



Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen

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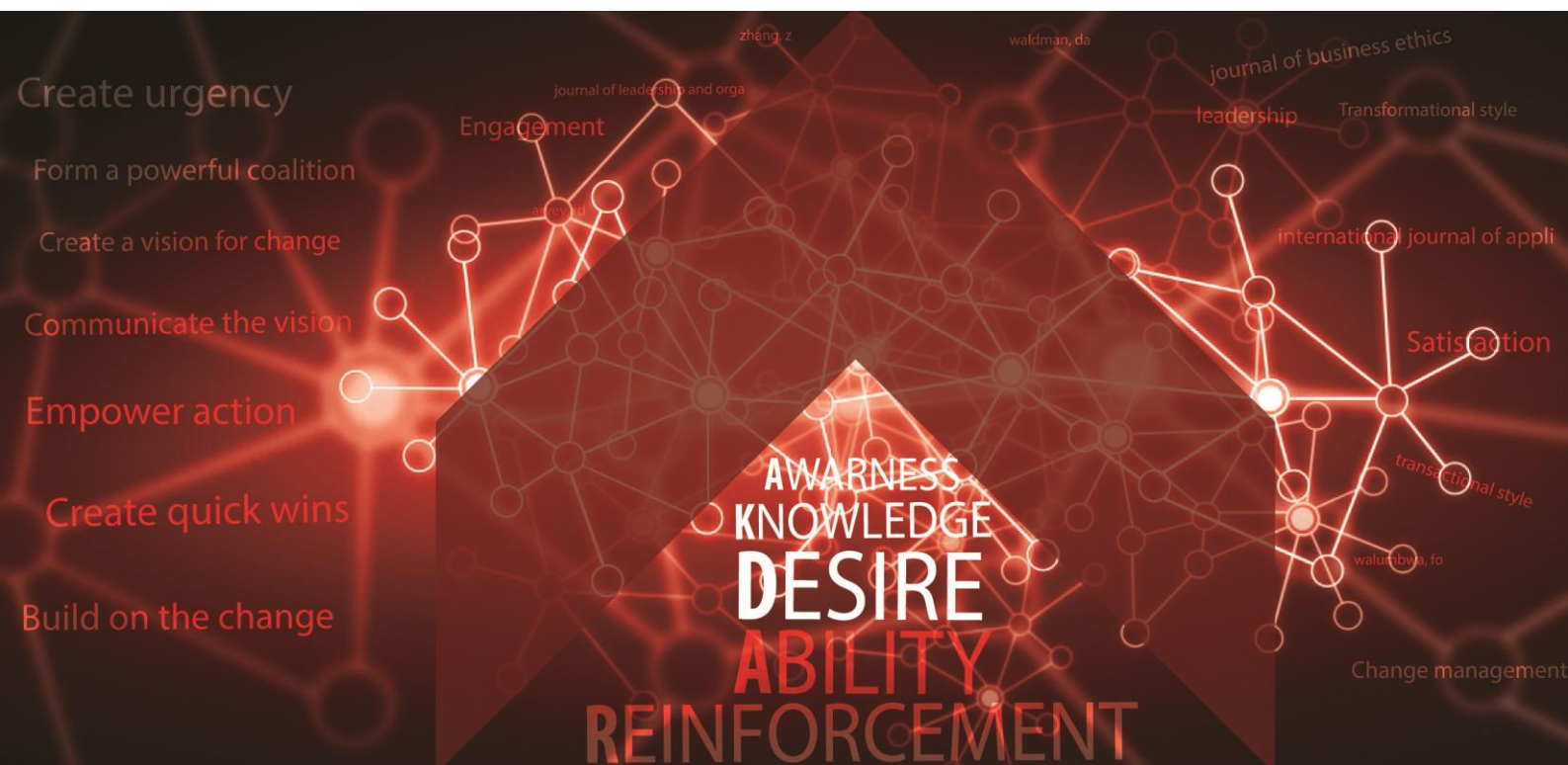


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- Bibliometric Review
- Relationship With ADKAR and Kotter Change Models

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Transactional and Transformational Leadership Styles:

- **Bibliometric Review**
- **Relationship With ADKAR and Kotter Change Models**

Doctoral thesis

Supervised by Dr. Ana Beatriz Hernandez Lara

Facultat d'Economia i Empresa



**UNIVERSITAT
ROVIRA i VIRGILI**

Tarragona 2019

Statement of Supervision

I STATE that the present study, entitled “**Transactional and Transformational Leadership styles, bibliometric review and relationship with Kotter and ADKAR change models**”, presented by **Ali Mohammad Mouazen** for the award of the degree of Doctor, has been carried out under my supervision at the Department of Business Management of this university.

Doctoral Thesis Supervisor/s

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Dedication

To my departed brother, Abbas Mouazen, who left us like a thunderstorm

I still remember how proud you were when I decided to peruse my Ph.D. studies.

I still remember that, at that night, when you left us, you were excited to visit Spain to enjoy some days with me

I am sorry because we could not make it together, but deep inside I know that you have been watching me throughout this journey.

Wherever you are, I know that you are happy; but you must know that, I will be missing you, until we meet again...

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For the person who stood next to me during my ups and falls, handled my stress and relieved it with her smile, care and love. My wife “Rawand”, the life with you is much beautiful, with your love and support, I am ready to challenge the world.

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List of Abbreviations

Term	Abbreviation
Anchoring Approaches in the Culture	AC
Active Management by Exception	MBEA
Attributed Idealized Influence	IIA
Average Variance extracted	AVE
Behavioral Idealized Influence	IIB
Cronbach's Alpha	CA
Confidence Interval	CI
Composite Reliability	CR
Create Short-term Wins	CSTW
Create a Vision and Strategy	VC
Communicate the Vision	CV
Contingent Reward	CR
Dependent Variable	DV
Goodness of Fit	GoF
Individual Consideration	IC
Inspirational Motivation	IM
Intellectual Stimulation	IS
Independent Variable	IV
Kotter Change Model	KCM
Mediating Variables	ME
Moderating Variables	MO
Powerful Coalition	PC
Partial Least Square	PLS
Passive Management by Exceptions	MBEP
Remove Obstacles	RO
Sense of Urgency	SU
Significant Level	Sig.
Transactional Leadership Style	TRLS
Transformational Leadership Style	TFLS

Abstract

Leadership and leadership styles as well as strategic change management have gained scholars attention since decades. Many attempts were held by several scholars to link leadership and change, yet, up till now the research on this topic, especially when studying leadership styles and change management models remains limited, among many topics related to the leadership research paradigm.

Firstly, this thesis provides insightful information about transactional and transformational leadership styles. Providing a bibliometric review of the articles that entailed transactional and transformational leadership styles topics published in the Web of Science (WOS) and Scopus platforms since January 2007 until 2018 and covering more than 970 publications. This thesis discussed how this topic has evolved and where this topic raises a greater interest, among which academics, countries and journals, the most relevant affiliations and their collaborations, in addition to the discussed hypotheses, dependent and independent variables, mediating and moderating variables. This way, we will aim at contributing to leadership research by directing scholars and researchers towards identifying where to publish their articles, with whom they can contribute or refer in researching leadership. The thesis can also serve as a reference to identify the countries and affiliations contributing to the leadership research domain. Most importantly, this research identifies the less researched topics and research gaps that can be addressed in the future.

Secondly, this thesis studies the relationship between the transactional and transformational leadership styles, and two contemporary change models (Kotter and ADKAR) to find the relationship between them, as well as to examine which model is more applicable to Lebanese small and medium enterprises (SMEs). For this, following a positivism approach, data were collected from 385 Lebanese employees working in

SMEs across Lebanese provinces, using MLQ, Kotter and ADKAR questionnaires. The findings conclude a strong significant positive relationship between transactional and transformational leadership styles and each of Kotter and ADKAR models. The results also indicated the applicability of both models in Lebanese SMEs with recommendations for change leaders to adapt their leading style with respect to each of the implementation stages in the indicated models. This research helps Lebanese organizations to sustain and improve their competitive positions in a competitive market place, by applying change, especially given the dynamism and complexity expected in the upcoming years of these organizations' specific and general environment.

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Chapter 1 Introduction

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1.1- Organizational Change

Organizations nowadays are facing global competition, vast technological development, political and socio-cultural uncertainty, and other environmental forces that create a need to continuously adapt and innovate (Cacioppe, 1998; Rebelo & Gomes, 2008; Gunasekaran, 2001; Rijal, 2010). Organizations' reaction to adequately face environmental changes is based on their ability to exploit their employees, managers and team capacities, by developing their human capital (Pasban & Nojede, 2016). The human capital should act in an adaptive way to achieve organizational goals by adapting and managing change (Huczynski, Buchanan, & Huczynski, 2013).

Strategic change management is the organized methodology in the transitioning of groups, teams, and individuals, from the overall state to the sought future state. It entails a roadway toward actualizing a pre-characterized model/system in an organization to enhance its overall performance (Harris & Beckhard, 1987). Organizations that aim at creating and sustaining a competitive advantage and seeking to survive, compete and develop in a local or global competitive environment, should always focus on enhancing their internal and external functionality, and continuously demand change (Jones & Jones, 2013).

Boston (2000) expressed that a managed change should be continuous to keep organizations moving towards a well stated and written new or modified visions, goals and objectives. In today's world, organizations environment is rapidly and quickly changing, thus organizations are confronting both internal and external forces that leave change unavoidable. It is additionally vital for the business entities to deal with the different needs and desires of their stakeholders (Hage, 1999). Changes in the marketplace, workforce demographics, social qualities, and political situations have

been embodied to effectively affect the organization's products, procedures and administration practices (Berger, Sikora, & Berger, 1994).

The organizations' specific and general environment in Middle East and Gulf areas in general, and Lebanon in specific, is subject to dramatic changes in the upcoming years. From the Middle-East and North Africa (MENA) perspective; Egypt, Kingdom of Saudi Arabia's (KSA) and United Arab of Emirates are the most developed economies in this area. The MENA area plays a vital location role in connecting Asia, Africa and Europe continents; it is also characterized by its richness in gas and oil resources. Although this area remains as untapped markets especially in e-commerce businesses, its growth is expected in the upcoming years (Schulz & Camp, 2018).

Egypt is a country in North Africa that is still recovering from the effects of the Arab Spring of 2011. Abdel Fattah el-Sisi – the Egypt President elected in 2014- promised Egyptians to put all his efforts towards having a better future, prosperity and stability. The President is working towards making the country an investment-focused economy by putting efforts on providing more employment opportunities to women and youth. For example, the government took many actions to improve the business climate by removing the embargo on many industrial sectors, supporting SME's, and facilitating access to country resources (Schulz & Camp, 2018).

Further East, in KSA and after naming the prince Mohammed bin Salman to lead the country; the Kingdom is experiencing its very own momentous change on a bigger scale. The young prince put his "Vision 2030" into action aiming at modernizing the society, decreasing dependence on oil and diversifying the economy (Schulz & Camp, 2018). For example, his vision targets tourism growth from 8 million tourist visits to 30 million annually, increase the private sector contribution to the economy by 20%, and increase non-oil exports by 34% (Schulz & Camp, 2018).

Dubai, in the United Arab of Emirates, already experienced a sharp growth on all sectors since the ruler Sheikh Mohammed bin Rashid Al Maktoum put his “vision 2021” into action is hosting Dubai Expo 2020. The new target of Dubai consists of putting more investments in manufacturing and tourism industries (IMF, 2018). In addition, computer engineering, telecommunication, computer sciences and information technology industries investments would increase benefiting from the presence of well-established Dubai Internet City and Dubai Media City (Schulz & Camp, 2018).

With regard to Lebanon, the country chosen to conduct this doctoral thesis, the Lebanese Ministry of Energy, Water and the Petroleum Administration have completed all the essential work and documentation to start the second round of gas and oil exploration in the Lebanese coast (Barrington, 2018). Previous seismic studies conducted by “Norwegian Petroleum Geo-Services”, and “U.S. Geological Survey” indicated after exploring 10% of Lebanese water territory, that almost 29 trillion cubic feet of gas and 650 million barrels of liquid oil were found to estimate between 40 and 70 billion US dollars (Habib, 2012).

With such promising development and to manage the country wealth, the Lebanese government approved in 2010 the “Offshore Petroleum Resources Law”, since such figures places Lebanon in the eighth place in the region and thirty’s rank worldwide as gas and oil producer according to CIA’s world fact book (CIA, 2019). With such estimations, if Lebanon achieve being an oil producing country, the effects on economic growth and gross domestic product (GDP) as well as the benefits for public finances will be expected to enhance during the upcoming twenty years. Public revenues and expenditures will increase due to the gas and oils profit shares and royalty fees (Dailystars, 2017).

From another perspective, the conflict in Lebanon's neighbor Syria, reached its final stage (Sly, 2018), and it is estimated that the cost of reconstruction will exceed 388 billion dollars (Özkizilcik, 2018). While Lebanese bankers and organizations set their plans to play a role in the booming construction opportunity, many world leading countries are seeking a role in the reconstruction process and believes that the Lebanon's location is attractive for logistics and transporting operations (Dziadosz, 2017). For example, China leased the Cascada mall to establish 400 companies that will play a role in the Syria reconstruction (Alieh, 2019).

Such scenarios will directly affect the private sector and the received investments in Lebanon, where almost 95% of companies are considered as SMEs (MOI, 1999). They play a major role in the Lebanese economy in terms of national wealth and growth and are also drivers for future economic growth. As the change is predictable and foreseen, organizations, including SMEs, ought to respond quickly to those changes in their environment to achieve a competitive advantage (Cacioppe, 2000). Organizations that were seeking survival in the last decade due to several country critical conditions, will be looking for fine tuning, development and change management.

1.2- Leadership

The term leadership has been explored all over the world, across different cultures from social and organizational sciences. As a result, many arguments, definitions, concepts and dimensions have been introduced by researches and scholars configuring different theories, starting with the great man theory of Carlyle (1841) in the personality era, and finishing with the leadership styles theory of the situational and transformational era. The term leadership hides a complex process that involves core competencies which refer to knowledge, skills and abilities, charisma, standards and qualities to set apart

successful and unsuccessful leaders. Theories on organizational leadership focused on emphasizing that an effective leader is the one who can influence followers – normally employees - to behave in a desired way or to achieve organizational strategic and financial objectives and goals by acquiring the followers trust, admiration and respect (Yukl, 1989, Mullins, 2016). According to organizational success, employee's commitment, employee's productivity, and employee's job satisfaction are directly related to supervisors' behaviors and their leadership style.

Change resides at the heart of leadership (Latta, 2009). For the change to be successful, leaders and managers have to play the role of effective change agents to promote positive attitudes (O'Toole, 1995). A change agent can be hired externally by means of consultancy, or internally, being organizational leaders at several levels (Battilana & Casciaro, 2012). Those agents have to cope with environmental changes internally and externally, starting from minor issues such as employees' job roles, to largest issues such as restructuring or mission and vision changes (Mavromatis & Olofsso, 2013). Accordingly, organizations ought to have managers who can be adaptable to act in two roles, managers and leaders (Isaac, Zerbe, & Pitt, 2001). The manager role allows those who have higher organizational level authority to use their coercive or reward power to impulse and influence their subordinates, towards predetermined goals. The leader role is useful to influence and inspire the subordinates to work towards these goals (Isaac et al., 2001). These two dimensions, the reward and influence of employees, are the core of transactional and transformational leadership styles introduced by Bass (1985) and developed by Avolio & Bass (2001). In addition, the ability of organizations to manage change successfully relies on the nature of the organization itself, the employees participating in the change and how these employees understand the change process and believe in its success (Luthans, 2008). A well-

organized change by top managers can provide distinctive critical advantages (e.g. it enhances intensity, enhances monetary execution, upgrades workers and consumer loyalty, and most importantly drives the organization towards nonstop change, maintainability, creativity and innovation) (Boston, 2000).

However, despite the relevance of leadership and change management, their research still needs further development. Yukl (1999) illustrated that most of leadership studies that examined the relationship between leadership and change do not take into consideration the complexity of the processes within the organization, including planned change initiatives and implementation. These activities highly rely on leadership competencies that have been unnoticed by leadership literature (Higgs & Rowland, 2005). Organizational change management literature, on the other side, addresses the complexity of change processes and the role of managers in several change implementation activities (Kanter, Jick, & Stein, 1992; Armenakis & Bedeian, 1999; Van de Ven, Angle, & Poole, 2000). Conversely, researches that entailed change management have failed to provide a complete analysis on the link between leadership styles and change management models, although it is clear that there is a relationship between change agent leaders competencies, skills, abilities and behaviors and the success or failure of achieving organizational goals and change (Howell & Higgins, 1990; Eisenbach, Watson, & Pillai, 1999; Fiol, Harris, & House, 1999; Struckman & Yammarino, 2003; Berson & Avolio, 2004; Waldman, Javidan, & Varella, 2004; Bommer, Rich, & Rubin, 2005; Higgs & Rowland, 2005; Colville & Murphy, 2006).

The lack of complete and in-depth analyses on the relationship between leadership styles and change management models, and their relevance especially in areas affected by the need of change management in the upcoming years (like Lebanon among other Middle East countries), encourage the goal of this doctoral thesis.

Accordingly, its main purpose will be to analyze the relationship between leadership styles (specifically transactional and transformational leaderships) and change management models (specifically two contemporary planned change approaches, the Kotter change model developed by Kotter (1996) and the ADKAR change model developed by Prosci® Hiatt (2006)), in the context of SMEs in Lebanon.

This research provides academic and practical contributions. From the academic perspective, the reviews conducted will help students, researchers and academic institutions to identify the most productive countries, institutions and researchers engaged in leadership research. It will also help them to fetch the relationships conducted on these issues, guiding them in future researches by exploring new approaches and examining new relations on the transactional and transformational leadership styles paradigms. In addition, from the derived hypotheses on leadership and Kotter and ADKAR change models, this thesis contributes on knowledge about the effects of leadership styles on change model implementation by identifying theoretically and empirically the relationship between a leader specific trait or behavior and each of Kotter and ADKAR change model's implementation phases; such kind of relationships examination has never been done before.

The examined relationships in this thesis will also serve as a practical guideline for Lebanese organizations leaders who are seeking a profitable change in their organizations, suggesting the best applicable leadership practices they can adopt while implementing change relying on Kotter or ADKAR change models. This research will also set the ground for researchers in the MENA region to examine this relationship in their countries.

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Chapter 2 Bibliometric Literature Review

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This chapter provides a bibliometric literature review on leadership styles, revising firstly the bibliometric articles that discussed leadership styles and the gaps identified in these researches; secondly, we will explain the methodology used to conduct the bibliometric review. Finally, we will expose the results of the two bibliometric reviews conducted, the first more generic and the second more specific, centered in the purposes, topics, variables and hypotheses of the research field.

2.1- Bibliometric Articles on Leadership Styles

Bibliometric research and “science mapping” – or the idea of visualizing and analyzing bibliometric networks - has gained extreme attention to scholars around the world, being crucial for prolific issues, and gaining popularity in many research fields including social and business sciences in the last decade (Hérubel, 1999).

Leadership styles are considered as one of the most researched topics in social and managerial sciences around the globe due to its importance, which have been widely discussed and tested since the early 60’s. Various classifications, definitions, theories and explanations have been introduced in early and contemporary literature, making this topic a magnificent area to apply bibliometric researches. This kind of bibliometric analysis is recommended in scientific fields with a long trajectory, to better understand the researches conducted, their main topics and conclusions, aiming to systematize and visualize the main contributions of previous studies (Gonzales-Bustos & Hernández-Lara, 2016).

Although lots of publications covered leadership, the theories that explain it, and its effect on organizational or social factors, to the authors’ best knowledge, only few articles adopted bibliometric and text mining analysis to conduct leadership research.

Previous bibliometric researches provided insightful information on the relevance of leadership for academic research (Lowe & Gardner, 2000; Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010), leadership theories (Tal & Gordon, 2016), female leaders (Tal & Gordon, 2018), leadership in specific sectors like education (Gumus, Bellibas, Esen, & Gumus, 2018), the outcomes of leadership (Batistic, Cerne, & Vogel, 2017; Lis, Czerniachowicz, & Wieczorek-Szymanska, 2017), and specific leadership styles, like authentic leadership (Cunha, Günther, Vicentini, & Esper, 2015), responsible leadership (Marques, Reis, & Gomes, 2018), public leadership (Marques, Reis, & Gomes, 2018), and transformational or charismatic leadership (Dionne et al., 2012; Alvarez, Castillo, Molina-Garcia, & Balague, 2016). Even so, bibliometric researches that discussed leadership styles remain limited; and more research is needed to clarify its outputs and effectiveness.

Existing bibliometric researches on leadership styles took both, general and specific perspectives. The general perspective involves revisions that cover just one journal regardless of the topics on leadership discussed, as well as known leadership theories and leadership outcomes, or the contributions on leadership related to a specific industry or sector. The specific perspective, on the other hand, focused on one specific leadership style, neglecting the others.

Regarding the general approach, two articles examined, for example, one of the main journals on leadership, *Leadership Quarterly* (LQ), focusing on the journal's publications during its first and second decades. Lowe & Gardner (2000) reviewed the first 188 articles published since the founding year of LQ in 1990. They adopted a quantitative approach in addition to interviews with the journal former editors. The analysis of the LQ articles showed that the number of articles increased from 17 in the founding year 1990 to 37 in volume 10. This article identified the type of publications,

the nationality of the authors, journal special issues and their subjects. This study also showed that empirical researches increased during these years while the theoretical researches varied from one year to another. With respect to the methodological approach used, the results showed an increasing use of quantitative methods, along with analytical techniques in testing hypotheses. This study also revealed that 8% (N=17) of the articles discussed trait leadership theories, while behavioral theories received a little attention with 2.5% (N=5). Contingency theories were the ones that received the higher attention with 12% (N=25). This review indicated also that charismatic leadership style had the highest attention by the scholars with 52 publications to constitute 26% of total publications, followed by transformational leadership style with 37 publications (18%), and by “new direction” theories, especially political leadership with 12 publications (6%).

As for the second decade (2000-2009), Gardner, Lowe, Moss, Mahoney, & Cogliser (2010) adopted several research methods - including video interviews with the associate and junior editors - to conduct a bibliometric review on 353 published articles published at LQ in this period. Aiming to answer their research question: “Is there a consensus among leadership scholars that the content of LQ represents the highest level of leadership scholarship?”. The researches generated citation analysis, content analysis, contribution analysis, theoretical foundation, research strategies in addition to analytical procedures to assess the journal reputation with respect to other competing journals. These researchers concluded that leadership research flourished in this decade due to the revival of charismatic leadership research interest (House, 1976; Conger & Kanungo, 1987; House & Aditya, 1997) and the introduction of the concept of transformational leadership theory by Burns (1978) and Bass (1985). This revive affected LQ and other journals such as “Journal of Applied Psychology” and “Personnel

Psychology”. Accordingly, the analysis also showed that the number of LQ issues increased from 10 to 20 between 2000 and 2009 due to the increase in the number of publications from 34 in 2000 to 62 in 2009. The researchers also assessed the journal reputation in a non-traditional way (i.e. used by WOS or Scopus), alternatively assessing the impact factor through the “h-index” and “g-index; accordingly, LQ appeared in the 10th place. The scholars also assessed LQ reputation and impact, considering the article type (i.e. theoretical or empirical), the most cited articles, the scholars’ contribution and their nationality, theoretical foundation, research strategy, design, and analysis procedures. Gardner, Lowe, Moss, Mahoney, & Cogliser (2010) concluded that after ten years of research, Lowe & Gardner (2000) expectations about future leadership research were true, especially their expectations on researches related to transformational and charismatic leadership, which received the greatest attention.

