☐ 1 to 3 years (2)
  - ☐ 4 to 6 years (3)
  - ☐ 7 to 9 years (4)
  - ☐ 10 or more years (5)
- 

**Thank you for your participation. Your contribute was invaluable.**

## **Dimensions and items of Transformational Leadership**

Just for clarity for Researchers here the items for transformational Leadership pertaining to each dimension:

### **Articulating a Vision**

- 1) Is always seeking new opportunities for the unit/ department/organization.
- 2) Paints an interesting picture of the future for our group.
- 8) Has a clear understanding of where we are going.
- 14) Inspires others with his/her plans for the future.
- 20) Is able to get others committed to his/her dream of the future.

### **Providing an Appropriate Model**

- 3) Leads by “doing” rather than simply by “telling.”
- 9) Provides a good model to follow.
- 15) Leads by example.

### **Fostering the Acceptance of Group Goals**

- 4) Fosters collaboration among work groups.
- 10) Encourages employees to be “team players.”
- 16) Gets the group to work together for the same goal.
- 21) Develops a team attitude and spirit among his/her employees.

### **High Performance Expectations**

- 5) Shows us that he/she expects a lot from us.
- 11) Insists on only the best performance.
- 17) Will not settle for second best.

### **Individualized Support**

- 6) Acts without considering my feelings. **(R)**
- 12) Shows respect for my personal feelings.
- 18) Behaves in a manner that is thoughtful of my personal needs.
- 22) Treats me without considering my personal feelings. **(R)**

### **Intellectual Stimulation**

- 7) Has provided me with new ways of looking at things which used to be a puzzle for me.
- 13) Has ideas that have forced me to rethink some of my own ideas I have never questioned before.
- 19) Has stimulated me to think about old problems in new ways.

**APPENDIX B – OUTPUT TABLE OF STATISTICAL TESTING**

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,222 <sup>a</sup>	,049	,013	,72861	,049	1,373	6	159	,229
2	,488 <sup>b</sup>	,238	,204	,65446	,188	39,073	1	158	,000

a. Predictors: (Constant), How long are you working with your current direct manager., How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

b. Predictors: (Constant), How long are you working with your current direct manager., How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, TransfLeaderGlobal

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,374	6	,729	1,373	,229 <sup>b</sup>
	Residual	84,409	159	,531		
	Total	88,784	165			
2	Regression	21,110	7	3,016	7,041	,000 <sup>c</sup>
	Residual	67,674	158	,428		
	Total	88,784	165			

a. Dependent Variable: ACC

b. Predictors: (Constant), How long are you working with your current direct manager., How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

c. Predictors: (Constant), How long are you working with your current direct manager., How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, TransfLeaderGlobal

		Coefficients <sup>a</sup>					Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients				
Model		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	3,123	,496		6,296	,000		
	Gender	,279	,117	,187	2,387	,018	,973	1,027
	Age	,006	,010	,052	,584	,560	,757	1,322
	Org. size	,021	,058	,030	,359	,720	,871	1,148
	Unit size	-,056	,092	-,049	-,605	,546	,922	1,085
	Tenure	-,019	,057	-,032	-,333	,740	,654	1,529
	Manager-employee tenure	,059	,074	,071	,796	,427	,757	1,320
2	(Constant)	1,731	,498		3,474	,001		
	Gender	,257	,105	,172	2,438	,016	,972	1,029
	Age	,005	,009	,039	,491	,624	,756	1,323
	Org. size	-,003	,052	-,004	-,051	,959	,867	1,154
	Unit size	-,030	,082	-,026	-,362	,718	,919	1,088
	Tenure	-,038	,051	-,064	-,739	,461	,652	1,535
	Manager-employee tenure	,059	,067	,071	,884	,378	,757	1,320
	Transf. Leader Global	,448	,072	,438	6,251	,000	,981	1,020

a. Dependent Variable: ACC

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,222 <sup>a</sup>	,049	,013	,72861	,049	1,373	6	159	,229
2	,429 <sup>b</sup>	,184	,148	,67720	,135	26,061	1	158	,000

a. Predictors: (Constant), How long are you working with your current direct manager, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

b. Predictors: (Constant), How long are you working with your current direct manager, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, EntrepLeaders

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,374	6	,729	1,373	,229 <sup>b</sup>
	Residual	84,409	159	,531		
	Total	88,784	165			
2	Regression	16,326	7	2,332	5,086	,000 <sup>c</sup>
	Residual	72,458	158	,459		
	Total	88,784	165			

a. Dependent Variable: ACC

b. Predictors: (Constant), How long are you working with your current direct manager, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

c. Predictors: (Constant), How long are you working with your current direct manager, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, EntrepLeaders