Tal & Gordon (2016) used a general perspective to conduct a bibliometric analysis to examine leadership theories. The researchers divided leadership into two categories: hierarchal system and complex flexible framework. In their research, they exported data since 1965 till 2014 from the “World Catalog database” and the “Science and Social Science Citation Index Expanded” in order to examine the current approaches in leadership research. They stated that transformational leadership remains the most utilized subject in leadership research for many reasons, firstly due to its applicability in the Western society; secondly due to the shift from the industrial to the knowledge era; and thirdly due to the globalization, complexity of the Western society and democratization. With 2441 publications, transformational leadership obtained the greater attention by the scholars, followed by shared leadership with 2386 and collective leadership with 1193 publications, while distributed leadership research developed in 1990 appeared in the last place with almost 83 publications till 2014. Their

research also reviewed other types of leadership including trait leadership, distributive leadership, and collective leadership.

From a general perspective also, Tal & Gordon (2018) conducted a bibliometric research on women as political leaders to reflect the publications development on this topic from 1967 to 2017. For their study they used the “Science Citation Index Expanded” database’s core collection as the data source. The results showed that the first article covering this topic was published in 1972, then the number of publications rose from 205 in 2000 to 322 in 2010, while the citation count increased after the year 2000, rising to 683 citations in 2016. According to the authors, the publications between 2005 and 2017 covered this issue in Latin America, Sub-Saharan Africa and Australia. Two journals emerged as the most relevant, the “Journal of Women’s History” that appeared in the first place with 13 publications, and “Women & Politics” that appeared in the second place with 12 publications.

Another bibliometric study conducted by Gumus, Bellibas, Esen, & Gumus (2018) explored the researches indexed between 1980 and 2014 in the “Web of Science” database. In their study the scholars aimed to identify the different leadership models in education and the changes occurred overtime by analyzing 709 articles; from those, 344 articles were published between 2010 and 2014 and 192 between 2005 and 2009. It was concluded that an increasing interest in leadership models in the educational field existed, where the top researches mainly covered curriculum leadership, managerial leadership, teacher leadership, instructional leadership, distributed leadership, moral and ethical leadership and transformational and charismatic leadership. The results also showed that the journal “Education and Educational Research” appeared in the first place with 334 publications, followed by “Educational Administration Quarterly” with 107 publications. As for the countries

USA appeared in the first place with 296 followed by England with 67 publications. With respect to the research design, 81 publications followed qualitative approaches, while 52 followed quantitative approaches. Topics on this domain mostly entailed distributive leadership with 118 publications, followed by instructional leadership and transformational leadership with 85 and 75 publications respectively. The researchers also identified the top journals, the number of papers per country, the most productive scholars, and research method and purpose of the revised articles.

Lis, Czerniachowicz, & Wieczorek-Szymanska (2017) researched leadership and corporate social responsibility from a bibliometric perspective. For this research, data was extracted from the “Scopus” platform to discuss published articles topics, journals, authors and subject areas. 432 publications were retrieved covering the period between 1980 and 2017. 361 publications (84%) were released between 2009 and 2017, and the highest number of publications (48) occurred in 2014. With respect to the top journals in this domain, “Journal of Business Ethics” appeared in the first place with 58 publications, followed by “Corporate Governance” journal with 16 publications.

In the article titled “Just how multi-level is leadership research? A document co-citation analysis 1980–2013 on leadership constructs and outcomes”, Batistic, Cerne, & Vogel, (2017) asked highly ranked scholars to identify the most used keywords that are used to determine the outcomes of leadership. Through several methods the scholars decreased the number of articles subject to study – based on the scholar’s keyword identifications-, aiming to conduct citation and co-citation bibliometric analysis. The researchers found that the main cluster in the 1990’s decade was formed by transactional and transformational leadership, creativity and emotional intelligence, as well as trust. In the 2000 decade, transformational leadership become

the most important cluster followed by emotional intelligence and emotions, and authentic leadership.

Besides these works that applied a general perspective, other publications took a specific perspective, focusing in revising a specific leadership style. For example, Cunha, Günther, Vicentini, & Esper (2015) conducted a bibliometric review until 2013, on authentic leadership to find that scholars interests on authentic leadership increased over the years. For this research 162 publications were revised, retrieved from “Scopus”, “Web of Science”, “EBSCO” and “Scielo” platforms. 332 scholars participated in publishing these articles, those are linked to 152 academic institutions in 29 countries. 258 citations were received by the most cited articles in the “Scopus” platform, 321 in “EBSCO” and 172 in the “Web of Science”. “Leadership Quarterly” was ranked as the first journal with 28 publications and also the first in the number of citations with 2729 citations, followed by the “Journal of Business Ethics” with 8 publications, but this journal appeared the 8th in the number of citations with 58 citations only.

Relying on 64 articles published between 2006 and 2016 in the “Social Sciences Citation Index” and the “Web of Science”, Marques, Reis, & Gomes (2018) conducted a bibliometric research to cover responsible leadership. They found that research on this topic started in 2006 and grew in 2009. The highest number of publications occurred in each of 2009 and 2014 with 13 publications. Regarding the journals, the “Journal of Business Ethics” appeared in the first place with the highest number of publications with 30 publications, followed by the “Academy of Management Perspectives” with 7 publications. With respect to the research nature, most of the publications (29) adopted a theoretical review. Additionally, the scholars of this article conducted factor analyses, citation, and co-citation to serve the purpose of their study.

Selecting articles that were written in English language only, Vogel & Masal (2015) conducted a bibliometric review on public leadership utilizing the “Thomson Reuters Social Science Citation Index” database. Their data set included 787 documents covering all available years until 2016. Having 33,183 references and 25, 645 cited documents, the researchers conducted citation, co-citation and factor analyses to conclude two dimensions of research: the biographic approach that focuses on accountability, representativeness and political values; and the functional approach that focuses on management effectiveness and efficiency.

Two studies covered transformational leadership. The first article titled “Quality and publication impact via levels of analysis incorporation: An illustration with transformational/charismatic leadership” was published in “Leadership Quarterly” by Dionne et al. (2012) to study articles quality and publication impact of transformational and charismatic leaderships. The scholars of this article based their study on a previous research conducted by Yammarino, Dionne, & Chun, (2002) and Yammarino, Dionne, Chun, & Dansereau, (2005) adding 5 years of research on this topic. For this, “ProQuest”, “PsycINFO” and the “Center for Leadership Studies library” at Binghamton University were utilized as sources of data. These yielded to 539 documents, including articles, book chapters, and books. The research included 403 empirical researches, constituted of 299 researches on transformational leadership and 104 researches on charismatic leadership; and 136 conceptual researches, constituted of 74 transformational leadership researches and 62 charismatic leadership researches. The journals that appeared in this study were classified into three categories. “Leadership quarterly” appeared in the first category (A) of journals with 157 publications followed by “Journal of Applied Psychology” with 41 publications. As for category (B), “Group and Organization Management” journal appeared in the first place

with 20 publications, followed by “Journal of Occupational and Organizational Psychology” with 17 publications, while category (C) included journals with least publications. Dionne et al. (2012) also analyzed the descriptive statistics and correlations between variables for conceptual research considering the publication year, level of analysis, publication quality, levels in theory, as reflected by the journals impact factor.

Another article written by Alvarez, Castillo, Molina-Garcia, & Balague (2016) utilized the paradigm of transformational leadership in the context of physical activity and sports. The researchers aimed to provide a comprehensive bibliometric research review on this literature, considering 28 international papers published from 2000 till 2015. Their research covered the applied psychology category in “ProQuest”, “Web of Science”, “Journal Citation Reports” and “MedLINE” platforms. The scholars found that the highest number of publications occurred in 2008 with 8 publications, and the most frequent contributions were related to Canada, America, United Kingdom, Australia and New Zealand.

Although there are several leadership theories, concepts and descriptions, the transformational leadership style developed by Bass (1985) is the one that has attracted more attention of research (Tal & Gordon, 2016), especially since the introduction of the Multifactor Leadership Questionnaire (MLQ) by Bass & Avolio (2000). As discussed earlier, the current bibliometric articles were limited to generally adopted leadership styles in specific industries, or were focused on other specific styles of leadership that entailed few articles published in one platform. Beyond this scope, only two articles investigated transformational leadership and charismatic leadership styles solely. The first one conducted by Dionne et al. (2012), who analysed 600 articles from 1984 until 2011. Dionne et al. (2012) investigated the articles source quality and impact

factor. The second article was very focused on only 28 papers that examined the relationship between transformational leadership style and sports activities.

However, with the vast development of transformational, charismatic and transactional leadership styles research in the last 3 decades (Lowe & Gardner, 2000; Gardner, Lowe, Moss, Mahoney, & Coglisier, 2010; Tal & Gordon, 2016), there is still much to learn. Most of the current published researches relied on software tools to analyze information and presented it in an organized systematic way. Scholars most of the times provided general illustration and information related to the evolution of leadership research, top journals, citation and co-citation, authorship, top countries, most productive scholars and affiliations, impact factor, and keywords used. However, none of the current researches provided in-depth analysis on the models, and text mining on the dependent, independent, moderating and mediating variables and discussed hypotheses on any of the presented leadership styles.

Therefore, several gaps can be spotted in the current research. The first is the tendency of research to be focused only on one leadership style, especially transformational leadership. The second is that none of the previous articles developing systematic reviews on leadership styles covered the last decade. The third is that the most well know platforms such as “Web of Science” and “Scopus” are never utilized jointly in any research entailing transactional and transformational leadership styles. Finally, none of the articles covered a complete scope of bibliometric review to include top cited articles, published articles quartile classification, number of citations, top countries and their collaboration, top affiliations and their collaboration, and most productive scholars and their collaboration. Moreover, none of these revisions entailed discussed research purposes (dependent variables), research topics (independent

variables), hypotheses examined, and the type of relationships described by them, nor the mediation or moderation effects described in the relationship models.

These gaps point to the need of conducting a more holistic bibliometric leadership analysis that contemplates a whole range of research, allowing to obtain a complete scheme of the previous literature and analytical contributions on leadership.

This thesis entails with this more general goal using bibliometric and text mining analysis to map the knowledge structure of transactional and transformational leadership styles for the last twelve years. Referring to the published articles, in both “Web of Science” and “Scopus” platforms, from 2007 till 2018. The research aims to characterize the current leadership literature, aiming to provide insightful information to the current and future researches who are interested in this research topic. Therefore, mapping and text mining leadership literature, will aim to face the following issues:

- Analyze the evolution in the number of articles published over time and the top journals in the field
- Determine the most productive researchers, institutions, countries and publishers involved in leadership styles research
- Determine the main collaboration between authors and institutions
- Identify top articles, number of citation and quartiles of published articles in leadership styles research
- Determine the research designs utilized in published articles
- Determine the discussed research purposes (dependent variables) and research topics (independent variables)
- Determine the most utilized moderating and mediating variables
- Determine the tested hypotheses relationships, in addition to their conclusions

Exploring these issues will provide valuable vision and scope to researchers interested in the transactional and transformational leadership styles, to achieve a better understanding of the academic position of this subject and to gaining useful and up to date information about the most relevant journals, publishers, institutions and scholars, contributing to the most relevant leadership styles. This will also provide valuable vision and scope to researchers and students interested in the leadership topic, to achieve a better understanding of the academic position of this subject and to gain useful and up to date information about the most and less discussed topics and tested hypotheses on transformational and transactional leadership styles, which will aid to examine new relationships and hypotheses. This may enrich leadership research by examining the relationships that were poorly discussed.

2.2- Methodology Applied to Conduct The Bibliometric Research

Bibliometrics is a statistical analysis method to generate meaningful information of the bibliographical data for published articles, mainly in journals, entailing according to Broadus (1987), a “quantitative study of physical published units, or bibliographic units, or the surrogates of either”. We conducted two different systematic reviews, the first one was generic, to determine the main features of publication in the field, and the second one was specific, conducted to analyse the research purposes, topics and variables.

Aiming to gather information for the first generic search, identifying the set of related subfields within the domain of interest constitutes the first step. The selected topics were the leadership styles because they gained a lot of attention by the scholars since Bass & Avolio (2000) introduced the MLQ-5X questionnaire to measure them. “Web of Science” (WOS) and “Scopus” (Scopus) platforms were the two targeted sources to retrieve information. With regard to WOS core collection database, we

identified transformational leadership, transactional leadership and leadership style as topics; while business, economics, management and social sciences were chosen as research areas. Regarding the Scopus platform, the same selection was adopted with a slight difference in the research area (subject) where business management and accounting, social science, economics and econometrics were identified. The search covered the period from 2007 to April 2018. As a result, 710 WOS articles and 475 Scopus articles were retrieved.

Considerable efforts were made before analyzing the data aiming to standardize the entries and correct discrepancies between the two sources, WOS and Scopus. Entries corrected mainly included spelling of affiliations, publisher country (i.e. England, UK, TU Dortmund, Dortmund University of Technology) and typing errors such as using capital letter instead of small letters. Another discrepancy appeared between the two sources in authors' names; for example, some authors are known by their second name instead of their first name depending on the source. Such errors would affect the results because such variables are considered as strings and SPSS software used in the analysis is case sensitive. Additionally, some articles were published twice under the same title, these were treated as one publication. The data was edited in a way when there was no doubt that there was a discrepancy which could affect the results and the outcome of the analysis. Fine tuning led to exclude 38 book chapters and 12 proceeding papers from WOS dataset. As for Scopus dataset one article was published twice, and another paper had two parts, these were considered as two articles instead of four.

While comparing the papers inclusion in WOS and Scopus databases, it was also noticed that 163 articles were commonly included in both WOS and Scopus. Those articles indexed in both do not refer to the inclusion of the journal in these databases

but to the inclusion of the paper in the search conducted in them, these were mainly named as common articles and treated separately. Thus, the final number of articles subject to study was 497 WOS articles, 310 Scopus articles, and 163 common articles.

With regard to the specific bibliometric review analyses that entailed determining purposes, topics and variables of the discussed hypotheses, we look for the dependent and independent variables, as well as the moderating and mediating variables. This second search covered the period between 2007 and December 2018. To satisfy the purpose of this research, WOS and Scopus platforms were again the two targeted sources to retrieve information using the topic query: *TOPIC* (transformational leadership) *AND TOPIC* (transactional leadership). With regard to the WOS core collection database, business, economic or social sciences were chosen as research areas. As for Scopus platform, the same selection was adopted with a slight difference in the research area (subject) where business, management and accounting or social sciences were identified. In total, 1362 articles were retrieved, 808 articles were extracted from the WOS database and 554 articles were extracted from the Scopus database.

WOS and Scopus datasets were compared separately and against each other to ensure discrepancy nonexistence, consistent entries, outcomes and results. Text mining analysis was conducted on each publication by reading the abstracts, the conclusions and sometimes the researches findings aiming to provide meaningful and precise information on the variables utilized. Accordingly, a detailed combined database was created to include research source (WOS/Scopus), publication year, article title, scholars name, research design, research purpose (dependent variables), main topics (independent variables), mediating and moderating variables and article title. Hence, in

the final database, we identified the hypotheses that only tested transactional and/or transformational leadership styles with other variables.

The data was edited in a way that there was no doubt that there was a discrepancy which could affect the results and the outcome of the analysis. Fine tuning led to exclude from WOS dataset 40 book chapters and 12 proceeding papers, as well as 98 articles that were not related to transactional and transformational leadership styles. As for Scopus dataset, 3 papers were published twice, those were considered as three articles instead of six; another paper had two parts, and 49 articles were not related to transactional and transformational leadership styles.

While comparing the papers inclusion in WOS and Scopus databases, it was also noticed that 177 articles were commonly included in both WOS and Scopus. In this second search again, those articles indexed in both do not refer to the inclusion of the journal in these databases but to the inclusion of the paper in the search conducted in them, these were mainly named as common articles and treated separately. After fixing these issues, the final number of articles subject to study in this second search was 982 articles (481 WOS articles, 324 Scopus articles, and 177 common articles).

Although the extracted files from WOS and Scopus platforms will be used to create the bibliometric network, this type of file would not serve the purpose of this research, accordingly main bibliometric information associated with a publication, such as articles information, scholars, affiliations, journals, variables, publishers, etc. were identified, separated and imported to Excel file to form a model approach, where these information will be classified and arranged in an entity relation (ER) diagram as shown in Figure 2.1 (Fang, Chang, & Chen, 2009).

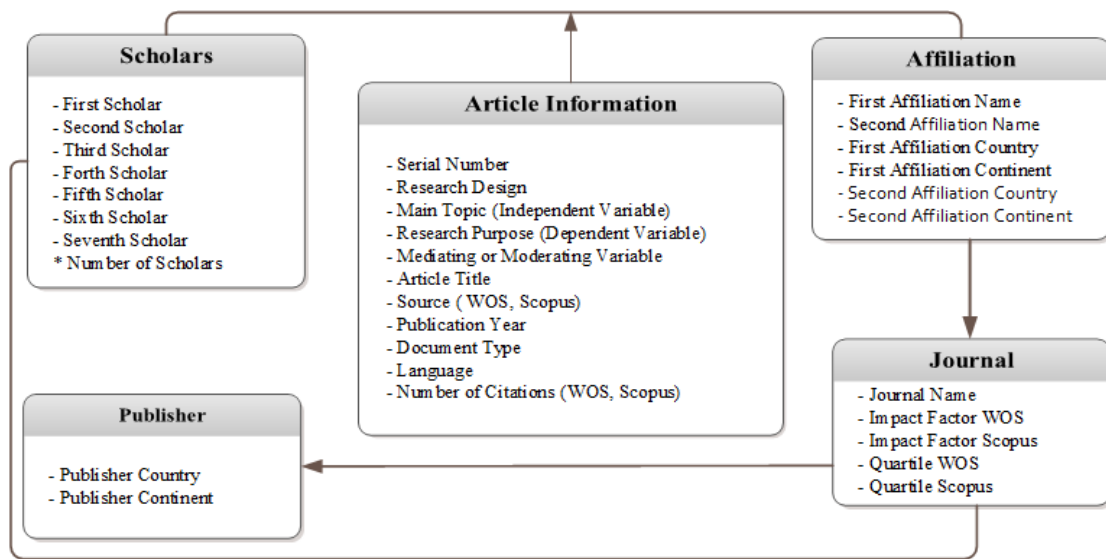


Figure 2.1- ER Bibliometric Articles Database, Graphical Representation

ER modeling is a graphical representation of a dataset; each entity is represented by a box; the attributes represent the variables included in one entity. Five entities were created to ease the analysis, these are: First, scholar's entity that included the name of the scholars who published or contributed in publishing an article, the number of scholars was calculated using a specific formula. Secondly, the publisher's entity included the publisher country and continent. Thirdly, the affiliation entity included first and second affiliation information such as name, country, and continent. Fourthly, the journal entity included journal name, impact factor, and quartile. Finally, the article entity included main information of the articles, like their research design, research category, independent variables, dependent variables, mediating and moderating variables, article title, source (WOS or Scopus), publication year, document type, and number of citations in each of WOS and Scopus platforms.

SPSS version 21, VOSViewer, MS. Excel, MS. Visio and Adobe Photoshop are the main software tools utilized in developing these reviews. For example, VOS Viewer was adopted for analyzing and visualizing bibliometric networks in addition to creating distance-based visualizations and co-citation mapping of bibliometric networks for the

data exported from each of WOS and Scopus platform. Exported platform data was arranged in excel for reviewing, correcting text and checking duplicates by creating a separate column for each and every article subject to study (i.e. first, second and third scholar name, affiliations, source etc.). Those were imported to SPSS to generate useful information based on descriptive analysis and cross tabulations, while MS. Visio and Adobe Photoshop were utilized to sketch flowcharts and images related to the analysis.

2.3- Generic Bibliometric Analysis Results

2.3.1- Publications distribution per source and year

The first objective of this work is to identify if the evolution in the number of articles discussing transactional and transformational leadership styles is increasing over time. Figure 2.2 shows that the number of publications in each of WOS and Scopus databases is increasing. With respect to the Scopus dataset, the number of publications started with 16 publications in 2007 and increased in the last ten years to reach 38 articles in 2018. While, it started with 9 articles in the WOS database to reach 72 in 2018. The same results were indicated for common articles. In general, publications that are indexed in the WOS database are more than those indexed in the Scopus database. The increasing number of publications on these leadership styles discussed topics confirm the results of Lowe & Gardner (2000), Gardner, Lowe, Moss, Mahoney, & Cogliser (2010) and Tal & Gordon (2016).

According to the results, it can be pointed out that leadership research from 2007 to 2010 was not that interesting for researchers around the world, where only 30 (3.71%) articles were published in 2007, reaching 54 (6.08%) articles in 2010 after a slight growth during these years. Articles publication doubly increased starting from 2011, when 94 (11.13%) articles were published in this year. On

average 107 articles were published between 2011 and 2017. In general, leadership research is increasing in the last decade, the number of publications increased from 34 in 2007 to 127 in 2017. The most productive years for leadership topics are 2016 and 2017. According to the analyses performed, 113 (12.27%) articles were published in 2017 and 128 (13.09%) in 2018.

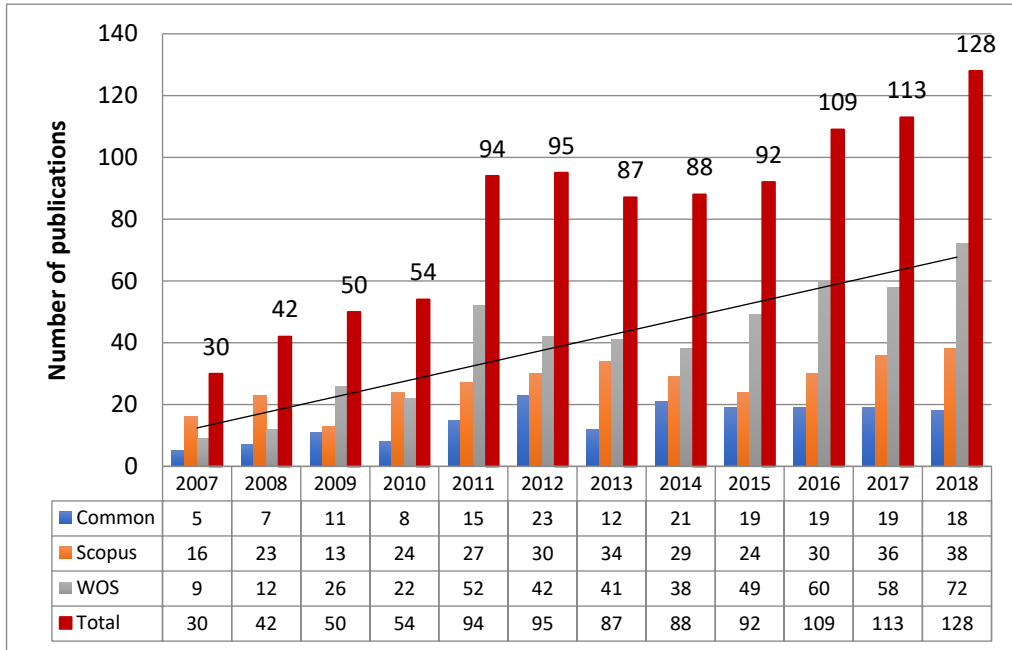


Figure 2.2- Publications Distribution by Source and Year

Scopus publications exceeded WOS in 2007 and 2008 with an average of 8 articles per year, while WOS publications exceeded Scopus in the followed years from 2008 till 2018 by almost 20 articles as an average.

2.3.2- Top journals in field

In order to judge the ranking of top journals in leadership styles research, it was necessary to analyze the data of WOS and Scopus separately.

Table 2.1 shows the top nine ranked journals in WOS platform. The first ranked journal is “Leadership Quarterly”, with 80 published articles on leadership during the specified period, to contribute in 16.1% of WOS journals, those articles were cited 2455 times. The second ranked journal according to the study

is the “Leadership and Organization Development Journal”, where 43 (8.65%) articles were published from 2007 till 2018; those articles were cited 198 times. Surprisingly, the third journal “Journal of Applied Psychology” which published only 22 articles, was cited 1044 times, more than 5 times the number of citations of the second ranked journal, while “Personnel Psychology” which published only 9 articles was cited 728 times, to have more citations than the second ranked journal. Thus, journal ranking could be based more on the number of citations than on the number of publications. Only “Leadership Quarterly” appeared to be the first ranked journal in both, number of publications and citations in the WOS database. The analysis also showed that 274 (55.1%) articles were published by other journals, different from the top 9, and all of them published less than 9 articles during the considered period.

Regarding Scopus, as shown in Table 2.2, “Leadership & Organization Development Journal” appeared in the first-place publishing 16 (5.16%) articles, those were cited 165 times, followed by “International Journal of Applied Business and Economic Research Journal” in the second place, where 7 (2.26%) articles were published with no citation. Table 2.2 also shows that 287 (92.5%) articles were published by different journals, all of them publishing less than 7 articles in the last ten years.

Table 2.1- WOS Articles Top Journals, Publications per Year and Total Number of Citations

Top Journals - WOS Articles	Publication year												Total / Year		Citation
	07	08	09	10	11	12	13	14	15	16	17	18	N	%	
Leadership Quarterly	3	3	7	5	10	15	9	5	13	4	4	2	80	16.1	2455
Leadership & Organization Development Journal	0	0	0	0	4	3	4	8	1	8	9	6	43	8.65	198
Journal of Applied Psychology	3	1	1	1	3	1	0	3	3	3	2	1	22	4.43	1044
International Journal of Human Resource Management	0	0	2	1	2	3	1	3	0	3	1	0	16	3.22	140
Journal of Business Ethics	0	1	1	1	2	0	4	1	4	1	0	0	15	3.02	255
African Journal of Business Management	0	0	2	3	9	0	0	0	0	0	0	0	14	2.82	71
European Journal of Work and Organizational Psychology	0	0	0	2	3	1	1	2	2	0	2	1	14	2.82	120
Group & Organization Management	0	0	1	1	1	0	2	2	0	2	1	0	10	2.01	368
Personnel Psychology	1	1	0	0	2	0	1	1	1	0	2	0	9	1.81	728
Others	6	6	12	13	25	25	26	19	35	47	49	11	274	55.1	
Total Published Articles Per Year	F	13	12	26	27	61	48	48	44	59	68	70	21	497	100
	%	2.6	2.4	5.2	5.4	12.2	9.65	9.65	8.85	11.8	13.7	14.08	4.22	100	

Table 2.2- Scopus Articles Top Journals, Publications per Year and Total Number of Citations

Top Journals - Scopus Articles	Publication year													Total		CIT
	07	08	09	10	11	12	13	14	15	16	17	18	N	%		
Leadership & Organization Development Journal	0	3	1	2	2	0	1	1	4	0	2	0	16	5.16	165	
International Journal of Applied Business and Economic Research	0	0	0	0	0	0	0	0	2	1	4	0	7	2.26		
Others	16	20	12	22	29	30	37	30	24	32	32	3	287	92.5		
Total Published Articles Per Year	F	16	23	13	24	31	30	38	31	30	33	38	3	310	100	
	%	5.16	7.42	4.19	7.74	10	9.68	12.7	10	9.68	10.6	12.2	0.97	100		

Table 2.3- Top Journals, Publications per Year and Total Number of Citations

Top Journals - Common Articles	Publication year													Total / Year		CIT
	07	08	09	10	11	12	13	14	15	16	17	18	N	%		
Leadership Quarterly	2	3	2	2	3	4	2	1	2	1	0	0	22	13.5	1510	
Leadership & Organization Development Journal	0	0	0	0	2	5	1	1	1	4	0	1	15	9.20		
Journal of Business Ethics	0	0	1	0	3	2	2	0	0	0	0	0	8	4.91		
Others	3	4	9	6	8	11	6	20	13	13	19	6	118	72.39		
Total Published Articles Per Year	F	5	7	12	8	16	22	11	22	16	18	19	7	163	100	
	%	3	4.29	7.4	4.91	9.82	13.0	6.7	13.0	9.82	11.4	11.7	4.2	100		

Table 2.3 shows the top journals indexed in both sources or databases, WOS and Scopus. As it is displayed, “Leadership Quarterly” again appeared as the first ranked journal in this domain for the common published articles. This journal published 22 (13.5%), which are found when you conduct a search in both WOS and Scopus, and have 1510 citations, followed by “Leadership & Organization Development Journal”, which was ranked as number one in Scopus, by publishing 15 (9.20%) articles with 162 citations. “Journal of Business Ethics” appeared in the third place for common articles by publishing 8 (4.91%) articles with 624 citations. Moreover, 118 (72.39%) articles were published by different journals, each one with 6 or less articles.

As a conclusion, “Leadership Quarterly” is ranked number one in leadership styles research with 102 (10.5%) publications, and 3965 citations, “Journal of Applied Psychology” ranked number 2 in citations with 1044 cited references although it is fourth in number of publications with 22 articles (2.27% of total publications). “Journal of Business Ethics” is ranked number three in both number of articles published and number of citations, while “Leadership & Organization Development Journal” had the second place in the number of publications with 74 (7.63%) published articles and fourth in the number of citations with 525.

VOSViewer software is a tool that can analyze co-citations and other bibliometric information exported from WOS and Scopus platforms. This software establishes the associations by forming links to visualize grouped nodes as networks and its co-occurrence (Waltman, Eck, & Noyons, 2010). Using the original non-separated data file, journal network analyses for both WOS and Scopus were generated as represented in Figures 2.3 and 2.4 respectively.

In analyzing bibliometric network, there is a difference between clusters, nodes and occurrence. Clustering is a technique that set objects into groups based on their similarity and dis-similarity represented by different color; thus, keywords that are highly correlated are mostly arranged within the same cluster. Elements of bibliometric network are described by a “vertex” or “node”, whereas vertex refers to a high-frequent word, the size of nodes represents the frequency of occurrence, the greater size means more occurrence. As for the line between one node and another, it represents the relationship between two concepts or keywords which appeared in the same article, the thicker the line, the more connection exists (Eck & Waltman, 2009).

To confirm the previous analysis, bibliometric coupling by source was generated, bibliometric coupling represents the relatedness of items based on the references that the articles share. To determine the top journals in the WOS dataset, 10 minimum numbers of documents of a source were selected, 16 journals met the threshold as shown in Figure 2.3

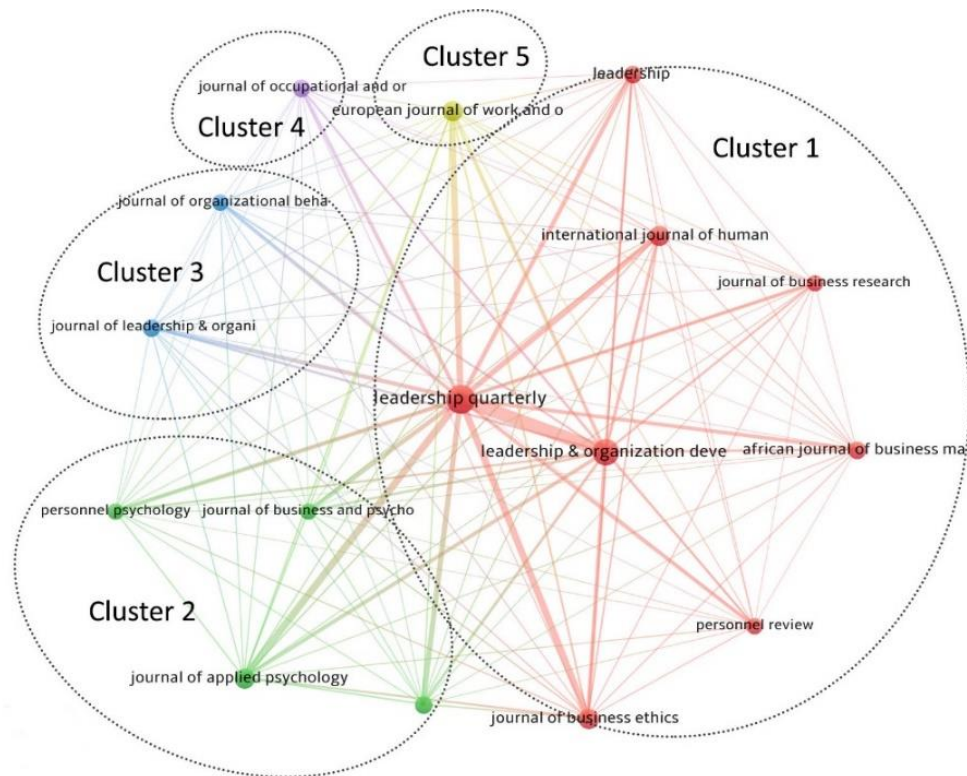


Figure 2.3- VOSViewer , WOS Sources Bibliographic Coupling

As a result, five clusters were created based on its similarity, the largest cluster (cluster 1) is formed mainly of “Leadership Quarterly” and “Leadership and Organizational Development Journal”. Additionally, “Leadership Quarterly” appeared having the biggest nod of cluster 1, while “Journal of Applied Psychology” had the biggest nod in Cluster 2. Moreover; most of the clusters are connected to cluster 1, mainly with “Leadership Quarterly” which reflects the high citation of this journal. These results confirmed the descriptive analysis provided earlier.

The same process was repeated for the Scopus dataset. Accordingly, 10 minimum number of documents of a source were selected and only 10 journals met the threshold as shown in figure 4.3. The results also confirmed those of the aforementioned descriptive analysis, where “Leadership & Organization Development Journal”, “Leadership Quarterly”, and “Leadership” have the

thickest nodes. “Leadership & Organization Development Journal” appeared having two nodes due to the keyword difference in the Scopus database; such errors were determined and treated in the descriptive analysis provided. Hence, two clusters were created in this analysis, while the nodes in the WOS figure are thicker due to the higher number of articles in this dataset.

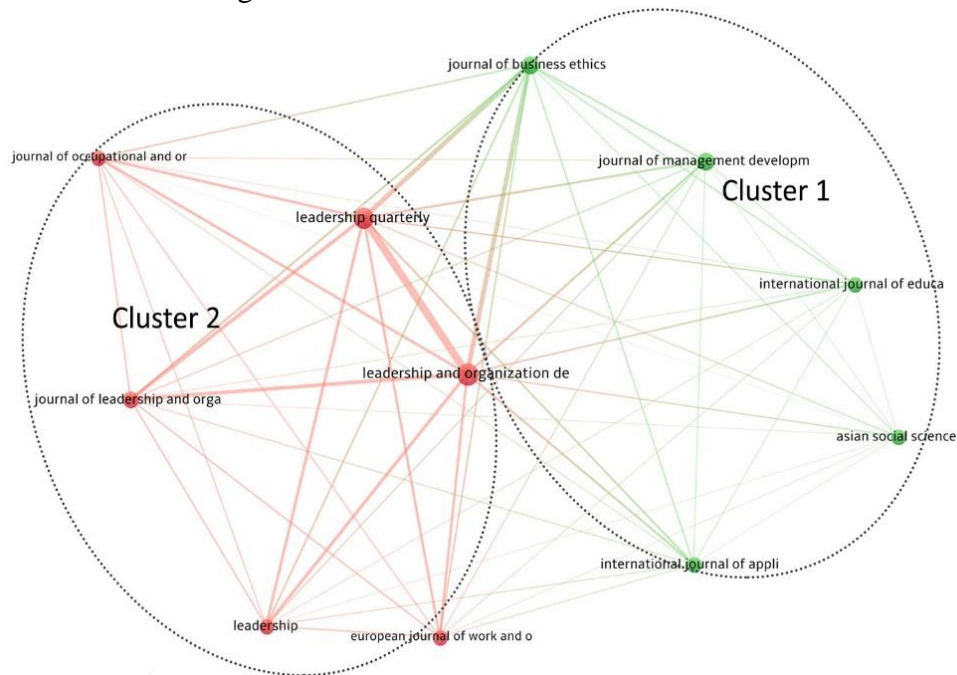


Figure 2.4-VOSViewer, Scopus Sources Bibliographic Coupling

2.3.3- Quartiles and impact factors

Quartiles and impact factors provide information on the academic relevance of the leadership articles in terms of the journal in which they were published. At the time this analysis was conducted, the last available data on impact factors and quartiles belonged to 2016; accordingly, all the following analyses are based on this year.

Table 2.4 shows the quartile distribution of WOS and Scopus articles. As for WOS 202 (40.64 %) articles belong to Q1, 72 (14.4 %) belong to Q2, 83(16.70 %) belong to Q3, 85 (17.10 %) belong to Q4, and 55 (11.06 %) articles were not ranked. However, 68 (21.9 %) of Scopus articles belong to Q1, 100 (32.25 %) belong to Q2, 82 (26.45 %) belong to Q3, 53 (17.09 %) belong to Q4, and 7 (2.25 %) articles were not ranked.

Further analysis was conducted to determine the quartile of common articles. The analysis is based in comparing each article published in both platforms with respect to the journal quartile. As Table 2.5 shows, a quartile difference can be noticed; for example, 58 WOS journals were ranked as Q1, while 87 Scopus articles were ranked in the same category, nevertheless 18 journals were ranked in Q2 in WOS and it increased to 58 in the Scopus platform.

Table 2.4- WOS and Scopus Journals Quartile Distribution

	Quartile	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	N/Q	TTL
WOS	Q1	9	8	15	12	24	22	27	16	29	15	20	5	202	497
	Q2	0	2	3	9	11	10	7	8	3	6	12	1	72	
	Q3	2	1	8	5	17	7	6	8	13	12	4	0	83	
	Q4	2	1	1	1	8	9	8	12	4	13	16	10	85	
	NR	0	0	0	0	1	0	0	0	0	10	22	17	5	
Scopus	Q1	5	5	3	3	6	2	11	10	8	6	8	1	68	310
	Q2	1	8	2	10	14	14	10	9	11	11	8	2	100	
	Q3	6	8	2	3	7	9	12	9	4	11	11	0	82	
	Q4	2	2	5	7	3	5	5	3	7	5	9	0	53	
	NR	2	0	1	1	1	0	0	0	0	0	0	2	0	

Table 2.5- Common Articles Journals Quartile Distribution

	Quartile	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	N/Q	
WOS	Q1	3	4	5	6	9	7	6	6	6	1	4	1	58	
	Q2	2	0	2	1	2	5	1	2	0	0	3	0	18	
	Q3	0	3	4	0	1	1	2	9	2	1	6	4	33	
	Q4	0	0	1	1	4	9	2	5	2	6	2	0	32	
	NR	0	0	0	0	0	0	0	0	0	6	10	4	2	22
Scopus	Q1	5	4	8	7	11	13	7	9	6	3	11	3	87	
	Q2	0	3	1	1	5	9	3	8	8	13	4	3	58	
	Q3	0	0	2	0	0	0	1	4	1	1	1	1	11	
	Q4	0	0	0	0	0	0	0	0	0	1	1	2	0	4
	NR	0	0	1	0	0	0	0	0	1	0	0	1	0	3
Total		5	7	12	8	16	22	11	22	16	18	19	7	163	

WOS and Scopus showed a difference in the quartile category for the same journals. For the purpose of differentiating between the two platforms, the analyses of journal's quartile differences, included in Table 2.6, were conducted. To do so, we investigated the quartile category of each journal considering a matrix that contemplates both platforms (WOS and Scopus).

23 (2.4%) of the not ranked articles in WOS belong to Q1 in Scopus, and 83 (8.6%) belong to Q2 in Scopus, while 75 (7.7%) belong to Q3 and 52 (5.4%) to Q4. In general, most of the not ranked WOS articles had their quartile classification in Scopus. Analyzing WOS Q2 articles showed that 109 (11.2%) out of 124 belong to Q1 category in Scopus, and only 7 (0.7 %) articles have the same ranking. Moreover, 41(4.2 %) out of 146 WOS Q3 category articles were classified as Q1 in Scopus, 85 (8.8%) were classified in Q2 category and 18 (1.9%) articles have the same classification. Surprisingly, 111(11.4%) out of 156 WOS Q4 category articles were classified as Q2 category in Scopus. Nevertheless, all WOS Q1 journals appeared the same in Q1 Scopus classification except two articles, one appeared in the not ranked category and another one appeared in the Q2 category of Scopus.

It was surprising that 265 articles were not ranked in the WOS platform. They were published in 38 journals that included but were not limited to "Human Systems Management" journal that belongs to Q3 in the Scopus platform, "International Journal of Innovation Management" that belongs to Q2 in the Scopus platform, same as "Journal of Management Development". Considering another example, "Journal of Leadership Studies" was not ranked either in WOS although it belongs to Q3 in the Scopus platform, while each of "European Business Review", "Behavioral Research in Accounting", and "Critical

Table 2.6- WOS and Scopus Journals Quartile Comparison

			Scopus Quartile					Total	
			NR	Q1	Q2	Q3	Q4		
WOS Quartile	NR	Count	32	23	83	75	52	265	
		% of Total	3.3%	2.4%	8.6%	7.7%	5.4%	27.3%	
	Q1	Count	1	277	1	0	0	279	
		% of Total	.1%	28.6%	.1%	0.0%	0.0%	28.8%	
	Q2	Count	1	109	7	2	5	124	
		% of Total	.1%	11.2%	.7%	.2%	.5%	12.8%	
	Q3	Count	1	41	85	18	1	146	
		% of Total	.1%	4.2%	8.8%	1.9%	.1%	15.1%	
	Q4	Count	5	1	111	34	5	156	
		% of Total	.5%	.1%	11.4%	3.5%	.5%	16.1%	
	Total		Count	40	451	287	129	63	970
			% of Total	4.1%	46.5%	29.6%	13.3%	6.5%	100%

Perspectives on International Business” journals were not ranked in WOS, but they appeared in the Q1 category of the Scopus platform based on the 2016 evaluation. In the analysis of common articles, some journals such as “Cross Cultural & Strategic Management”, “Risk Management-Journal of Risk Crisis and Disasters” and “R&D Management” were not ranked in Scopus platform while they appeared in Q4, Q3, Q2 categories of the WOS platform respectively. Not ranked journals and differences between the quartile distribution comparing different platforms could be the consequences of not fitting the criteria or not completing subscription and documentation requirements set by the platforms themselves to fit specific metrics.

The impact factor (IF) of each journal against quartile in both platforms was also examined and depicted in Figure 2.5, to find that it is interlaced in each quartile category. For example, in WOS the IF of Q1 category appeared to be from 11.11 to 1.84, interlaced with Q2 categories where IF appeared to be from 2.71 to 1.109, which in its term interlaced with Q3 with an IF from 1.71 to 0.7, while the IF of Q4 categories began from 1.03 to 0.03. Scopus Q1 impact factor has an upside of 10.34 to 0.47 to interlace with Q2 which started from 0.7 to 0.26, while Q3 IF started from 0.38 to 0.19, and interlaced with Q4 where the category IF started from 0.21 to 0.1. Overall, the IF for both WOS and Scopus Q1 started from 11.11 to 0.47 to interlace with Q2 with an IF from 2.71 to 0.24, Q3 also interlaced with IF from 1.81 to 0.12, while IF of Q4 started from 1.03 to 0.03.

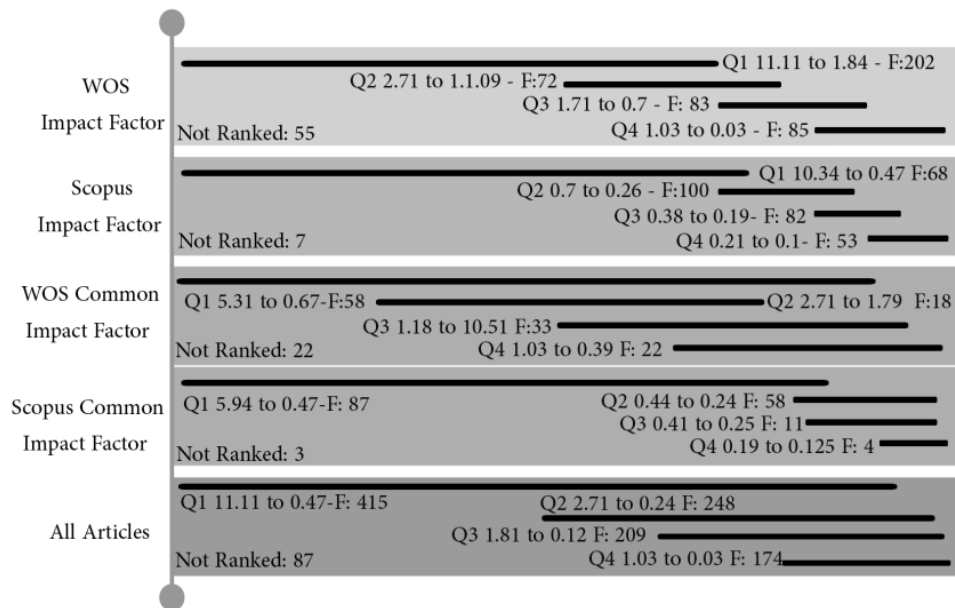


Figure 2.5- Quartile and Journals Impact Factor

2.3.4- Top cited articles

After analyzing the most relevant information of the journals in the field, we conduct the analyses to retrieve information about the specific articles. Table 2.7 depicts the twelve most cited articles published in WOS platform during the last decade. The first ranked article was published in 2009 by Gümüşlüoğlu & Ilsev, in the “Journal of Business Research” which is classified in Q1 (IF of 3.35) in the field of business, with 256 citations. The results of this study showed that transformational leadership style influences employee’s creativity and innovation in Turkish small enterprises. The second ranked article (with 247 citations) was published in 2007 by Kark & Van Dijk in the same journal “Journal of Business Research”. The authors of this article found transactional leaders influence followers’ motivation and self-regulatory focus.