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,123	,496		6,296	,000		
	Gender	,279	,117	,187	2,387	,018	,973	1,027
	Age	,006	,010	,052	,584	,560	,757	1,322
	Org. size	,021	,058	,030	,359	,720	,871	1,148
	Unit size	-,056	,092	-,049	-,605	,546	,922	1,085
	Tenure	-,019	,057	-,032	-,333	,740	,654	1,529
	Manager-employee tenure	,059	,074	,071	,796	,427	,757	1,320
2	(Constant)	2,194	,496		4,426	,000		
	Gender	,207	,110	,139	1,886	,061	,957	1,045
	Age	,006	,010	,051	,619	,537	,757	1,322
	Org. size	-,009	,054	-,012	-,157	,876	,862	1,161
	Unit size	-,031	,085	-,027	-,360	,719	,919	1,089
	Tenure	-,038	,053	-,064	-,718	,474	,651	1,537
	Manager-employee tenure	,052	,069	,062	,753	,453	,757	1,321
	EntrepLeaders	,331	,065	,375	5,105	,000	,956	1,047

a. Dependent Variable: ACC



### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	,222 <sup>a</sup>	,049	,013	,72861	,049	1,373	6	159	,229
2	,478 <sup>b</sup>	,229	,194	,65841	,179	36,714	1	158	,000

a. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

b. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,374	6	,729	1,373	,229 <sup>b</sup>
	Residual	84,409	159	,531		
	Total	88,784	165			
2	Regression	20,290	7	2,899	6,686	,000 <sup>c</sup>
	Residual	68,494	158	,434		
	Total	88,784	165			

a. Dependent Variable: ACC

b. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

c. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,123	,496		6,296	,000		
	Gender	,279	,117	,187	2,387	,018	,973	1,027
	Age	,006	,010	,052	,584	,560	,757	1,322
	Organizational size (employees)	,021	,058	,030	,359	,720	,871	1,148
	Unit/Team size	-,056	,092	-,049	-,605	,546	,922	1,085
	Organizational Tenure	-,019	,057	-,032	-,333	,740	,654	1,529
	Manager-employee Tenure	,059	,074	,071	,796	,427	,757	1,320
2	Gender	2,041	,483		4,230	,000		
	Age	,259	,106	,173	2,446	,016	,972	1,028
	Organizational size (employees)	,005	,009	,039	,485	,629	,756	1,323
	Unit/Team size	,004	,053	,006	,074	,941	,869	1,151
	Organizational Tenure	-,032	,083	-,028	-,386	,700	,920	1,087
	Manager-employee Tenure	-,036	,051	-,061	-,704	,483	,652	1,534
	Gender	,071	,067	,085	1,063	,289	,757	1,322
	CBL	,361	,060	,426	6,059	,000	,986	1,014

a. Dependent Variable: ACC

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	,222 <sup>a</sup>	,049	,013	,72861	,049	1,373	6	159	,229
2	,509 <sup>b</sup>	,259	,222	,64713	,210	22,280	2	157	,000
3	,520 <sup>c</sup>	,270	,228	,64452	,011	2,274	1	156	,134

a. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

b. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, TransfLeaderGlobal

c. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, TransfLeaderGlobal, TLGlobal\_x\_CBL

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,374	6	,729	1,373	,229 <sup>b</sup>
	Residual	84,409	159	,531		
	Total	88,784	165			
2	Regression	23,035	8	2,879	6,876	,000 <sup>c</sup>
	Residual	65,748	157	,419		
	Total	88,784	165			
3	Regression	23,980	9	2,664	6,414	,000 <sup>d</sup>
	Residual	64,804	156	,415		
	Total	88,784	165			

a. Dependent Variable: ACC

b. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Just for characterization purposes of the sample as a whole, please answer the following sociodemographic questions. This will take less than a minute! Gender, How many employees work in your company?, Age?, For how long are you working with your company?

- c. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Just for characterization purposes of the sample as a whole, please answer the following sociodemographic questions. This will take less than a minute! Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, TransfLeaderGlobal
- d. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Just for characterization purposes of the sample as a whole, please answer the following sociodemographic questions. This will take less than a minute! Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, TransfLeaderGlobal, TLGlobal\_x\_CBL