**Table 2.7- Top Cited Articles in WOS Platform Based on 2016 Evaluation and 14th of April 2017
 Citation – CIT represents number of citations**

Y	Author's and Rank		Journal Name / IF / Q	CIT	Article Reference
2009	1st	Gumusluoglu, Lale	Journal of Business Research IF 3.35 - Q1 – Business	256	(Gumusluoglu & Ilsev, 2009)
	2nd	Ilsev, Arm			
2007	1st	Kark, Ronit	Academy of Management Review IF 9.4 - Q1 – Management	247	(Kark & Van Dijk, 2007)
	2nd	Van Dijk, Dina			
2013	1st	Van Knippenberg, Daan	Academy of Management Annals IF 11.11 - Q1 - Management	220	(Van Knippenberg & Sitkin, 2013)
	2nd	Sitkin, Sim B.			
2011	1st	Wang, Gang	Group & Organization Management IF 1.84 - Q2 - Management	189	(Oh, Courtright, & Colbert, 2011)
	2nd	Oh, In-Sue			
	3rd	Courtright, Stephen H.			
	4th	Colbert, Amy			
2007	1st	Schaubroeck, John	Journal of Applied Psychology IF 4.13 - Q1 - Management	178	(Schaubroeck, Lam, & Cha, 2007)
	2nd	Lam, Simon S. K.			
	3rd	Cha, Sandra E.			
2009	1st	Kearney, Eric	Journal of Applied Psychology IF 4.13- Q1 - Management	175	(Kearney & Gebert, 2009)
	2nd	Gebert, Diether			
2008	1st	Jansen, Justin J. P.	Journal of Management Studies IF 3.96 - Q1 – Management	162	(Jansen, George, Van Den Bosch, & Volberda, 2008)
	2nd	George, Gerard			
	3rd	Van Den Bosch, Frans			
	4th	Volberda, Henk W.			
2011	1st	Schaubroeck, John	Journal of Applied Psychology IF 4.13 - Q1 - Management	153	(Schaubroeck, Lam, & Peng, 2011)
	2nd	Lam, Simon S. K.			
	3rd	Peng, Ann Chunyan			
2008	1st	Walumbwa, Fred O.	Personnel Psychology IF 4.3 - Q1 - Management	140	(Walumbwa, Avolio, & Zhu, 2008)
	2nd	Avolio, Bruce J.			
	3rd	Zhu, Weichun			
2010	1st	Brown, Michael E.	Business Ethics Quarterly IF 1.70 – Q3- Business	128	(Brown & Mitchell, 2010)
	2nd	Mitchell, Marie S.			
2008	1st	Jung, Dongil	Leadership Quarterly IF 3.09 - Q1 - Management	127	(Jung, Wu, & Chow, 2008)
	2nd	Wu, Anne			
	3rd	Chow, Chee W.			
2008	1st	Walumbwa, Fred O.	Leadership Quarterly IF 3.09 - Q1 - Management	127	(Walumbwa, Wu, & Orwa, 2008)
	2nd	Wu, Cindy			
	3rd	Orwa, Bani			

A similar analysis was conducted for the Scopus articles. Table 2.8 lists the top ten cited articles in the Scopus platform. The results showed that the most cited article in this platform was published by the “Journal of Leadership & Organizational Studies”, a Q2 journal in the field of business and international management, with an impact factor of 0.68. It was written by Harms & Credé in 2010. The researchers adopted a meta-analytic approach to study the influence of transformational and transactional leadership on emotional intelligence. The paper was cited 113 times. The second ranked article was published in 2010 by the “Educational Administration Quarterly”, a Q1 journal in the field of public administration. This article aimed to describe a leadership style that fits educational domain, based on leadership traits. The researchers found that educational transformative leaders whose actions are based on courage, democracy and justice and non-discrimination achieve a better future for students and are able to address individual and society wellbeing. This article was cited 93 times.

Table 2.9 shows the top nine ranked common articles. The top cited article was published in 2011 by DeRue, Nahrgang, Wellman & Humphrey. In this paper researchers adopted a meta-analytic research design to study leadership behaviors and their validity. This article was published in “Personnel Psychology” journal and has received 310 citations in Scopus and 277 in WOS, with an impact factor of 4.66 and 4.36 respectively. The second ranked article discussed the relationship between leadership styles and organizational learning moderated by the role of environment uncertainty. This article was written by Jansen, Vera & Crossan, and was published in the “Leadership Quarterly” journal, having received 176 citations in Scopus and 158 in WOS.

**Table 2.8 - Top Cited Articles in Scopus Platform Based on 2016 Evaluation and 14th of April 2017
 Citation - CIT represents number of citations**

Y	Author's and Rank		Journal Name / IF / Q	CIT	Article Ref.
2010	1st	Harms, Peter D.	<i>Journal of Leadership & Organizational Studies</i> IF 0.689 - Q2 – Business and International Management	113	(Harms & Credé, 2010)
	2nd	Credé, Marcus			
2010	1st	Shields, Carolyn M.	<i>Educational Administration Quarterly</i> IF 2.431 - Q1 – Public Administration	93	(Shields, 2010)
2008	1st	Trottier, Tracey	<i>Public Administration Review</i> IF 2.73 - Q1 - Public Administration	81	(Trottier, Van Wart, & Wang, 2008)
	2nd	Van Wart, Montgomery			
	3rd	Wang, Xiao-Hua			
2013	1st	Sharon, Clarke	<i>Journal of Occupational And Organizational Psychology</i> IF 1.66 - Q1 – Applied Psychology	77	(Clarke, 2013)
2011	1st	Zhu, Weichun	<i>Journal of Leadership & Organizational Studies</i> IF 0.689 - Q2 - Business and International Management	49	(Zhu, Riggio, Avolio, & Sosik, 2011)
	2nd	Riggio, Ronald E.			
	3rd	Avolio, Bruce J.			
	4th	Sosik, John J.			
2014	1st	Zhang, Yiwen	<i>Academy of Management Journal</i> IF 10.346 - Q1 - Business and International Management	45	(Zhang, Lepine, Buckman, & Wei, 2014)
	2nd	Lepine, Jeffery A.			
	3rd	Buckman, Brooke R.			
	4th	Wei, Feng			
2011	1st	Nguyen, Hai Nam	<i>Journal of Management Development</i> IF 0.318 - Q2 – Business	45	(Nguyen & Mohamed, 2011)
	2nd	Mohamed, Sherif			
2008	1st	Limsila, Kedsuda	<i>Engineering, Construction and Architectural Management</i> IF 0.54 - Q1 – Business and Management	44	(Limsila & Ogunlana, 2008)
	2nd	Ogunlana, Stephen Olu			
2011	1st	Wodak, Ruth	<i>Discourse and Society</i> IF 0.726 - Q1 – Sociology (Social Science)	40	(Wodak, Kwon, & Clarke, 2011)
	2nd	Kwon, Winston			
	3rd	Clarke, Ian M.			
2011	1st	Eyal, Ori	<i>Journal of Educational Administration</i> IF 1.059 - Q1 - Administration	40	(Eyal & Roth, 2011)
	2nd	Roth, Guy			

Table 2.9- Top Cited Common Articles Based on 2016 Evaluation and 14th of April 2017 Citation - CIT represents number of citations

Y	Rank	Authors Names	Journal / CIT/ IF/ Q/ Classification	Source
2011	1st	DeRue, D. Scott	<i>Personnel Psychology</i>	(Derue et al., 2011)
	2nd	Nahrgang, Jennifer D.	WOS: CIT 277, IF 4.36, Q1- Management	
	3rd	Wellman, Ned	Scopus: CIT 310, IF 4.66, Q1- Psychology (Social Science)	
	4th	Humphrey, Stephen E.		
2009	1st	Jansen, Justin J. P.	<i>Leadership Quarterly</i>	(Jansen, Vera, & Crossan, 2009)
	2nd	Vera, Dusya	WOS: CIT 158, IF 3.09, Q1 – Management	
	3rd	Crossan, Mary	Scopus: CIT 176, IF 2.18, Q1 - Business and International Management	
2010	1st	Pieterse, Anne N.	<i>Journal of Organizational Behavior</i>	(Pieterse, van Knippenberg, Schippers, & Stam, 2010)
	2nd	van Knippenberg, Daan	WOS: CIT 150, IF 3.6, Q1- Management	
	3rd	Schippers, Michaela	Scopus: CIT 169, IF 2.5 Q1 - Organizational Behavior	
	4th	Stam, Daan		
2010	1st	Muller, Ralf	<i>International Journal of Project Management</i>	(Muller & Turner, 2010)
	2nd	Turner, Rodney	WOS: CIT 134, IF 4.03, Q1, Management Scopus: CIT 154, IF 1.39, Q1 - Business and International Management	
2009	1st	Morhart, Felicitas M.	<i>Journal of Marketing</i>	(Morhart et al., 2009)
	2nd	Herzog, Walter	WOS: CIT 133, IF 5.31, Q1, Business	
	3rd	Tomczak, Torsten	Scopus: CIT 155, IF 5.9, Q1 - Business and International Management	
2012	1st	Vaccaro, Ignacio G.	<i>Journal of Management Studies</i>	(Vaccaro et al., 2012)
	2nd	Jansen, Justin J. P.	WOS: CIT 115, IF 3.96, Q1 - Management	
	3rd	Van Den Bosch, Frans	Scopus: CIT 129, IF 5.11, Q1 - Business and International Management	
	4th	Volberda, Henk W.		
2009	1st	Toor, Shamas-ur-Rehman	<i>Journal of Business Ethics</i>	(Toor & Ofori, 2009)
	2nd	Ofori, George	WOS: CIT 93, IF 2.35, Q2 - Business Scopus: CIT 115, IF 1.16, Q1 - Business and International Management	
2007	1st	Rowold, Jens	<i>Leadership Quarterly</i>	(Rowold & Heinitz, 2007)
	2nd	Heinitz, Kathrin	WOS: CIT 91, IF 3.09, Q1 - Management Scopus: CIT 97, IF 2.18, Q1 - Business and International Management	
2007	1st	Hambley, Laura A.	<i>Organizational Behavior and Human Decision Process</i>	(Hambley et al., 2007)
	2nd	O'Neill, Thomas A.	WOS: CIT 74, IF 2.45, Q2 – Management	
	3rd	Kline, Theresa J. B.	Scopus: CIT 102, IF 2.4, Q1 - Organizational Behavior	

To sum up, considering all the most cited articles in WOS, Scopus and both, it can be concluded that 35 (74.5%) articles belong to Q1, 6 (12.8%) belong to Q2, 5 (10.6%) belong to Q3, and 1 (2.1%) belongs to Q4. Also, “Leadership Quarterly” published 4 (11.4%) of the top cited articles, followed by “Journal of Leadership & Organizational Studies” and “Journal of Management Studies” with 3 (8.6%) articles each. 4 different journals published 2 articles to contribute in 22.9% and 17 journals published 1 high ranked article to contribute in 48.6% of the top ranked articles.

In WOS top cited articles, Schaubroeck and Walumbwa appeared twice in the top 12 ranked articles contributing as the first authors, while Lam contributed as second author twice in these articles. The highest impact factor (11.11) of WOS top cited articles belongs to Van Knippenberg and Sitkin, and their theoretical article that studied the foundation of transformational and charismatic leadership. This study was published in the “Academy of Management Review” journal (Van Knippenberg & Sitkin, 2013). As for Scopus, the highest impact factor (10.34) belonged to the article published by Zhang, Lepine, Buckman & Wei (2014). This article studied the relationship between leadership, organizational justice and performance, and was published in the “Academy of Management Journal” (Zhang et al., 2014). As for common articles, the analyses showed that Scopus provided more citations than WOS for the same articles. Additionally, differences in the journal category classification were also detected in both platforms.

2.3.5- Scholars and affiliations

Table 2.10 depicts the first eight ranked scholars in the WOS platform, their publication years, quartile, and their contribution in terms of their position in the list of authors in each paper. Rowold who is ranked the first in WOS, published a total of 9 articles, in three of them appears as first author and in other six contributes as second or third author in 2011, 2014, 2015 and 2016. The articles in which he contributed were classified in the first and second quartiles, while his personal published articles belong to the fourth and third quartile. Walumbwa, the second most prolific WOS author, published four articles and contributed in publishing another four. His personal articles belong to first quartile while the articles he contributed in by being second and third author belong to the fourth and second quartile. In the table below, this information is displayed for all the authors with 5 publications or more. Additionally, the WOS dataset showed that 49 articles were written by 1 scholar to contribute in 9.85% of WOS articles, 147 articles were written by 2 scholars to contribute in 29.57% of WOS articles, 176 articles were written by 3 scholars to contribute in 35.41%, 88 were written by 4 scholars to contribute in 17.70%, 31 by 5 scholars to contribute in 6.23%, 5 by 6 scholars to contribute in 1% and finally 1 article was written by 7 scholars. Thus, the highest number of publications is for the articles that were written by 3 scholars, which constitutes the regular number of authors in the field.

The same analyses were conducted for Scopus top scholars. Table 2.11 shows that Rowold is also ranked as the first scholar by publishing 7 articles. In 5 articles he appears as first author, one of them being included in the first quartile, while in the others he collaborates as second author. The second ranked scholar

is Tuan, he published four articles, categorized in the not ranked journals. Additionally, the Scopus dataset showed that 94 articles were written by 1 scholar to contribute in 30.32% of Scopus articles, 90 articles were written by 2 scholars to contribute in 29.03% of Scopus articles, 87 articles were written by 3 scholars to contribute in 28.06%, 27 by 4 scholars to contribute in 8.70%, 8 by 5 scholars to contribute in 2.58 %, 3 by 6 scholars to contribute in 0.9% and finally 1 article was written by 7 scholars. Thus, the highest number of publications in the Scopus platform is for the articles that were written by 1 scholar.

Rowold also appeared to be the first scholar in the common articles' dataset. He has been the first author for five articles published in 2007 and 2013, and three articles in 2014. He also contributed as the third author in 2016 and fourth author in 2012. A difference appeared in the quartile classification between WOS and Scopus as displayed in Table 4.12.

Moreover, the common dataset showed that 17 articles were written by 1 scholar to contribute in 10.42% of common articles, 55 articles were written by 2 scholars to contribute in 33.74%, and another 55 articles were written by 3 scholars. 25 by 4 scholars to contribute in 15.33%, 6 by 5 scholars to contribute in 3.68%, and 5 articles were written by 6 scholars to contribute in 3.06%. Thus, the highest number of publications in the common dataset is for the articles that were written by 2 or 3 scholars.

Table 2.10- WOS Top Scholars, Publication Year and Quartile

WOS Top Scholars, Publications Year and Quartile							Quartile				
Scholar Name	N	1 st Author	2 nd Author	3 rd Author	4 th Author	5 th Author	Q1	Q2	Q3	Q4	NR
Rowold, Jens	9	2009, 2011, 2017	2011, 2014, 2016 (2)	2015(2)	NULL	NULL	1	1	3	4	0
Walumbwa, Fred O.	8	2008 (2), 2011, 2012	2007, 2009	2009,2012	NULL	NULL	6	1	0	1	0
Bruch, Heike	6	NULL	2009, 2010	2011, 2015	2011, 2015	NULL	5	1	0	0	0
Arthur, Calum Alexander	5	2011, 2014	2010, 2013, 2015	NULL	NULL	NULL	3	1	0	1	0
Chang, Yi-Ying	5	2015, 2016(2),2018,2017	NULL	NULL	NULL	NULL	0	0	0	5	0
Shamir, Boas	5	NULL	Null	2007,2009,2012,2010	2015	NULL	4	1	0	0	0
Yammarino, Francis J.	5	NULL	2009 (2)	2012	NULL	2012, 2013	5	0	0	0	0
Zhang, Zhen	5	2011	2011, 2012	2014, 2012	NULL	NULL	4	0	0	0	1

Table 2.11- Scopus Top Scholars, Publication Year and Quartile

Scopus Top Scholars Publication Years and Quartile					Quartile				
Scholar Name	N of Articles	1 st Author	2 nd Author		Q1	Q2	Q3	Q4	NR
Rowold, Jens	7	2008(2), 2009, 2011, 2015	2011, 2016		1	1	1	3	1
Tuan, Luu Trong	4	2010, 2011, 2012(2)	NULL		0	0	0	0	4

Table 2.12- Common Articles Top Scholars, Publication Year and Quartile

Common Articles Top Scholars Publication Years and Quartile					Quartile WOS				Quartile Scopus			
Scholar Name	N of Articles	1 st Author	3 rd Author	4 th Author	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Rowold, Jens	7	2007, 2013, 2014(3)	2016	2012	3	0	2	2	3	3	1	0

New authors appeared in the top scholars list after compiling the three datasets: WOS, Scopus and common articles. Rowold who appeared as first ranked scholar in WOS and common articles also appeared the first scholar in the total top scholars list by publishing 13 articles as first author. Chang also granted his position as the second scholar by publishing 5 articles as first author, along with Zacher who appeared as second scholar by publishing 2 articles in WOS, 2 articles in Scopus and 1 article in both, WOS and Scopus. 6 scholars appeared in the third rank position by publishing 4 articles. They are: Walumbwa, Zhu, Hoch, Sun, Dartey-Baah and Tuan, who occupied similar positions in WOS or Scopus. Second and third scholars ranking are also depicted in the Table 2.13.

Table 2.13-All Articles Top Scholars Ranking and Publications per Year.

Contribution	Name	N of Articles	Source and Year
Published as the first author	Rowold, Jens	13	2008 (4) , 2009 (3), 2011 (3), 2015(2) and 2017
	Chang, Yi-Ying	5	2015, 2016 (2), 2017, 2018
	Zacher, Hannes	5	2015, 2016 in (<i>Scopus</i>), 2013 & 2014 in (<i>WOS</i>) and 2011 in (<i>Common</i>)
	Dartey-Baah, Kwasi	4	2015,2016,2018 in (<i>WOS</i>) and 2017 in (<i>Common</i>)
	Hoch, Julia E.	4	2013,2014,2017,2018 in (<i>WOS</i>)
	Sun, Peter Y. T.	4	2012, 2013 in (<i>WOS</i>) and 2012 (2) in (<i>Common</i>)
	Tuan, Luu Trong	4	2010, 2011, and 2012 (2) in (<i>Scopus</i>)
	Walumbwa, Fred O.	4	2008 (2), 2011,2012
	Zhu, Weichun	4	2009,2013 (2) in (<i>WOS</i>) and 2011 in (<i>Scopus</i>)
Contributed as the second author	Rowold, Jens	6	2011(2), 2014, 2016 (3)
	Borgmann, Lars	4	2015 in (<i>Scopus</i>) and 2014 (2), 2013 in (<i>Common</i>)
	Den Hartog, Deanne N.	4	2008, 2010, 2011, 2015 in (<i>WOS</i>)
Contributed as the third author	Shamir, Boas	4	2007, 2009, 2012, 2015 in (<i>WOS</i>)
	Turner, Nick	4	2007, 2008 in (<i>WOS</i>) and 2010, 2012 in (<i>Common</i>)

2.3.6- Co-authorships

Generally speaking, VOS Viewer co-authorship analysis determines the relatedness of data based on the number of co-authored articles. VOS Viewer co-authorship analysis was conducted for both WOS and Scopus. As for the WOS dataset, the maximum number of scholars per articles was considered as 4 since the highest number of publications were written by up to 4 scholars, while the minimum number of articles per scholar was considered as 2. Accordingly, 217 documents met the threshold as shown in Figure 2.6.

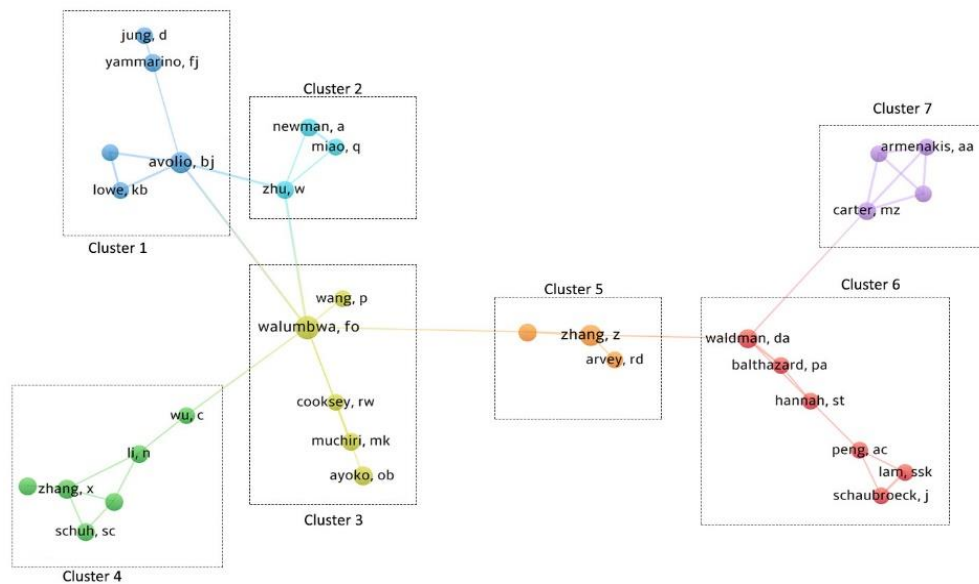


Figure 2.6- WOS Bibliometric Authors Co-authorship

This analysis revealed 7 clusters, those determine by the scholar's similarity or dis-similarity of topics discussed, each cluster has a central node with thick density, for example the thickest node in cluster 1 appeared for Avolio, while Walumbwa had the thickest node in the third cluster. The lines connecting authors inter cluster determine the degree of co-authorship between those scholars, while the lines connecting scholars within one cluster and the others determine the degree of co-authorship between these clusters. Initial links appeared between Avolio and Zhu, Avolio and Walumbwa, Avolio and

Yammarino. Another links were established between Walumbwa and Zhang, Zang and Waldman, and Waldman and Carter . Never to forget, the thickest connecting line, the more collaboration between those scholars.

The same process was repeated to determine co-authorship in Scopus dataset. Maximum number of scholars per article was set to four, while the minimum number of documents per scholar was set to one to view the maximum contribution. Accordingly, 918 authors met the threshold as shown in figure 4.6. 3 clusters were created. These clusters showed that the authors who were ranked as top productive scholars such as Rowold, and Borgmann I. appeared having the thickest node in cluster 1. In terms of contribution, the lines connecting clusters showed that Rowold contributes with Heinitz from cluster 3 and with Borgmann who appeared in the same clustered group.

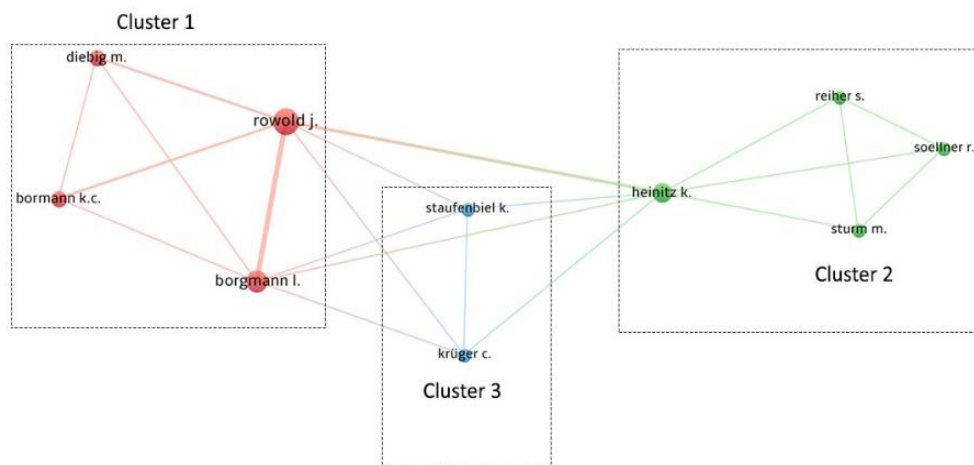


Figure 2.7- Scopus Bibliometric Authors Co-authorship

VOS Viewer is a very effective tool when analyzing research bibliometric data for each dataset (i.e. Scopus, WOS, etc.), however the limitation appeared when trying to compile the platforms dataset, especially that many articles can be published in both platforms as determined in our case. Thus, separating,

classifying and analyzing publications in descriptive statistic means would return more accurate and less biased results, this was applied in our research.

In total, 160 articles were written by one scholar to contribute in 16.49%, 292 (30.10%) articles were written by two scholars, 318 (32.78%) were written by 3 scholars, 140 (14.43%) were written by four scholars, 45 (4.63%) by five scholars, 13 by six scholars to contribute in 1.3 % and only 2 articles were written by 7 scholars. To conclude, in general, the highest numbers of articles are written by 3 authors followed by 2 authors in the leadership styles field.

2.3.7- First affiliation ranking and citations

Table 2.14 shows first affiliation ranking in WOS, Scopus and common articles in addition to the number of citations per affiliation. To do so, we did not take into consideration affiliations that appeared less than 6 times in WOS, and less than 5 time in Scopus and common articles. In general, Arizona State University appeared to be as the first ranked affiliation in WOS by publishing 13 articles, 12 of those belong to the first quartile category and were cited 778 times. Erasmus University Rotterdam is ranked as second by publishing 10 articles, 6 of them belong to the first quartile and 2 articles to the second and third quartiles. The articles published by this affiliation were cited 739 times. Michigan State University and University of Ghana were ranked as five by publishing 6 articles, but Michigan State University was cited 313 times while University of Ghana was cited only three times. As for Scopus, Universiti Putra Malaysia was ranked as first affiliation in the dataset, with the publication of 5 articles, none of them in the first quartile and which were cited only 16 times. Dortmund University of Technology, which was ranked the third in WOS by publishing 9 articles, was ranked the first in common articles with the

publication of 5 articles. The articles that belong to this affiliation were more cited in WOS than in Scopus. Erasmus University Rotterdam also ranked as second in common articles by publishing 4 articles; those articles were cited more than 300 times in both WOS and Scopus.

Considering the evolution over time, showed in Table 2.15, and after considering all the publications that were not counted in previous analysis conducted in Table 2.14 (for each platform separately for having less than 5 publications), Dortmund University of Technology appeared as the first ranked affiliation with 16 publications after adding two articles published in the Scopus platform. Arizona State University, and Erasmus University Rotterdam appeared as the second top affiliation. For example Arizona State University initial count (13 articles) was based on WOS publications, after considering one publication occurred in the Scopus platform, the total number of publications increased to 14. Erasmus University Rotterdam publications increased after compiling WOS and common articles. Additionally, Dortmund University of Technology productivity increased between 2014 and 2017, while it has decreased for Arizona State University. California State University and University of Queensland, which occupy the third and fourth position respectively, with almost the same number of publications.

Table 2.14- Top First Affiliation Ranking and Citation based on Platform

Top First Affiliation				Quartile					Affiliation Citation				
Journal Name Common		N	%	Q1	Q2	Q3	Q4	NR	WOS	Scopus	Common		
											WOS	Scopus	
WOS	Arizona State University	13	1.34	12	0	0	0	1	778	10	0	0	
	Erasmus University Rotterdam	10	1.03	6	2	2	0	0	739	0	0	0	
	Dortmund University of Technology	9	0.93	1	2	2	4	0	95	0	0	0	
	University of Queensland	7	0.72	2	2	2	1	0	85	2	26	27	
	California State University	6	0.62	4	0	1	1	0	106	2	12	25	
	Michigan State University	6	0.62	3	2	1	0	0	313	0	14	28	
	University of Ghana	6	0.62	0	0	0	2	4	2	0	2	2	
Scopus	Universiti Putra Malaysia	5	0.52	0	2	1	2	0	0	16	0	1	
Common	Dortmund University of Technology	5	WOS	0.52	1	0	2	2	0	0	0	31	0
			Scopus	0.52	1	3	1	0	0	0	0	0	26
	Erasmus University Rotterdam	4	WOS	0.41	4	0	0	0	0	0	0	325	0
			Scopus	0.41	4	0	0	0	0	0	0	0	366

Table 2.15- Top First Affiliations Contributed on Leadership Styles Research

Top Affiliation														
Affiliation	07	08	09	10	11	12	13	14	15	16	17	18	N	%
Dortmund University of Technology	0	0	0	0	3	0	2	5	2	3	2	0	17	1.7
Arizona State University	2	2	2	0	3	2	0	1	1	1	0	0	14	1.4
Erasmus University Rotterdam	0	2	1	0	3	1	2	2	1	0	2	0	14	1.4
California State University	0	1	0	1	1	0	1	1	0	4	1	0	10	1
University of Queensland	0	0	0	1	2	0	1	3	1	0	1	0	9	0.9
Michigan State University	2	1	0	0	1	1	1	0	1	0	1	0	8	0.8
University of Groningen	0	0	0	2	1	1	1	1	1	1	0	0	8	0.8
University of Ghana	0	0	0	0	0	0	0	0	1	1	5	1	8	0.8
Monash University	0	0	1	0	4	0	0	1	0	1	0	0	7	0.7
University of Amsterdam	1	0	0	1	0	0	0	2	1	1	0	1	7	0.7

Further analyses were conducted to determine scholar's contribution with respect to affiliations in order to know how those scholars affected the affiliation ranking. As depicted in Table 2.16, it was found that Rowold who published six articles under the Dortmund University of Technology, also published four articles under the University of Munster but at earlier years of his academic career. As well as Engelen and Diebig, who published two articles each one, under the Dortmund University of Technology affiliation. Regarding Arizona State University, Walumbwa published four articles while Peterson, Balthazard and Nemanich published two articles each. It was also noticed that Arizona State University publications are highly cited. Most of the University of Queensland publications were conducted by Zacher until 2015, although one year after, Zacher published one article affiliated to the University of Groningen. Hoch published her first article under the Michigan State University affiliation in 2013, afterwards she published three papers with the affiliation of California State University between 2014 and 2018.

As a conclusion, some of the affiliations are highly ranked as a result of their academic contributions. It is the case of Rowold for the Dortmund University of Technology and Zacher for the University of Queensland and Hoch for the California State University. It can also be noticed that when scholars move from one affiliation to another, they are adding value to it by releasing more publications.

Table 2.16- Scholars' Contribution with Respect to Affiliation

Scholar	Source	Publication Years	Affiliation	Citations
Rowold, Jens	WOS (2), Common (4), Scopus (2)	2011(2), 2013(1), 2014(3),2015 (1) 2017(1)	Dortmund University of Technology	93
Rowold, Jens	WOS (1), Scopus(2), Common(1)	2007,2008, 2009(2)	University of Munster	234
Hoch, Julia E.	WOS (3)	2014(1), 2017(1), 2018(1)	California State University	61
Hoch, Julia E.	WOS	2013	Michigan State University	32
Diebig, Mathias	WOS (1), Common (1)	2016(1), 2017 (1)	Dortmund University of Technology	12
Diebig, Mathias	WOS	2017	Heinrich Heine University Dusseldorf	0
Zacher, Hannes	WOS(2), Scopus(1), Common (1)	2011 (1), 2013 (1), 2014 (1), 2015 (1)	University of Queensland	70
Zacher, Hannes	Scopus	2016	University of Groningen	7
Balthazard, Pierre A.	WOS (2)	2009 (1), 2012 (1)	Arizona State University	79
Nemanich, Louise A.	WOS (1), Common (1)	2007 (2)	Arizona State University	106
Peterson, Suzanne J.	WOS (2)	2009(1), 2011(1)	Arizona State University	101
Walumbwa, Fred O.	WOS (4)	2008(2), 2011(1), 2012(1)	Arizona State University	411
Asencio, Hugo	Scopus (3)	2016 (3)	California State University	2
Engelen, Andreas	WOS (2)	2014(1), 2015(1)	Dortmund University of Technology	42
Jansen, Justin J. P.	WOS (1), Common (1)	2009 (1), 2008(1)	Erasmus University Rotterdam	496
Van Dierendonck, Dirk	WOS (2)	2011(1), 2014(1)	Erasmus University Rotterdam	117
Ayoko, Oluremi B.	WOS (2)	2010 (1), 2014 (1)	University of Queensland	43

Analyses were also conducted to determine the top second affiliation who contributed in publishing. As a result, Arizona State University which appeared to be as the first ranked in our analyses of first affiliation in WOS, also appeared the first ranked as second affiliation by contributing in publishing 8 articles, 7 of these articles belong to the first quartile category and were cited 470 times, while the Michigan State University and the University of Amsterdam are ranked as second by contributing in publishing 5 articles. Michigan State University articles belong to the first quartile and were cited 473 times, while University of Amsterdam articles are classified in the second and third quartile and cited 162 times. As for Scopus, the Universiti Putra Malaysia is also ranked as the first in second affiliation dataset by contributing in publishing 3 papers in the second, third and fourth quartile, those articles are only cited once. Liechtenstein University is ranked the first in common articles, the scholars in this university contributed in publishing 4 articles, those articles were cited 16 times in WOS and 17 times in Scopus.

Furthermore, to identify the top counties and continents that are adding value to leadership styles research, descriptive analyses were conducted as shown in Figure 2.8 for the first affiliations. Accordingly, Europe continent appeared to be the first ranked continent by producing 297 articles to constitute 30.62% of all articles. Out of 297, 148 were published in WOS (30), 91(29 %) articles in Scopus and 58 (4 %) were common articles. In Europe, Germany appeared to be the first contributor by publishing 64 (6.6 %), followed by England with 52 (5.4 %), then Netherlands with 46 (4.7 %) and Spain with 26 (2.7 %) articles. Other countries in Europe contributed in 109 (10.2 %) articles.

The second ranked continent is America where 289 (29.79 %) articles were published in this continent. Mainly North America contributed the most in publications where 276 (28 %) articles were published there. 152 articles were published in WOS (31 %), 76 (25 %) articles were published in Scopus, and 48 (29 %) are common articles. In North America, United States of America (USA) solely published 232 (23.9 %) articles, while Canada published 41 (4.2 %) articles.

The third ranked continent is Asia, showing a similar situation to America. Asia including Gulf, Middle East, and Far East published 287 (29.59 %) articles. 61 articles (6.3 %) were published by Chinese affiliations, while Taiwanese affiliations published 43 (4.4 %) articles. 36 (3.7 %) articles were published under Malaysian affiliations.

Australia and New Zealand were ranked the fourth by publishing 74 (8 %) articles. Finally, the last rank position is for Africa where 23 (2.37 %) articles were published, most of these articles were published by South African affiliations.

Comparing Europe, Asia, and North America, it can be clearly noticed that European productivity is increasing over the years. 10 (3.36 %) publications occurred in 2007, then increased to 31 (10.43 %) in 2011 to reach 40 (13.46 %) in 2016. Comparing to North America, publication in this continent started with 15 (5.43 %) in 2007, to 45 (16.30 %) in 2001, and then decreased to 29 (10.50 %) from 2012 to 2016. However; Asian publications are increasing over the years, 7 (2.4 %) publications occurred in 2007, to reach 47 (16.37 %) in 2017. 2011, was the most productive year in North America when 45 articles were published in this year, followed by 2013 by publishing 32 articles. As for Asia,

2017 was the most productive year, when 47 (16.37 %) publications were released in this year, followed by 2012 and 2015 by producing 38 (13.24 %) in each. However; Europe produced 40 (13.46 %) articles in each of 2015 and 2016, and 37 (12.45 %) in each of 2014 and 2017. The first quarter of 2018 showed that 15 articles have been published by Asia, 7 articles have been published by Europe and 4 articles by North America. If the performance of the Asia continent continues with this momentum, it is expected to be in the first rank position in the upcoming years, followed by Europe and North America. Such change is considered a big shift in the leadership styles research scenario. Figure 2.8 also shows the countries ranking. USA appeared in the first place with 232 publications to constitute 23.9 % of the publications, those articles have been cited 7295, followed by Australia with 67 publications and 454 citations, then Germany with 64 publications and 1728 citation. The Netherlands published 46 articles which were cited 2312 to be in the sixth position but with the highest number of citations among the Europe countries. Moreover, Spain is in the tenth position, with 26 publications and 152 citations. Additionally, to address first affiliation top countries, and in order to go thoroughly into the results, Table 2.17 was created. This table identifies quartiles per country, the number of citations per country and platform, and top affiliations producing articles that contributed in increasing the country rank. For example, articles that were published by American institutions in the WOS platform received 4520 citations, in this platform 83 articles (35.8%) were published in the first quartile and 18 (7.76%) in the second quartile, while the 16 articles that were published in Scopus received 716 citations, 16 (6.9%) were published in the first quartile.

A difference was also noticed in the quartiles of the publishing journals of common articles, the total common articles published in WOS and Scopus for USA is 38, with respect to classification, 22 of them were published in the Q1 category in WOS while 27 articles were published in the Q1 Scopus classification category. Hence after adding the total citations including the common articles, the total of citations received by USA affiliations is 7295. A huge gap (71.12%) appeared between the first (USA) and second ranked producing country (Australia). For example, Australia produced only 67 articles, most of them were published in the Q2 and Q3 categories and received 454 citations, thus the citation difference between the first and second country is 6841 citations. Although the Netherlands appeared in the sixth place in countries ranking with 46 publications, this country appeared the second in citations ranking with 2312 citation mostly from the WOS platform, where 19 articles were published in the Q1 WOS category and 6 articles in the Q2. Moreover, Germany appeared the third in both citations with 1728 citations and number of publications with 64 publications. Thus, countries ranking can be determined either by the number of publications or by the total number of citations received.

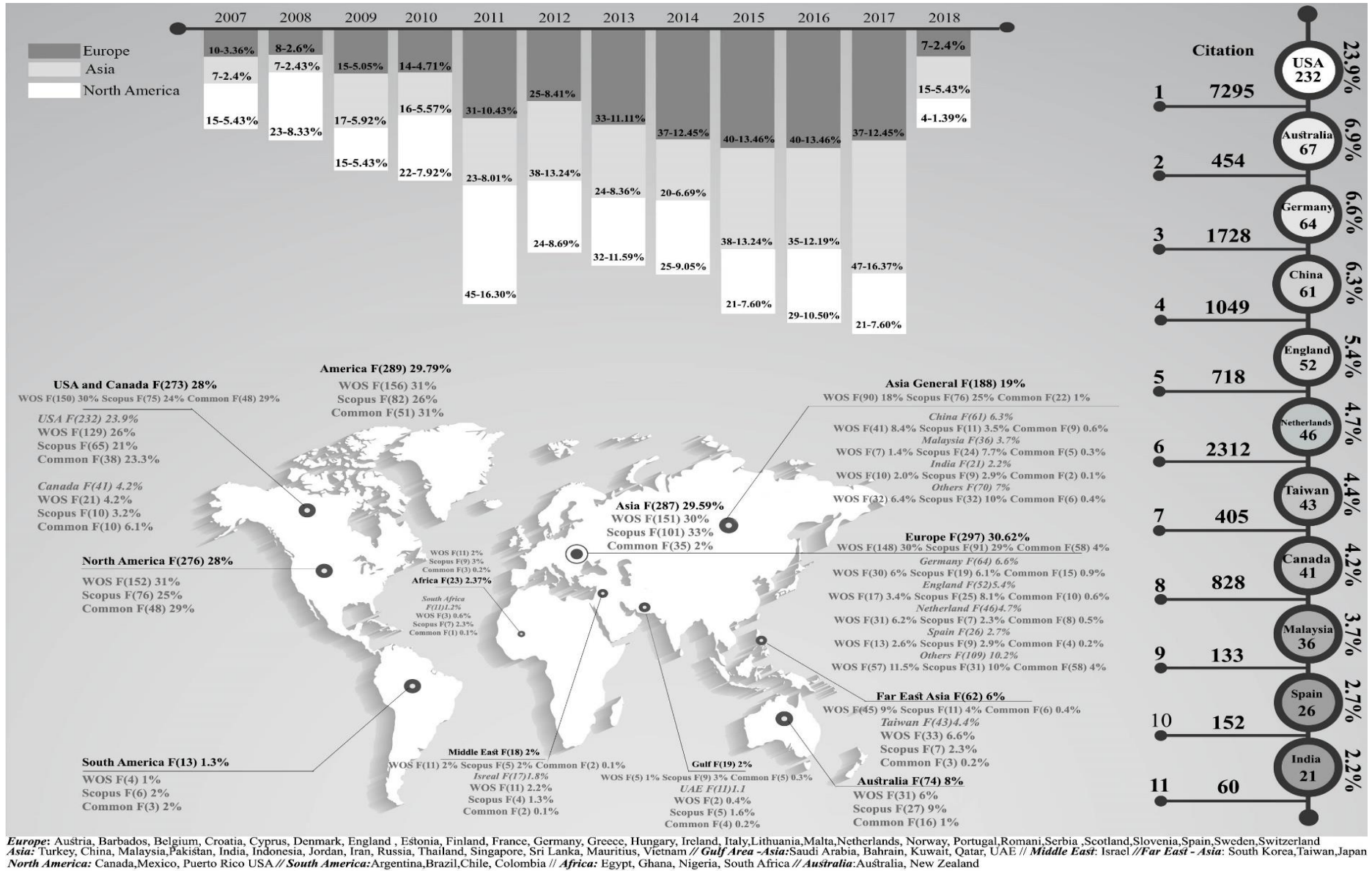


Figure 2.8- First Affiliation Continent, Countries, Productivity and Citation Ranking.

Table 2.17-Countries Ranking, Quartile and Top Affiliations

	F	%	Source	Q1		Q2		Q3		Q4		NR		Citation	TTL Citation	Top Country Affiliation
				F	%	F	%	F	%	F	%	F	%			
USA	232	24	WOS	83	35.	18	7.7	13	5.6	9	3.8	6	2.5	4520	7295	Arizona State University (14 Articles)
			Scopus	16	6.9	28	12	11	4.7	8	3.4	2	0.86	716		
			C*.WOS	22	9.4	5	2.1	5	2.2	3	1.2	3	1.29	960		
			C*.Scopus	27	11	9	3.8 8	1	0.4	1	0.4	0	0	1099		
Australia	67	6.9	WOS	10	15	6	8.9	4	6	7	10	1	1.4	301	454	University of Queensland (10 Articles)
			Scopus	2	2.9	6	8.9	6	9	1	1.5	2	3	141		
			C*.WOS	0	0	2	2.9	1	1.5	0	0	0	0	5		
			C*.Scopus	0	0	0	0	0	0	0	0	3	4.4	7		
Germany	64	6.6	WOS	12	19	5	7.8	6	9.4	6	9.3	1	1.56	845	1728	Dortmund University of Technology (17 Articles)
			Scopus	1	1.5	1	1.5 6	4	6.3	1	1.5	0	0	39		
			C*.WOS	8	12.	0	0	3	4.7	4	6.2	0	0	562		
			C*.Scopus	9	14	3	4.6	3	4.7	0	0	0	0	282		
China	61	6.3	WOS	23	37	6	9.8 4	13	21	13	21	6	9.8	785	1049	University of Hong Kong (6 Articles)
			Scopus	5	8.2	3	4.9	1	1.6	2	3.2	0	0	81		
			C*.WOS	1	1.6	1	1.6	4	6.6	2	3.2	1	1.64	76		
			C*.Scopus	3	4.9	4	6.5	1	1.6	1	1.6	0	0	107		
England	52	5.4	WOS	7	13	2	3.8	5	9.6	1	1.9	2	3.85	324	719	Bangor University (5 Articles)
			Scopus	6	11	9	17	6	12	3	5.7	1	1.92	199		
			C*.WOS	4	7.6	0	0	2	3.8	4	7.6	0	0	90		
			C*.Scopus	5	9.6	5	9.6	0	0	0	0	0	0	106		
Netherland	46	4.7	WOS	19	41.	6	13	5	11	1	2.1	0	0	1051	2312	Erasmus University Rotterdam (14 Articles)
			Scopus	5	11	2	4.3	0	0	0	0	0	0	73		
			C*.WOS	6	13	2	4.3	0	0	0	0	0	0	561		
			C*.Scopus	8	17	0	0	0	0	0	0	0	0	627		
Taiwan	43	4.4	WOS	8	18	6	14	9	21	9	21	1	2.3	327	405	National Taiwan University of Science & Technology (5 Articles)
			Scopus	6	14	1	2.3	0	0	0	0	0	0	46		
			C*.WOS	0	0	0	0	2	4.7	1	2.3	0	0	15		
			C*.Scopus	1	2.3	2	4.6	0	0	0	0	0	0	17		
Canada	41	4.2	WOS	6	14	5	12	4	9.8	5	12	1	2.4	277	828	University of Montreal Concordia University (5 Articles each)
			Scopus	1	2.4	4	9.7	5	12	0	0	0	0	24		
			C*.WOS	4	9.7	2	4.8	2	4.9	2	4.8	0	0	229		
			C*.Scopus	6	14	3	7.3	1	2.4	0	0	0	0	298		
Malaysia	36	3.7	WOS	1	2.7	0	0	3	8.3	1	2.7	2	5.56	18	133	Universiti Putra Malaysia (6 Articles) Universiti Teknologi Malaysia (6 Articles)
			Scopus	0	0	6	16.	8	22	10	28	0	0	54		
			C*.WOS	0	0	0	0	0	0	2	5.5	3	8.33	28		
			C*.Scopus	0	0	5	14	0	0	0	0	0	0	33		
			C*.Scopus	0	0	5	14	0	0	0	0	0	0	33		
Spain	26	2.7	WOS	2	7.6	2	7.6	2	7.7	3	11	4	15.4	66	152	University of Valencia (4 Articles) University of Granada (3 Articles) Universidad Nacional de Educacion a Distancia (3 Articles)
			Scopus	2	7.6	1	3.8	5	19	0	0	1	3.8	46		
			C*.WOS	0	0	0	0	3	12	0	0	1	3.8	20		
			C*.Scopus	0	0	2	7.6	0	0	1	3.8	0	0	20		
India	21	2.2	WOS	1	4.7	1	4.7	1	4.8	3	14	4	19	42	60	Indian Institute of Technology (4 Articles)
			Scopus	0	0	2	9.5	1	4.8	6	28.	0	0	15		
			C*.WOS	0	0	0	0	1	4.8	0	0	1	4.7	1		
			C*.Scopus	1	4.7	1	4.7	0	0	0	0	0	0	2		

2.3.8- Collaboration between countries

VOS Viewer countries co-authorship for each of the WOS and Scopus datasets were also created to identify the degree of collaboration between countries. As for WOS, to show the most co-authorship occurrence, the maximum number of countries per document was set to 3, while the minimum number of documents per country were set as 4. Accordingly, out of 68 countries, 43 countries met the threshold. For each 43 countries the total strength of the co-authorship link with other countries will be calculated, the countries with the greatest total link strength are shown in Figure 2.9.

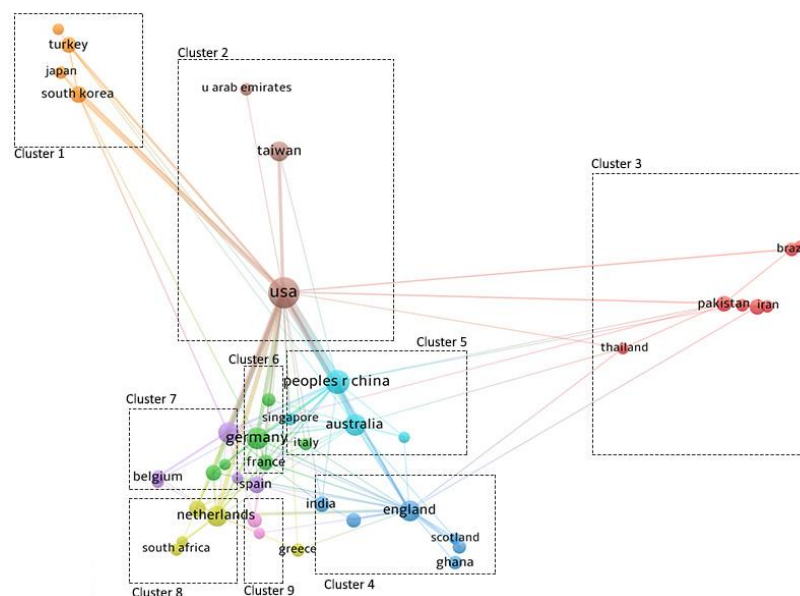


Figure 2.9- VOS Viewer, WOS Bibliometric Countries Co-Authorship

9 clusters were created showing the main nodes per cluster which are Turkey and Japan for cluster 1, USA and Taiwan for cluster 2, Pakistan for cluster 3, England for cluster 4, China and Australia for cluster 5, Germany for cluster 6, Canada for cluster 7, Netherlands for cluster 8 and Slovenia for cluster 9. The collaboration between clusters is represented by the lines connecting the clusters between them.