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,123	,496		6,296	,000		
	Gender	,279	,117	,187	2,387	,018	,973	1,027
	Age	,006	,010	,052	,584	,560	,757	1,322
	Organizational size (employees)	,021	,058	,030	,359	,720	,871	1,148
	Unit/Team size	-,056	,092	-,049	-,605	,546	,922	1,085
	Organizational Tenure	-,019	,057	-,032	-,333	,740	,654	1,529
	Manager-employee Tenure	,059	,074	,071	,796	,427	,757	1,320
2	(Constant)	1,698	,493		3,446	,001		
	Gender	,255	,104	,170	2,447	,016	,972	1,029
	Age	,004	,009	,037	,472	,638	,756	1,323
	Organizational size (employees)	-,003	,052	-,004	-,049	,961	,867	1,154
	Unit/Team size	-,027	,082	-,024	-,336	,737	,919	1,088
	Organizational Tenure	-,039	,050	-,067	-,783	,435	,651	1,535
	Manager-employee Tenure	,065	,066	,078	,992	,323	,756	1,323
	TransfLeaderGlobal	,275	,107	,269	2,560	,011	,427	2,341
	CBL	,190	,089	,225	2,144	,034	,429	2,329

3	(Constant)	1,554	,500		3,106	,002		
	Gender	,247	,104	,165	2,376	,019	,970	1,031
	Age	,003	,009	,027	,337	,736	,750	1,333
	Organizational size (employees)	,001	,052	,001	,019	,985	,865	1,156
	Unit/Team size	-,043	,082	-,038	-,529	,598	,904	1,106
	Organizational Tenure	-,045	,050	-,076	-,899	,370	,648	1,544
	Manager-employee Tenure	,073	,066	,088	1,115	,267	,751	1,332
	TransfLeaderGlobal	,322	,112	,315	2,891	,004	,393	2,543
	CBL	,192	,088	,226	2,166	,032	,429	2,329
	TLGlobal_x_CBL	,063	,042	,115	1,508	,134	,804	1,243

a. Dependent Variable: ACC

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,222 <sup>a</sup>	,049	,013	,72861	,049	1,373	6	159	,229
2	,487 <sup>b</sup>	,237	,199	,65667	,188	19,372	2	157	,000
3	,487 <sup>c</sup>	,238	,194	,65871	,000	,029	1	156	,864

a. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

b. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, EntrepLeaders

c. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, EntrepLeaders, EL\_x\_CBL

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,374	6	,729	1,373	,229 <sup>b</sup>
	Residual	84,409	159	,531		
	Total	88,784	165			
2	Regression	21,082	8	2,635	6,111	,000 <sup>c</sup>
	Residual	67,702	157	,431		
	Total	88,784	165			
3	Regression	21,094	9	2,344	5,402	,000 <sup>d</sup>
	Residual	67,689	156	,434		
	Total	88,784	165			

a. Dependent Variable: ACC

b. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?

c. Predictors: (Constant), How long are you working with your current direct

manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, EntrepLeaders  
d. Predictors: (Constant), How long are you working with your current direct manager:, How many People work in your team/ work unit?, Gender, How many employees work in your company?, Age?, For how long are you working with your company?, CBL, EntrepLeaders, EL\_x\_CBL

		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3,123	,496		6,296	,000		
	Gender	,279	,117	,187	2,387	,018	,973	1,027
	Age	,006	,010	,052	,584	,560	,757	1,322
	Organizational size (employees)	,021	,058	,030	,359	,720	,871	1,148
	Unit/Team size	-,056	,092	-,049	-,605	,546	,922	1,085
	Organizational Tenure	-,019	,057	-,032	-,333	,740	,654	1,529
	Manager-employee Tenure	,059	,074	,071	,796	,427	,757	1,320
2	(Constant)	1,945	,487		3,997	,000		
	Gender	,237	,107	,159	2,220	,028	,950	1,052
	Age	,005	,009	,042	,519	,605	,756	1,323
	Organizational size (employees)	-,003	,053	-,004	-,057	,954	,861	1,162
	Unit/Team size	-,028	,083	-,025	-,341	,733	,919	1,089
	Organizational Tenure	-,039	,051	-,066	-,765	,445	,651	1,537
	Manager-employee Tenure	,066	,067	,079	,984	,326	,754	1,326
	EntrepLeaders	,121	,089	,137	1,355	,177	,475	2,106
	CBL	,280	,084	,331	3,321	,001	,490	2,041
3	(Constant)	1,932	,494		3,914	,000		
	Gender	,237	,107	,159	2,210	,029	,950	1,053

Age	,005	,010	,041	,503	,616	,751	1,331
Organizational size (employees)	-,003	,053	-,004	-,053	,958	,860	1,162
Unit/Team size	-,030	,084	-,027	-,360	,719	,902	1,109
Organizational Tenure	-,040	,051	-,067	-,770	,442	,649	1,541
Manager-employee Tenure	,066	,067	,080	,988	,325	,753	1,329
EntrepLeaders	,126	,093	,142	1,343	,181	,436	2,294
CBL	,280	,085	,330	3,305	,001	,490	2,042
EL_x_CBL	,007	,044	,013	,171	,864	,839	1,192

a. Dependent Variable: ACC