Using SPSS cross tabulation analysis on the WOS database, and analyzing the countries with more than 31 articles, it could be noted that USA published 129

(26 %) articles, 40 (8%) articles were published by one institution in the US, 67(13.5%) articles were published in cooperation with another American institution, USA collaborated 6 times (1.2 %) with Chinese institutions, 3 times with Canadian institutions, 2 twice with institutions of England, the Netherlands, Sweden and Turkey; and once with institutions of France, Greece, New Zealand, South Africa, Taiwan and Switzerland. In the second place, China's first affiliations published 12 (2.4%) articles solely, 14 (2.8%) in collaboration with another Chinese institution, 9 (1.8%) articles with American institutions and 6 articles with 6 different countries. Taiwan published 33 (6.6%) articles, 16 (3.2%) of them were published by one institution, 14 (2.8%) in collaboration with another institution from Taiwan and 3 (0.6%) articles with American institutions. The Netherlands published 12 (2.4%) articles without collaboration, 8 (1.6%) with another affiliation from the Netherlands, 4 articles with American institutions and 7 articles in collaboration with European institutions.

Using the same technique, the same analyses were conducted for the Scopus dataset. Out of 74 countries, 37 met the threshold to form 7 clusters as shown in Figure 2.10. Mainly USA had the thickest node in cluster 1, Australia for cluster 2, Taiwan for cluster 3, Germany for cluster 4, Malaysia for cluster 5, England for cluster 6 and Canada for cluster 7. This means, most of the affiliations' collaboration occurred between these countries and other countries. Besides, the thicker the lines between the nodes the more collaboration exists between these countries.

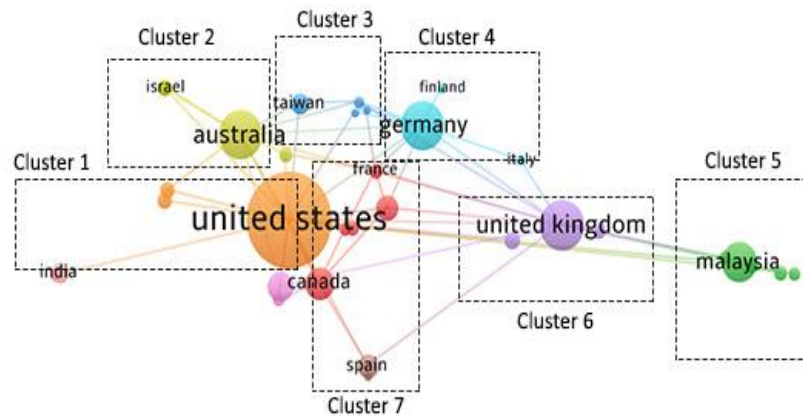


Figure 2.10- VOS Viewer, Scopus Bibliometric Countries Co-Authorship

As for Scopus articles, analyzing countries that published 24 articles and above, USA published 65 (21%) articles being first affiliation, 40 of them were solely written by one organization, 21 (6.8 %) in collaboration with another American organization and one article in collaboration with one institution from England, New Zealand, Sweden, and Turkey. As for the second rank, Australia published 26 (8.4 %) articles, 4 of them with another Australian institution, 14 without any cooperation and once with institutions from Canada, England, Ireland, Israel, Kuwait, New Zealand, Turkey and USA. England collaborated once with each of Australia and Austria, 8 times with another institution from England, and 15 times without any cooperation. Malaysian institutions published 24 (7.7 %) articles, 15 of them were done by one Malaysian institution, 7 in cooperation with other Malaysian intuition and they cooperated once with Nigerian and Omani institutions.

The analysis of the common articles showed that USA again published 38 articles, 19 of them were published in cooperation with another affiliation from USA, 2 with South Korea, and one with each of Australia, Canada, Israel, and Turkey.

As a conclusion, most of the top producing affiliations are not cooperating with other entities or institutions or in some cases they are cooperating with institutions of the same country as listed in the following table. USA always appeared to have the first place as first affiliation, showing that institutions around the world seek to collaborate with American intuitions (Table 18).

Table 2.18- Type of Affiliations Collaboration per Country

Country	Without Collaboration	Same Country Collaboration	Different Country Collaboration	Total
USA	93	107	32	232
Australia	31	16	20	67
Germany	38	19	7	64
China	19	23	19	61
England	20	19	13	52
Netherlands	16	13	17	46
Taiwan	19	21	3	43
Canada	18	16	7	41
Malaysia	22	11	3	36
Spain	15	3	8	26
India	13	6	2	21

Collaborations between continents showed that Asia collaborations – excluding Middle East, Far East and Gulf – occurred with Africa once (0.1 %), USA and Canada 18 (1.9 %) times, Australia 2 (0.2 %) times, Europe 7 (0.7 %) times, with Gulf 3 (0.3 %) times and once with Far East and South America. Australia collaborated twice (0.2 %) with USA and Canada, 5 (0.5 %) times with Asia, 9 (0.9 %) times with Europe, and once with each of Gulf, Middle East and North America. Europe collaborated 15 (1.5 %) times with USA and Canada, 5 times with Asia and Australia, once with Far East. Finally, South America collaborated twice with Middle East and 6 (0.6 %) times with North America. Figure 2.11 shows that the most frequent collaboration occurred between top first and second affiliations. The rectangle in this figure represents the first affiliation; the dotted rectangle represents the second affiliations, as for the

arrow it shows the year of collaboration and the source of the article. In this figure, affiliations with 7 or more collaborations are represented.

Out of 17 publications, Dortmund University of Technology from Germany which appeared as top ranked affiliation collaborated only 4 times with other affiliations, those included Free University of Berlin, State University of New York, RWTH Aachen University, and Fern University Hagen.

Arizona State University, Michigan State University from USA, Vrije Universiteit, University of Groningen, University of Amsterdam and Erasmus University Rotterdam from the Netherlands, in addition to Monash University from Malaysia represented the main collaborative affiliations. The collaboration between Michigan State University and Erasmus University Rotterdam occurred twice in 2011 and 2012 and their articles were published in the WOS platform. Another collaboration occurred between Erasmus University Rotterdam and University of Groningen in 2010, their article was published in both, WOS and Scopus platforms. The Erasmus University Rotterdam also collaborated with the University of Amsterdam twice in 2008 and 2017. The later collaborated with the Vrije Universiteit once in 2010. As for Arizona State University, the data showed that this affiliation never collaborated with any of the top affiliations, nevertheless, this affiliation collaborated once with each of Baylor University, University of Nebraska–Lincoln, University of Houston, Syracuse University, University of Texas System, University of Hongkong, United States Military University and New York University. 2 collaborated publication of Arizona State University occurred in each of 2007, 2008, 2009 and 2012 and one publication occurred in each of 2015 and 2016. Most of them published in the WOS platform.

Comparing between the collaborating institutes, although the Arizona State University had the highest number of collaborations with second affiliations, the Erasmus University Rotterdam publications in collaborating with aforementioned first affiliations were the highest. Thus, this affiliation has a high attention from different institutions to collaborate with it.

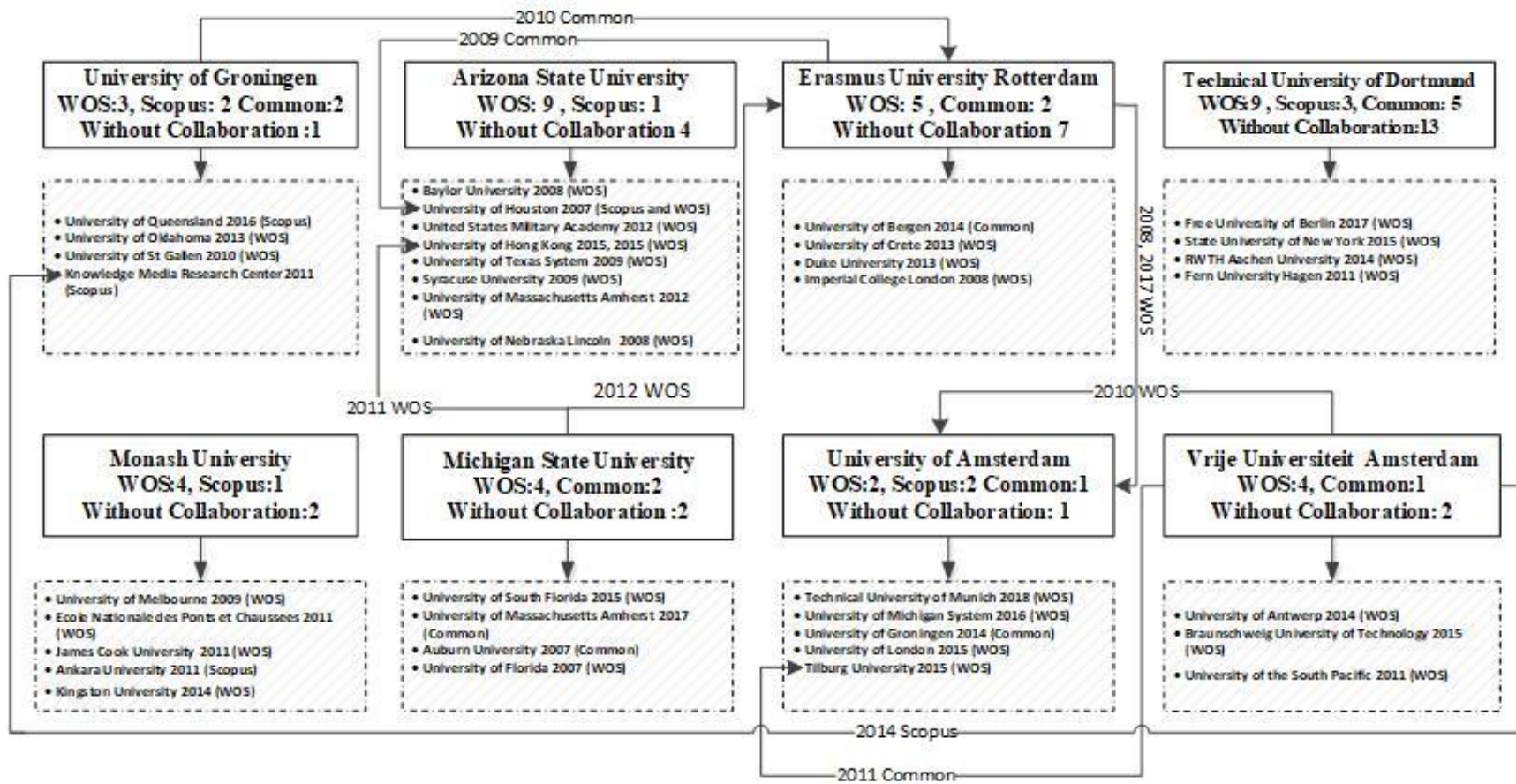


Figure 2.11- Top First Affiliation Collaborations with Second Affiliations

2.3.9- Publishers

Regarding the publisher country, most of the publications were published by journals located in England and USA. 396 (40.8 %) articles were published in England, 175 appeared in the WOS platform, 142 in Scopus, and 79 in both of them. USA journals published 378 (39%) articles, 240 appeared in WOS, 77 in Scopus, and 61 in both platforms. Thus, USA journals focus more on the WOS platform. As for the Netherlands journals, 55 articles were published, 31 of them in WOS and 12 in Scopus and another 12 in both WOS and Scopus journals. Table 4.19 shows all the locations of journals appeared in this research, where 14 journals were from Nigeria, 12 from Germany, 10 from each of Canada, India, and Romania, 9 from Spain and 8 from Switzerland. Most of the time those low ranked journals are considered as local journals who published for local affiliations.

It can be concluded from table 4.17 that most of the journals in Europe and America are publishing in their continent due to the existence of well ranked and reputable journals. Asian, Australian and African affiliations are also publishing in Europe and America, due to the lack of journals in their home continent.

Table 2.19- Publishers Country

Publisher Country	All Articles		WOS		Scopus		Common	
	F	%	F	%	F	%	F	%
England	396	40.8	175	35.2	142	45.8	79	48.5
USA	378	39.0	240	48.3	77	24.8	61	37.4
Netherlands	55	5.7	31	6.2	12	3.9	12	7.4
Nigeria	14	1.4	14	2.8	0	0	0	0
Germany	12	1.2	3	0.6	3	1.0	6	3.7
Canada	10	1.0	0	0	10	3.2	0	0
India	10	1.0	2	0.4	8	2.6	0	0
Romania	10	1.0	2	0.4	8	2.6	0	0
Spain	9	.9	4	0.8	4	1.3	1	0.6
Switzerland	8	.8	2	0.4	6	1.9	0	0
Malaysia	7	.7	1	0.2	3	1.0	3	1.8
Ukraine	6	.6	1	0.2	5	1.6	0	0
Australia	5	.5	2	0.4	3	1.0	0	0
Iran	5	.5	4	0.8	1	.3	0	0
Turkey	5	.5	0	0	5	1.6	0	0
Venezuela	5	.5	1	0.2	4	1.3	0	0
Italy	4	.4	2	0.4	2	.6	0	0
Chile	3	.3		0.0	3	1.0	0	0
Croatia	3	.3	1	0.2	1	.3	1	0.6
Singapore	3	.3	2	0.4	1	.3	0	0
China	2	.2	1	0.2	1	.3	0	0
Lithuania	2	.2	1	0.2	1	.3	0	0
Norway	2	.2	1	0.2	1	.3	0	0
Russia	2	.2	0	0	2	.6	0	0
South Africa	2	.2	1	0.2	1	.3	0	0
Bosnia & Herzegovina	1	.1	0	0	1	.3	0	0
Brazil	1	.1	1	0.2	0	0	0	0
Canada	1	.1	1	0.2	0	0	0	0
Colombia	1	.1	1	0.2	0	0	0	0
Denmark	1	.1	1	0.2	0	0	0	0
Ghana	1	.1	1	0.2	0	0	0	0
Greece	1	.1	0	0	1	.3	0	0
Pakistan	1	.1	0	0	1	.3	0	0
Peru	1	.1	1	0.2	0	0	0	0
South Korea	1	.1	0	0	1	.3	0	0
Taiwan	1	.1	0	0	1	.3	0	0
Thailand	1	.1	0	0	1	.3		0
Total	970	100	497	100	310	100	163	100

The collaboration also appeared between the place of publication and the first affiliation. 118 (12.2 %) of the articles written in Europe were published in North American journals, mainly USA, 4 (0.4 %) in Asia, 174 (17.9 %) in Europe itself, mainly England, and 1 (0.1 %) in South America. 162 (16.6 %) articles that were written by American affiliations were published in America, 111 (11.5 %) in Europe and only 2 in Asia. As for the Asian continent, 74 (7.6

%) of the articles were published in American journals, 154 (15.8 %) in European journals, 29 (3 %) in Asian journals, 14 (1.4 %) in African journals and 3 (0.3 %) in Asian journals. Australians institutions also published 19 (2 %) in American journals, 52 (5.4 %) in European journals and 2 (0.2 %) in Australian journals. As for African institutions, they focused more on Europe, publishing 15 (1.5 %) articles in Europe, 4 (0.4 %) in America and 3 in Africa.

2.4- Specific Bibliometric Analysis Results

After conducting a generic bibliometric analysis where the main features and characteristics of papers on leadership were highlighted, a more specific bibliometric analysis was also conducted to determine the main purposes, topics, variables and hypotheses established by previous research on the topic. With this second specific bibliometric review the more relevant gaps and voids of previous research will be underlined, being possible to better establish and justify the objectives of this doctoral thesis.

To conduct the specific bibliometric review, the research design of previous studies, their variables and main hypotheses will be identified, which constitute the different parts of this specific bibliometric analysis.

2.4.1- Research design

The analysis of our sample in terms of the research design used showed that most of the conducted researches, 878 (89.4%), adopted a statistical approach, 30 publications conducted literature reviews and 9 publications adopted quasi-experimental. Results are depicted in Table 2.20. This finding agrees with the conclusion of Antonakis, Bastardo, Liu, & Schriesheim (2014), who expected an increase on the use of ANOVA and regression analyses applied to quantitative data for their advantages.

Table 2.20- Research Design

Research Design	N	%
Case Study	11	1.1
Conceptual	25	1.6
Experimental Statistics	5	2.5
Literature Review	30	3.1
Meta-Analysis	24	2.4
Quasi-Experimental	9	.9
Statistical	878	89.4
Total	982	100

The trend analysis shown in Table 2.21 indicated an increasing interest in statistical research approaches, starting from 28 publication in 2007 to reach 118 publications in 2018. The meta-analysis approach appeared for the first time in 2010, and slightly increased in 2016. In addition, the highest number of conceptual publications occurred in 2015.

Table 2.21- Research Design by Year

Year	Case Study	Conceptual	Literature Review	Meta-Analysis	Quasi-Exp.	Statistical	N
2007	0	0	1	0	0	28	29
2008	0	0	2	0	0	40	42
2009	1	2	5	0	0	42	50
2010	1	1	0	2	0	50	54
2011	1	4	5	2	1	81	94
2012	1	3	3	2	1	85	95
2013	2	4	2	3	0	76	87
2014	2	1	0	3	1	82	89
2015	2	5	2	3	2	78	92
2016	1	2	1	4	0	101	109
2017	0	2	5	3	2	102	114
2018	0	1	4	2	2	118	127
N	11	25	30	24	9	883	982

2.4.2- Independent variables

In order to identify the most researched independent variables (research topics) on transformational and transactional leadership styles, independent variables were detected by adopting text data mining by reading articles abstract, content,

results and conclusion. Data were classified in Excel and SPSS to be analyzed and generate meaningful information, as depicted in Table 2.22.

Out of 552 (56.1%) publications that included transformational leadership style or leadership style in their title, abstract or keyword, it can be noticed that 446 (45.4%) discussed both transactional and transformational leadership styles, while 105 (10.7%) discussed the previous mentioned styles in addition to laissez-faire style. 324 (33%) publications considered transformational leadership style as an independent variable.

Aggregating these results leads to conclude that transformational leadership style is still the most researched topic from 2007 till 2018 as it is appeared 875 times as an independent variable, followed by transactional leadership style with 551 publications and laissez-faire style with 105. This finding contrasts with that of Meuser et al. (2016), who through network graphics showed that transformational and transactional leadership styles are often not studied together.

Table 2.22- Independent Variables Groups

IV-1			IV-4			IV-4 - Continued		
Independent Variable	N	%	Independent Variable	N	%	Independent Variable	N	%
Transformational and Transactional Styles	446	45.4	Absorptive Capacity	1	0.1	Leaders' Personality	1	0.1
Transformational Leadership Style	324	33	Behavior Based Control	1	0.1	Leadership Outcome Bib. Review	1	0.1
Transformational, Transactional and Laissez-Faire Styles	105	10.7	Challenge Appraisals	1	0.1	Machiavellianism	1	0.1
Charismatic Leadership Style	19	1.9	Charismatic Leadership Training	1	0.1	Management Control In TQM	1	0.1
Transactional Leadership Style	14	1.4	Core Self-Evaluation	1	0.1	Manager Personality	1	0.1
Total	908	92.4	Corporate Governance	1	0.1	Organizational Efficacy	1	0.1
IV-2			Corporate Social Responsibility	1	0.1	Safety Knowledge	1	0.1
Independent Variable	N	%	Deviant Workplace Behavior	1	0.1	Senior Team and Conflicts	1	0.1
Leadership Measurement Tool	13	1.3	Emotion Valence	1	0.1	Team Structure	1	0.1
Emotional Intelligence	5	0.5	Emotional Exhaustion	1	0.1	Value of The Buying Center	1	0.1
Personality Traits	3	0.3	Employability	1	0.1	Work Interference with Family	1	0.1
Organizational Justice	3	0.3	Employee Status	1	0.1	Laissez-Faire Leadership	1	0.1
Leader-Member Exchange	3	0.3	Employee Stress	1	0.1	Total	35	0.035
Total	27	2.7	Encouragement	1	0.1	IV1- Main group IV2-Independent Variables appeared between 3 and 13 times IV3- Independent variables appeared 2 times IV4- independent variables that appeared only once N: Frequency of occurrence		
IV-3			Entrepreneurial Orientation	1	0.1			
Independent Variable	N	%	Family Programs	1	0.1			
Transformational Leadership Bib. Review	2	0.2	Goal Orientations	1	0.1			
Self-Efficacy	2	0.2	High-Performance Work Systems	1	0.1			
Psychological Contract	2	0.2	Leader Attention	1	0.1			
HRM Practices	2	0.2	Leader Cynicism on Change	1	0.1			
Organizational Trust	2	0.2	Leader Political Skills	1	0.1			
Diversity	2	0.2	Leader Strain	1	0.1			
Total	12	1.2	Leaders Communication Style	1	0.1			

The in-depth trend analyses - conducted by comparing year of publication along with used independent variables- shown in Figure 2.12 indicate that the utilization of these two styles in research precedes transformational leadership style as stands alone utilization. Yet, transformational leadership continues to be the most analyzed leadership style in organizational research.

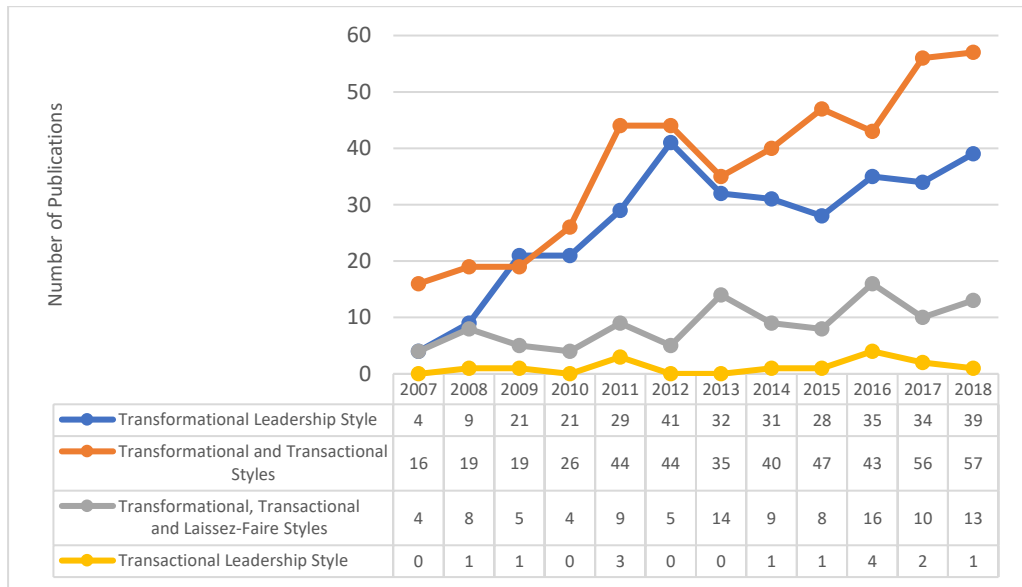


Figure 2.12- Trends on Transactional and Transformational Leadership Styles Research

2.4.3- Dependent variables

Following the same procedure of the previous section, dependent variables that appeared in the conducted search were identified; accordingly, 10 groups were produced based on their dependent variables occurrence as shown in Table 2.23. The first group (DV-1) included dependent variables that appeared more than 15 times, it included 14 topics representing 347 publication and forming 35% of the sample.

Table 2.23-Dependent Variables

DV-1	N	%	DV-3	N	%	DV-6	N	%
Organizational Citizenship Behaviors	37	3.8	Organizational Learning	9	0.9	Change Management	5	0.5
Employee Performance	35	3.6	Employee Motivation	8	0.8	Employee Stress	5	0.5
Organizational Performance	31	3.2	Project Performance	8	0.8	Employee Well Being	5	0.5
Job Satisfaction	29	3	Safety Management	8	0.8	Knowledge Management	5	0.5
Organizational Commitment	29	3	Total	33	3	Total	20	2%
Organizational Innovation	27	2.7	DV-4	N	%	DV-7	N	%
Team Performance	25	2.5	Conflict Management	7	0.7	Crisis Management	4	0.4
Employee Innovation	24	2.4	Corporate Social Responsibility	7	0.7	Demographics - Age	4	0.4
Practiced Leadership Style	23	2.3	Country Culture	7	0.7	Entrepreneurial Behavior	4	0.4
Leadership Outcome	20	2	Emotional Intelligence	7	0.7	Leader Performance	4	0.4
Employee Commitment	19	1.9	Employee Engagement	7	0.7	Management Innovation	4	0.4
Employee Outcome	17	1.7	Organizational Effectiveness	7	0.7	Organizational Behavior	4	0.4
Demographics - Gender	16	1.6	Total	42	4.2	Organizational Structure	4	0.4
Employee Creativity	15	1.5	DV-5	N	%	Personality Traits	4	0.4
Total	347	35%	Decision Making	6	0.6	Sales Performance	4	0.4
DV-2	N	%	Employee Burnout	6	0.6	Service Quality	4	0.4
Organizational Outcome	13	1.3	Enterprise Systems Success	6	0.6	Supply Chain Performance	4	0.4
Employee Turnover	12	1.2	Knowledge Sharing	6	0.6	Task Performance	4	0.4
Leadership Effectiveness	12	1.2	Organization Culture	6	0.6	Team Effectiveness	4	0.4
Employee Satisfaction	10	1	Organizational Ambidexterity	6	0.6			
Job Performance	10	1	Work Engagement	6	0.6			
Total	57	6%	Total	42	4.2%	Total	52	5.20%

DV-8	N	%	DV-9 Cont'd	N	%	DV-9 Cont'd	N	%
Employee Behavior	3	0.3	Leadership Ethical and Moral Behavior	2	0.2	Relationship Conflicts	2	0.2
Employee Empowerment	3	0.3	Leadership Learning	2	0.2	Research and Development Outcomes	2	0.2
Employee Safety Climate	3	0.3	Leadership Power	2	0.2	Self-Leadership	2	0.2
Islamic Leadership Principles	3	0.3	Leadership Training	2	0.2	Service Performance	2	0.2
Organizational Change Capacity	3	0.3	Learning Performance	2	0.2	Strategy Commitment	2	0.2
Presidents Leadership Practices	3	0.3	Managerial Performance	2	0.2	Task Cohesion	2	0.2
Proactive Behaviors	3	0.3	Marketing Effectiveness	2	0.2	Team Innovation	2	0.2
Product Innovation	3	0.3	Leadership Trait	2	0.2	Team Learning	2	0.2
Quality Management	3	0.3	Absorptive Capacity	2	0.2	Unethical Behavior	2	0.2
Quality Performance	3	0.3	Acquisition Performance	2	0.2	Virtual Teams Leaders Emergence	2	0.2
Readiness to Change	3	0.3	Adaptive Performance	2	0.2	Wisdom	2	0.2
Team Outcomes	3	0.3	Business Unit Performance	2	0.2	Work Environment	2	0.2
Total	36	4%	Change Acceptance	2	0.2	High Performance Work Systems	2	0.2
DV-9	N	%	Customer Orientation	2	0.2	Total	90	9.40%
Gaming for Developing Skills	2	0.2	Educational Change Management	2	0.2	N- Frequency of occurring DV-1 Main group of dependent variables DV-2 dependent variables that appeared between 10 and 13 times DV-3 dependent variables that appeared 8 and 9 times DV-4 dependent variables that appeared 7 times DV-5 dependent variables that appeared 6 times, DV-6 dependent variables that appeared 5 times DV-7 dependent variables that appeared 4 times DV-8 dependent variables that appeared 3 times DV-9 dependent variables that appeared 2 times.		
Gender Diversity	2	0.2	Employee Objectivity	2	0.2			
Implicit Leadership	2	0.2	Extraversion	2	0.2			
Influence Tactics	2	0.2	Financial Performance	2	0.2			
Instructor Effectiveness	2	0.2	New Product Development	2	0.2			
Internationalization	2	0.2	Organizational Identification	2	0.2			
Job-Related Attitudes	2	0.2	Performance Goals	2	0.2			
Leaders Spirituality	2	0.2	Quality of Relationship	2	0.2			
Leadership Development	2	0.2	Quality of Work Life	2	0.2			

As concluded, the highest number of publications examined the impact of leadership styles on organizational citizenship behavior with 37 publications, followed by employee performance and organization performance with 35 and 31 publications respectively. The second group (DV-2) included 5 topics that appeared between 10 to 13 times representing 57 publications, the third group (DV-3) included 4 topics that appeared 8 and 9 times representing 33 publications, the fourth group (DV-4) included 6 topics that were discussed 7 times representing 42 publications, while fifth group (DV-5) included 7 topics that were discussed 6 times representing 42 publications, the sixth group (DV-6) included 4 topics that were discussed 5 times representing 20 publications, the seventh group (DV-7) included 13 topics that were discussed 4 times representing 52 publications, the eighth group (DV-8) included 12 topics that were discussed 3 times representing 36 publications, the ninth group (DV-9) included 45 topics that were discussed 2 times representing 90 publications, and the last group (DV-10) included 234 topics that were discussed just once to represent 24% of the published articles. Hence DV-10 was excluded from further analysis for its low contribution.

Out of 982 publications, 12 articles discussed leadership style measurement tools, mainly the MLQ5x questionnaire, 2 articles provided bibliometric reviews on transformational leadership style, and 15 articles provided either literature review, conceptual framework or meta-analysis, those constituted 29 articles where it was not possible to determine any dependent variable.

2.4.4- Mediating variables

687 (70%) publications have not utilized a mediating variable. Employee trust was identified as the most used mediating variable, whereas it was adopted in 30 publications, followed by transformational leadership style and organizational culture that appeared in 16 and 15 publications respectively. Knowledge sharing, emotions and empowerment also appeared as the most used moderating variables in 14, 12 and 11 publications respectively. At the end, 6 groups of mediating variables were identified based on their occurrence, named as (ME1-6). These were depicted in Table 2.24.

Table 2.24- Mediating Variables

ME1	N	%	ME4	N	%	ME5 Cont'd	N	%
Employee Trust	30	3.1	Employee Commitment	3	0.25	Role Clarity	2	0.16
Transformational Leadership	16	1.6	Perceived Organizational Support	3	0.25	Team Interaction	2	0.16
Organizational Culture	15	1.5	Employee Stress	3	0.25	Work Engagement	2	0.16
Knowledge Sharing	14	1.4	Team Efficacy	3	0.25	Transactional Style	2	0.16
Emotions	12	1.2	Job Satisfaction	3	0.25	Total	36	3%
Empowerment	11	1.1	Team Identification	3	0.25	ME6	N	%
Total	98	9.9	Organizational Identification	3	0.25	Absenteeism Acceptance	1	0.11
ME2	N	%	Work Environment	3	0.25	Agency and Effectiveness	1	0.11
Demographics - Gender	7	0.7	Total	24	2%	Corporate Entrepreneurship	1	0.11
Self-Efficacy	7	0.7	ME5	N	%	Downward Influence Tactics	1	0.11
Communication	6	0.6	Affective Commitment	2	0.16	Employee Satisfaction	1	0.11
Leader-Member-Exchange	6	0.6	Innovation	2	0.16	Follower Values Congruence	1	0.11
Organizational Justice	6	0.6	Performance-Reward Expectancy	2	0.16	Ideological Messages Suspicion	1	0.11
Leadership Styles	6	0.6	Safety Environment	2	0.16	Managerial Level	1	0.11
Total	38	3.8	Coaching Competency	2	0.16	Instrumentality	1	0.1
ME3	N	%	Needs Satisfaction	2	0.16	Perceptions of Politics	1	0.1
Employee Engagement	4	0.4	Person & Organization Fit	2	0.16	Pride in Being A Follower	1	0.1
Personal Identification	4	0.4	Self-Regulatory Preferences	2	0.16	Psychological traits	1	0.1
Employee Motivation	4	0.4	CSR	2	0.16	Safety Commitment	1	0.1
Psychological Contract	4	0.4	Organizational Efficacy	2	0.16	Skill & Job-Based Development	1	0.1
Innovative Culture	4	0.4	Procedural Justice	2	0.16	Team Climate	1	0.1
Psychological Empowerment	4	0.4	Task Conflict	2	0.16	Team Reflexivity	1	0.1
Organizational Commitment	4	0.4	Follower Identification	2	0.16	Work-To-Family Resentment	1	0.1
Total	28	2.90%	Organizational Learning	2	0.16	Absorptive Capacity	1	0.1

ME6 Continued	N	%	ME6 Continued	N	%	ME6 Continued	N	%
Absorptive Capacity	1	0.1	Ethical Leadership	1	0.1	Organization Structure	1	0.1
Balanced Processing	1	0.1	Green Creativity	1	0.1	Organizational Politics	1	0.1
Deep Acting	1	0.1	Leader Personality	1	0.1	Positive Mood	1	0.1
Employee Competencies	1	0.1	Mental Health	1	0.1	Psychological Ownership	1	0.1
Environment Uncertainty	1	0.1	Organization Environment	1	0.1	Sacrifice	1	0.1
Goal Clarity & Creative Thinking	1	0.1	Organizational Level	1	0.1	Sentiments	1	0.1
Interactional Justice	1	0.1	Personality Trait	1	0.1	Team Behavior Integration	1	0.1
Member Value and Collectivist	1	0.1	Psychological Climate	1	0.1	Team PsyCap	1	0.1
Openness	1	0.1	Resilience	1	0.1	Narcissism	1	0.1
Organizational Environment	1	0.1	Self-Evaluations	1	0.1	Work Beneficiaries	1	0.1
Personal Resources	1	0.1	Substitutes for Leadership	1	0.1	Total	71	8%
Psychological Capital	1	0.1	Team Potency	1	0.1	N- Frequency of occurrence ME1 mediating variables appeared more than 10 times ME2 mediating variables appeared 6 and 7 times ME3 mediating variables appeared 4 times ME4 mediating variables appeared 3 times ME5 mediating variables appeared 2 times ME6 mediating variables appeared 1 time.		
Quality of Relationships	1	0.1	Total Quality Management	1	0.1			
Self-Determination	1	0.1	Work life Conflict	1	0.1			
Social Identification	1	0.1	Advice Network Density	1	0.1			
Team Cooperation	1	0.1	Conflict-Handling Styles	1	0.1			
Top Management Teams	1	0.1	Diversity	1	0.1			
Working Conditions	1	0.1	Employee Goal Orientation	1	0.1			
Adolescent Self-Concept	1	0.1	Follower Collective Identity	1	0.1			
Collective Identity	1	0.1	Humor	1	0.1			
Distributive Justice	1	0.1	Leaders Values	1	0.1			
Exploration Exploitation	1	0.1	Mentoring	1	0.1			

2.4.5- Moderating variables

847 (86.3%) publications have not utilized a moderating variable. Transformational and transactional leadership styles have been used the most as moderating variables in 18 and 12 publications respectively, followed by emotional intelligence that appeared 5 times, then environment uncertainty and organization culture that appeared 4 times. Moderating variables were also arranged into groups based on their occurrence. 4 groups were identified, labelled as (MO1-4) as depicted in Table 2.25, where group MO1 represents the most used moderating variables indicated above, MO2 represents the mediating variables that appeared 3 times, MO3 represents the mediating variables that appeared 2 times and MO4 represents the moderating variables that appeared only once constituting, 52.5% of the total moderating variables.

Table 2.25- Moderating Variables

MO1	N	%
Transformational Leadership Style	18	1.8
Transformational and Transactional Leadership Styles	12	1.2
Emotional Intelligence	5	0.5
Environment Uncertainty	4	0.4
Organizational Culture	4	0.4
Total	43	4.3
MO2	N	%
Country Culture	3	0.3
Employee Personality Traits	3	0.3
Organizational Environment	3	0.3
Team Heterogeneity	3	0.3
Total	12	1.2
N- Frequency of occurrence MO1 moderating variables appeared from 4 to 18 times MO2 moderating variables appeared 3 times MO3 moderating variables appeared 2 times MO4 moderating variables appeared 1 time.		

MO3	N	%	MO4 Continued	N	%	MO4 Continued	N	%
Gender and Income	2	0.21	Organizational Contextual Factors	1	0.09	Knowledge Management and Sharing	1	0.09
Leadership Behaviors	2	0.21	Proactive Personality	1	0.09	Legacy Beliefs	1	0.09
Organizational Size	2	0.21	Resistance to Change	1	0.09	National Culture	1	0.09
Social Distance	2	0.21	Social Capital	1	0.09	Organizational Orientations	1	0.09
Empowerment	2	0.21	Subordinates Attitudes	1	0.09	Psychological Capital	1	0.09
Locus of Control	2	0.21	Change Frequency	1	0.09	Self-Leadership	1	0.09
Organizational Support	2	0.21	Communication	1	0.09	Social Values and Age	1	0.09
Team Size	2	0.21	Age Difference	1	0.09	Types of Ownership	1	0.09
Extraversion and Neuroticism	2	0.21	Employees Collectivistic Value	1	0.09	Charismatic Leadership	1	0.09
Organizational Commitment	2	0.21	Hazard Exposure	1	0.09	Core Self-Evaluations	1	0.09
Promotion Regulatory Focus	2	0.21	Knowledge Acquisition	1	0.09	Employee Attitude	1	0.09
Job Satisfaction	2	0.21	Leadership Skills	1	0.09	Followers Goal Orientation	1	0.09
Organizational Level	2	0.21	Moral Inconsistency	1	0.09	Individual Exchange	1	0.09
Psychological Empowerment	2	0.21	Organizational Change	1	0.09	Leader Stakeholder CSR	1	0.09
Total	28	3%	Prototypical Leaders	1	0.09	Level of Formal Education	1	0.09
MO4	N	%	Self-Efficacy	1	0.09	Negative Affective Tone	1	0.09
Congruence Between Leader and Employee	1	0.09	Social Desirability	1	0.09	Over Commitment and Well-Being	1	0.09
Cultural Intelligence	1	0.09	Team Consensus	1	0.09	Religious Orientation	1	0.09
Employee Capacity	1	0.09	Charisma	1	0.09	Self-Related Subordinate	1	0.09
Gender and Learning Orientation	1	0.09	Contingent Reward	1	0.09	Span of Control	1	0.09
Innovative Culture	1	0.09	Age and Education	1	0.09	User Satisfaction	1	0.09
Leader-Member-Exchange	1	0.09	Follower Characteristics	1	0.09	CEO Functional Background	1	0.09
Mission Valence	1	0.09	Idiocentrism And Allocentrism	1	0.09	Total	52	5%

2.4.6- Discussed hypotheses and results

Using SPSS cross tabulation, the examined relationships (hypotheses) between dependent (DV) and independent variables (IV) were identified based on their occurrence, as shown in Table 2.26. In this table, the column named “TFLS & TRLS” represents the articles that examined a relationship of both transactional and transformational leadership styles with other dependent variable, columns named “TFLS” or “TRLS” represents the articles that discussed one of transactional or transformational leadership styles, while the column named “TFLS, TRLS and LF” represents the articles that discussed the three styles, transactional, transformational and laissez-faire.

The results showed that organizational citizenship behaviors, employee performance, organizational performance, job satisfaction, organizational commitment, organizational innovation, team performance, employee innovation, leadership outcome, employee outcome and employee commitment are the mostly examined DV with transactional and transformational leadership styles as IV.

Organizational citizenship behavior dependent variable has been examined 16 (1.60%) times with transformational leadership style, and 14 times with each of transactional and transformational leadership styles, thus combining these results, it is concluded that the relationship between this variable and transformational leadership style has been examined 30 times. While, organizational performance variable has been examined 17 (1.70%) times with both of transformational and transactional styles and 10 times with transformational leadership style solely.

Table 2.26- Discussed Hypotheses

Dependent Variables		Independent Variables							
		TFLS & TRLS	TFLS	TFLS, TRLS & LFS	CH	TRLS	IV2	IV3	IV4
Organizational Citizenship Behaviors	N	14	16	1	1	3			2
	%	1.40%	1.60%	0.10%	0.10%	0.30%			0.20%
Employee Performance	N	13	15	5			2		
	%	1.30%	1.50%	0.50%			0.20%		
Organizational Performance	N	17	10	1	1			1	1
	%	1.70%	1.00%	0.10%	0.10%			0.10%	0.10%
Job Satisfaction	N	8	9	10	1	1			
	%	0.80%	0.90%	1.00%	0.10%	0.10%			
Organizational Commitment	N	13	6	4	1	2		2	1
	%	1.30%	0.60%	0.40%	0.10%	0.20%		0.20%	0.10%
Organizational Innovation	N	18	8	1	0	0			
	%	1.80%	0.80%	0.10%	0.00%	0.00%			
Team Performance	N	3	18	2	1			1	
	%	0.30%	1.80%	0.20%	0.10%			0.10%	
Employee Innovation	N	14	8	2					
	%	1.40%	0.80%	0.20%					
Practiced Leadership Style	N	16	3	4					
	%	1.60%	0.30%	0.40%					
Leadership Outcome	N	7	1	9					2
	%	0.70%	0.10%	0.90%					0.20%
Employee Commitment	N	8	5	3			2		1
	%	0.80%	0.50%	0.30%			0.20%		0.10%
Employee Outcome	N	5	8	1			1		2
	%	0.50%	0.80%	0.10%			0.10%		0.20%
Demographics - Gender	N	11		5					
	%	1.10%		0.50%					
Employee Creativity	N	5	8						1
	%	0.50%	0.80%						0.10%

Dependent Variables		Independent Variables							
		TFLS & TRLS	TFLS	TFLS, TRLS & LFS	CH	TRLS	IV2	IV3	IV4
DV2	N	21	21	5	1		3	1	5
	%	2.10%	2.10%	0.50%	0.10%		0.30%	0.10%	0.50%
Dv3	N	18	4			1			2
	%	1.80%	0.40%			0.10%			0.20%
DV4	N	26	9	11				3	1
	%	2.60%	0.90%	1.10%				0.30%	0.10%
DV5	N	22	11	2			2		5
	%	2.20%	1.10%	0.20%			0.20%		0.50%
DV6	N	13	3	3	1				
	%	1.30%	0.30%	0.30%	0.10%				
DV7	N	20	23	2	2	1			4
	%	2.00%	2.30%	0.20%	0.20%	0.10%			0.40%
DV8	N	16	8	6	2		1	1	1
	%	1.60%	0.80%	0.60%	0.20%		0.10%	0.10%	0.10%
DV9	N	47	34	5	1	2	1		
	%	4.80%	3.50%	0.50%	0.10%	0.20%	0.10%		
DV10	N	111	96	23	7	3	2	1	7
	%	11.30%	9.80%	2.30%	0.70%	0.30%	0.20%	0.10%	0.70%
TFLS: Transformational Leadership Style TRLS: Transactional Leadership Style LFS: Laissez-Faire Style CH: Charismatic Leadership Style N: Number of tested hypotheses, %: of total									

The highest percentage represented by almost 111 (11.30%) articles examined the relationship between both transactional and transformational styles with DV10 group -this group represents dependent variables that appeared once (234 article)- and 96 articles examined the relationship of transformational leadership style solely and variables from this group

Furthermore, the articles of the top twelve dependent variables articles were checked to determine the nature of the relationship between transformational, transactional and laissez-faire independent variables and these 12 dependent variables as shown in Figure 2.13.

In general, almost discussed relationships between transformational leadership style and the dependent variables indicated a positive relationship, while transactional leadership style results varied between positive and negative relationships; however laissez-faire style results were either negative relationships or no relationships.

Using MS Visio 2016, Figure 2.14 was constructed to represent the most frequent mediating variables that appeared between transformational leadership style and dependent variables, while Figure 2.15 represents the most frequent mediating variables between transactional leadership style and dependent variables.

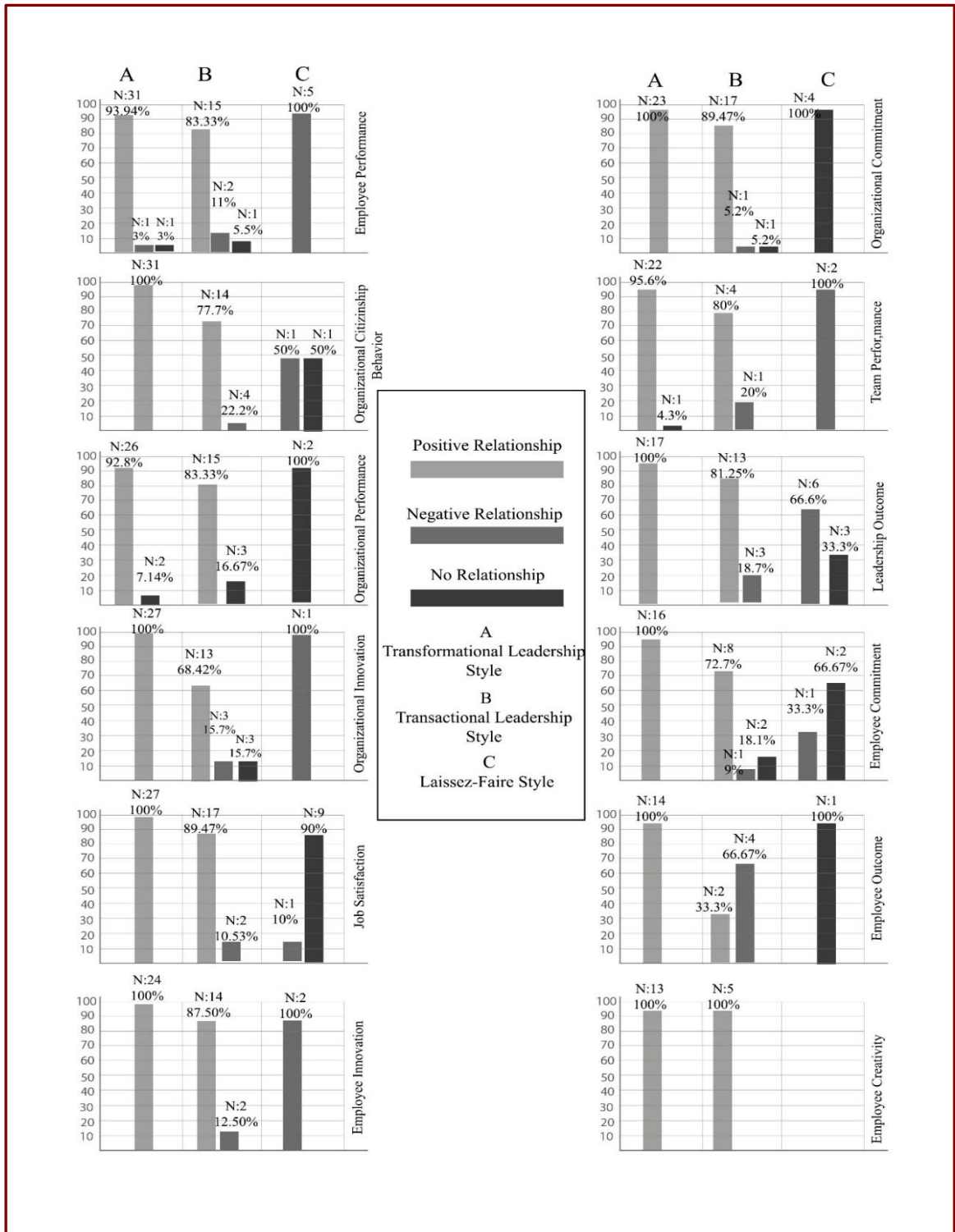


Figure 2.13- Discussed Hypotheses Results

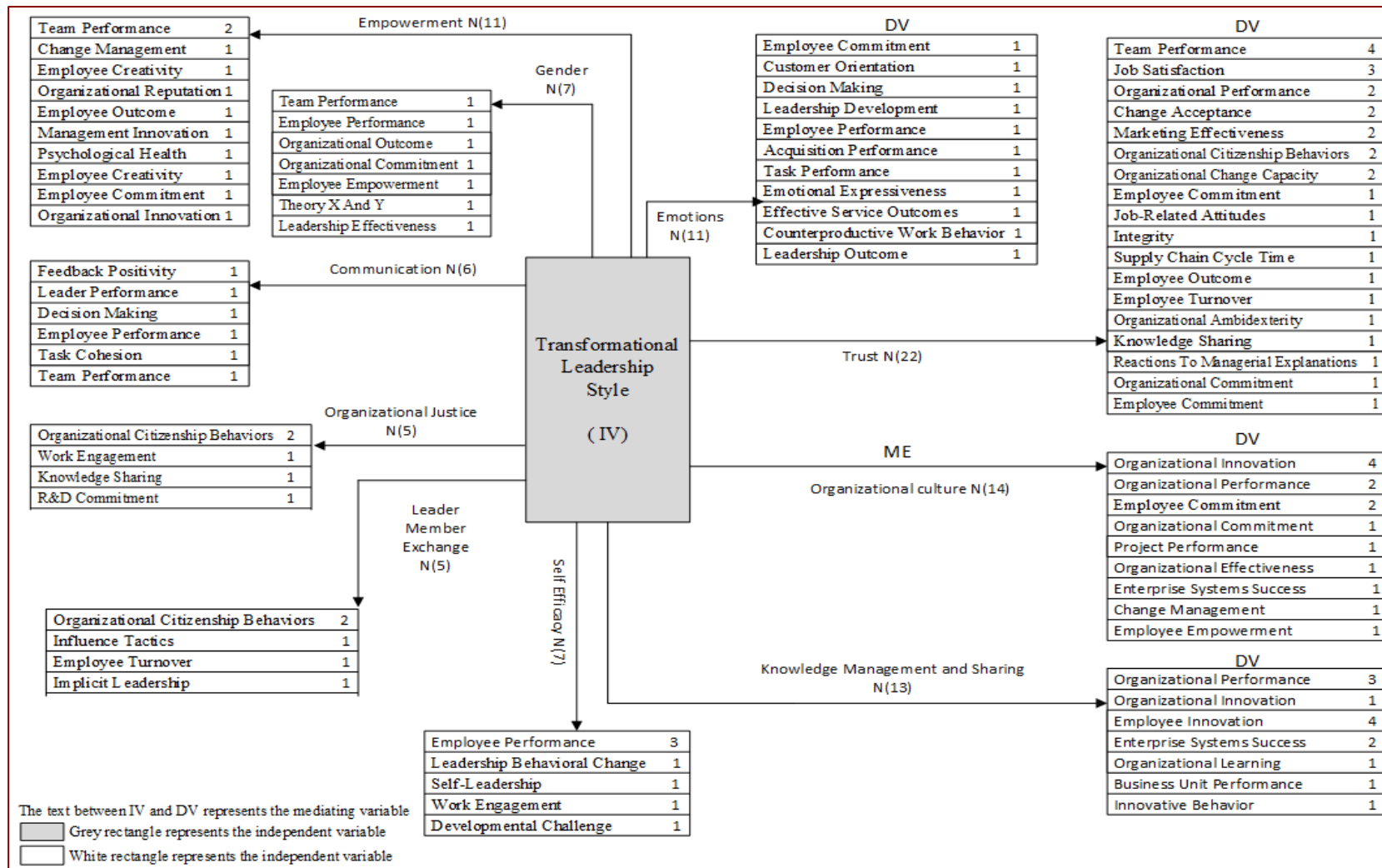


Figure 2.14- Frequent Mediating Variables Between Transformational Leadership Style and Dependent Variables

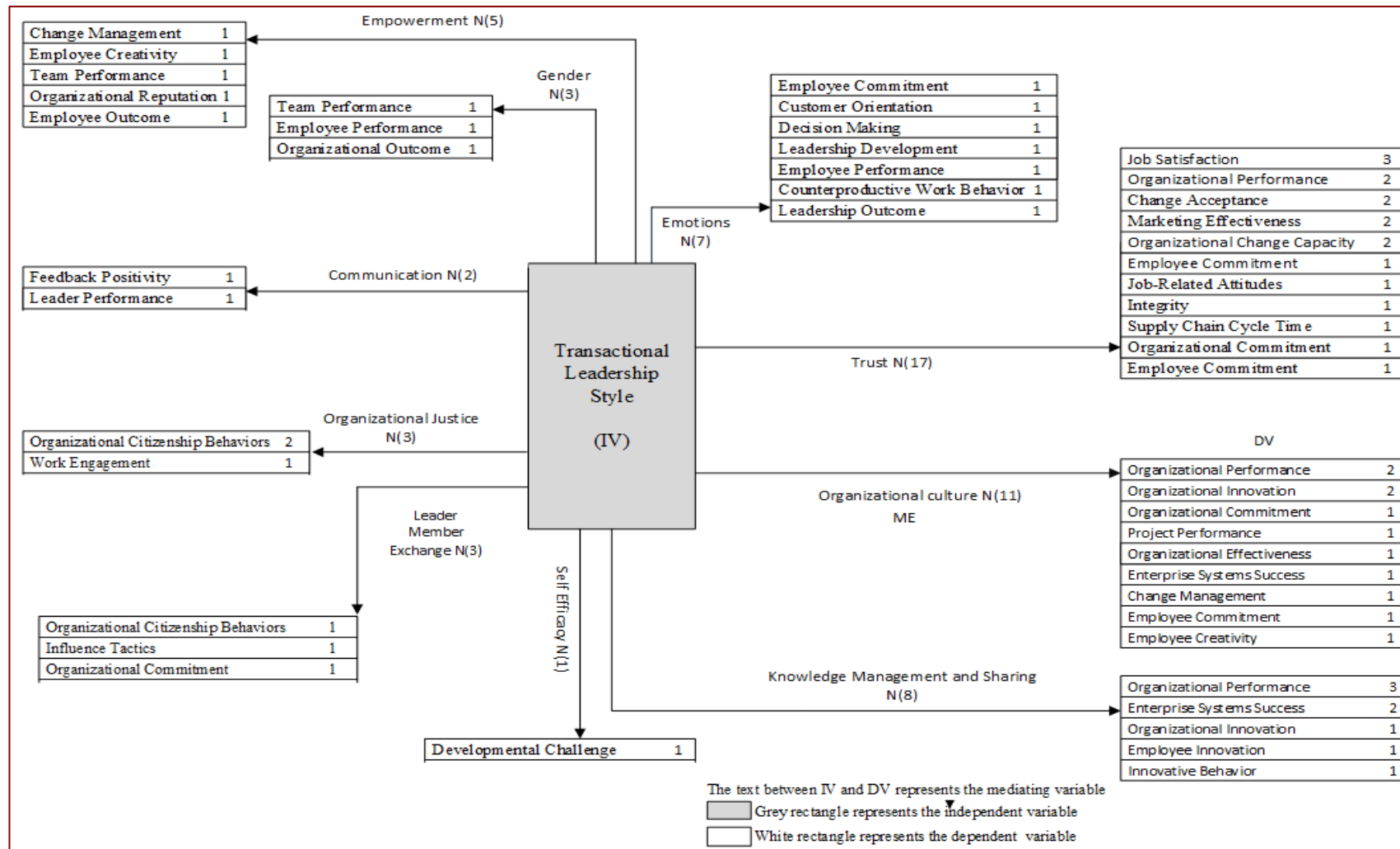


Figure 2.15- Frequent Mediating Variables Between Transactional Leadership Style and Dependent Variables

Trust is most frequent used mediating variable, this variable mediated the relation between transformational leadership and other variables 22 times, 4 times with the dependent variable team performance, 3 times with job satisfaction, and twice with each of organizational performance, change acceptance, marketing effectiveness, organization citizenship behavior, and organization change capacity. In addition, organizational culture appeared as a mediating variable 14 times, then knowledge sharing and management with 13 times, followed by emotions and empowerment with 11 times for each.

Trust also appeared as the most frequently used mediating variable between transactional leadership style and dependent variables. It has been used the most in studying its effects between transactional leadership style and job satisfaction (3 times), and twice with each of organizational performance, change acceptance, marketing effectiveness and organizational change capacity.

Transformational and transactional leadership styles have also been utilized as mediating variables as shown in Figure 2.16. With respect to transformational leadership style, it appeared as a mediating variable in 22 publications, 4 of them adopted emotional intelligence as an independent variable, 2 publications adopted leader-member-exchange and 2 others adopted organizational trust as independent variable. As for transactional leadership style, it appeared as mediating variable in 6 publications as shown in Figure 2.16.

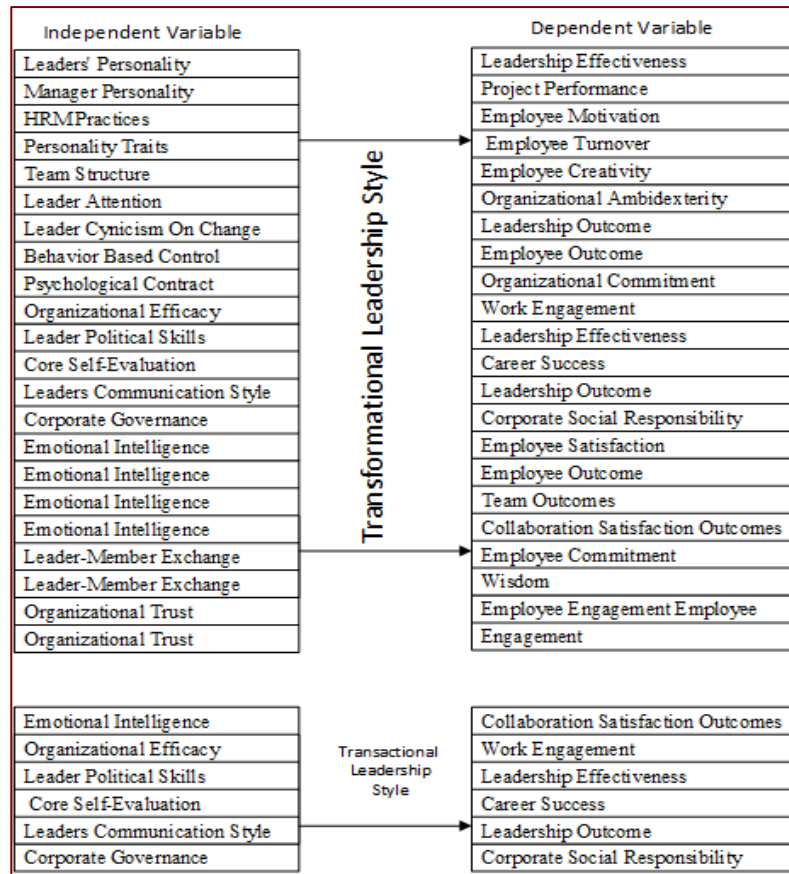


Figure 2.16- Transactional and Transformational Leadership Styles as Mediating Variables

In addition to the results discussed above, emotional intelligence, organization culture, and environment uncertainty appeared as the most commonly used moderating variables. Moreover, transformational leadership style appeared as a moderating variable in 30 publications, while transactional leadership style also appeared as a moderating variable in 12 publications as shown in figure 2.17. Most of these publications indicated that these two leadership styles positively mediated or moderated the discussed relationship.

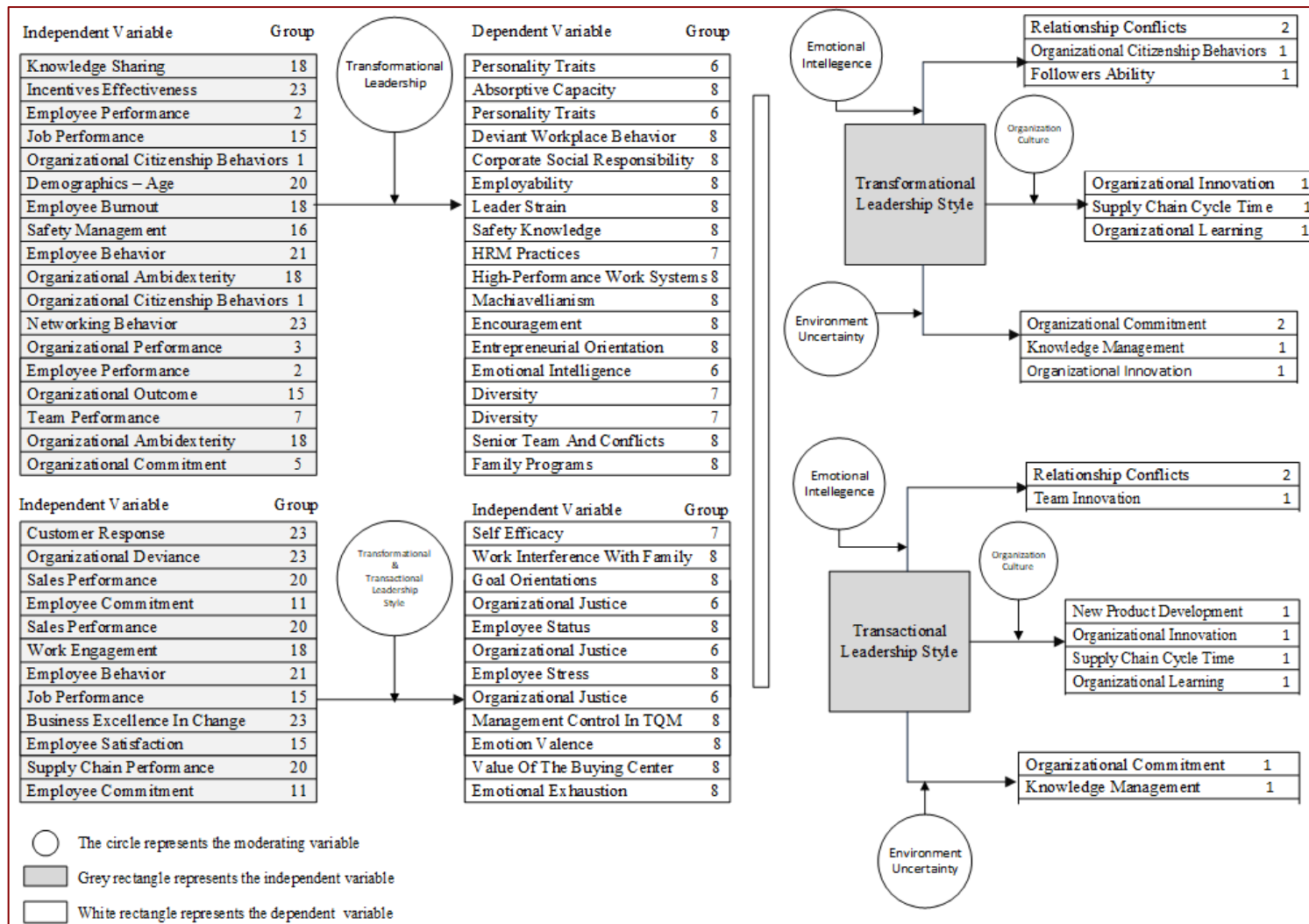


Figure 2.17- Most Frequent Moderating Variables

2.5- Bibliometric Research Discussion

With the purpose of setting the state of the art on leadership styles research, we decided to conduct a bibliometric review of the leadership research focusing on leadership styles specifically transactional and transformational leadership style, in the last 12 years, from 2007 to 2018, aiming at providing up-to-date information on the number of publications per year, top journals in the field, journals quartile and impact factor, top cited articles, top scholars and affiliations contributing to the field based on the number of publications and citations, in addition to their collaboration and distribution across countries, and the countries of publishers. The thesis also examined the most used dependent and independent variables, mediating and moderating variables, in addition to research design and discussed hypotheses.

Although bibliometric studies are considered as an alternative to theoretical studies and a source of valuable information, only few researches adopted such approach on their studies of leadership. Current researches either focused on general leadership research focusing on one journal, mainly the articles published by Lowe & Gardner (2000) and Gardner, Lowe, Moss, Mahoney, & Cogliser (2010) who researched “Leadership Quarterly”, or to general leadership theories mainly the article published by Tal & Gordon (2016). Other articles focused on specific leadership styles such as authentic leadership (Cunha, Günther, Vicentini, & Esper , 2015), responsible leadership (Marques, Reis, & Gomes, 2018), public leadership (Vogel & Masal , 2015), and transformational leadership (Dionne et al. , 2012). Moreover, other scholars examined leadership styles in specific industries or other specific domains, including women leaders in politics (Tal & Gordon , 2018), leadership in education (Gumus, Bellibas, Esen, & Gumus , 2018), leadership and CSR (Lis, Czerniachowicz, &

Wieczorek-Szymanska , 2017), leadership constructs and outcomes (Batistic et al., 2017), and finally transformational leadership in sports and physical activities (Alvarez, Castillo, Molina-Garcia, & Balague, 2016). However, none of the previous bibliometric studies on leadership focused on transactional and transformational leadership styles articles in the last decade to provide bibliometric information on specific details such as top cited articles and their impact factor, most productive scholars and their collaboration, top affiliations and their collaboration with other affiliations, number of citations, top countries and collaboration with other countries, quartile differences and classification difference based on different academic sources. Most importantly, the current research was limited to specific platforms and regretted most well-known academic databases, like Scopus and the WOS. It was noticed from this research that the results of the aforementioned subtopics could differ based on the platform. For this purpose and in order to reduce bias and to provide full board analysis; WOS, Scopus and common articles were treated and analyzed separately and jointly. We think that with the complete review developed in this doctoral thesis, including two bibliometric analysis, one generic, and another more specific, we cover the gaps of other previous systematic researches on the topic, fulfilling the holistic nature of the research which is a main characteristic in this type of literature reviews.

This bibliometric research serves from two perspectives. First, this study contributes to leadership research by directing scholars and researchers towards identifying where to publish their articles, with whom they can contribute in researching leadership, and who are the top scholars they can refer to while researching leadership styles. The study can also serve as a reference for students to identify the countries and affiliations contributing to the leadership research domain. From the second perspective, with respect to dependent, independent, moderating, mediating and

discussed hypotheses, this study provide up-to-date information to the current and future researchers, conferences, and journals on discussed topics on transactional and transformational leadership styles. This indeed will lead those who are interested in this topic to learn more by examining new aspects or relationships and by identifying the most and less researched relationships that require more investigation. For example, in terms of the effect of leadership style on organizational behavior, current researches focused on researching organizational performance, effectiveness, and creativity. Many other needed researches in the 21st century are neglected, for example and not limited to strategic change management, micro and macro organizational environment, entrepreneurship and intrapreneurship, leadership effectiveness and adaptability in different cultures in addition to emotional intelligence, quality management, efficiency, and emerging leadership in modern organizations structures.

2.6- Bibliometric Research Limitations and Future Discussion

This review is not exempted of limitations. Although WOS and Scopus are highly ranked indexed platforms, the sample size represented in this research did not represent all transactional and transformational leadership styles research and was limited only to articles; other indexes and databases such as google index, EBSCO conference proceedings, books, and non-indexed data could and should be included in future research to provide wider information on this topic. VOS Viewer software can only provide separate analysis for the platforms extracted files, for this the researches were reinforced to do separate bibliometric analysis for each platform. Lately, there is a growing interest on other contemporary leadership styles such as: democratic, autocratic and servant leadership styles. Bibliometric analysis could be considered as a new scope of research on these styles to provide up to date information on the research entailed these styles. As for transactional and transformational styles further

bibliometric research is needed to go in-depth the topics analyzed, covering current discussed topics with respect to independent and dependent, mediating and moderating variables and the relationship discussed between them.



Chapter 3 Leadership and Change Literature Review

UNIVERSITAT ROVIRA I VIRGILI

Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen

This chapter provides a classic content review to theoretically justify the relationship between transactional leadership style, transformational leadership style and each of Kotter and ADKAR change models.

3.1- Leadership Styles Subject To Study

Leadership is described as a universal phenomenon that has been studied by scholars since ancient times by researchers around the world. Those established the main roads in understanding leadership antecedents, consequences, and contextualized nature (Antonakis, 2017). Moreover, leadership has gained its place in social sciences researches, and it is considered as the essential parameter in studying societies, organizations, groups or individuals functionality, yet, still there is much to learn (Antonakis, 2017).

In terms of leadership concepts, investigations on this topic began as the rise of civilization (Bass & Avolio, 1990). Leadership has been widely identified, discussed, described and explained by many scholars across several cultures. As a result, different arguments, leadership styles, and concepts based on leader's personality, power, contingencies, traits and behaviors have emerged to enrich social and business sciences (Carlyle, 1841; Mann, 1959; Fiedler, 1971; House, 1971; Stogdill, 1974; Hickson, Hinings, Lee, Schneck, & Pennings, 1971; Vroom & Jago, 1988; Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Piccolo, & Ilies, 2004).

The term leadership is linked with organizational shared goals, objectives, mission and vision, contributing to their achievement, especially when they are complex and difficult (Hunt & Conger, 1999; Kempster, Jackson, & Conroy, 2011). Many scholars agree that leadership is not limited to a person or position; it is more entrenched with achieving organizational goals and vision through driving and giving

intensity to employees (Daft, 2004; Crevani, Lindgren, & Packendorff, 2010; Robbins & Coulter, 2017). Characteristics linked to influencing, motivating, inspiring, in addition to interpersonal skills are considered as essential characteristics to future leaders (Drath & Palus, 1994). Thus, leadership consists of set of behaviors, skills and character (Bass & Bass, 2009), and involves an interaction style between leaders and followers (Katz, Maccoby, & Morse, 1950; Stogdill & Coons, 1957), to make an exceptional, huge and positive contribution to actions and processes in the organizations (Crevani et al., 2010).

In the last century, leadership research became more focused on leadership styles, which were defined according to different theories. Those theories involved mainly the autocratic (authoritarian) and democratic styles developed by Lewin, Lippitt, & White (1939), and the servant leadership developed by Greenleaf (1977).

Nowadays, the most well-known leadership styles theories are transactional and transformational leadership that are associated with Burns (1978) and Bass (1985). At a later stage, Bass (1990) in his article “From transactional to transformational leadership” provided more insightful illustration on these styles, followed by developing the multifactor leadership questionnaire (Bass & Avolio, 2000) which facilitated these leadership styles research.

Theories on leadership and leadership styles agreed on the role of the leader to achieve organizational goals through traits, behaviors, characteristics, influence, charisma, communication and power (Bass & Avolio, 1990; Lussier, 2016; Robbins & Coulter, 2017). Therefore, the development of theories was coped with huge focus on researches that entailed the effect or the relationship between leadership styles from one side and varied business and organizational aspects from the other side.

In regard to leadership, scholars defined it as “the ability to influence employees to achieve specific goals” (Robbins & Coulter, 2017) . They also agree that leadership style is a set of behaviors, skills and characters (Bass & Bass, 2009). Although there are several leadership theories, concepts and descriptions (Miller & Sardais, 2011); transactional and transformational leadership styles introduced by Bass (1985) remain still as the most commonly used approaches in social sciences, business and management literature (Lowe & Gardner, 2000; Tal & Gordon, 2016). While research that explored transactional and transformational leadership styles focused on one style, it is quite common that optimal effective leaders use a combination of both (O’Shea, Foti, Hauenstein, & Bycio, 2009).

Transactional leadership style (TRLS) theory is based on three components. Contingent reward (CR) implies that leader provides reward and recognition to followers in exchange for their efforts and good performance towards predetermined goals. While in active management by exception (MBEA), the leader monitors and interferes directly when performance deviations in rules and standards occur to take corrective action; in passive management by exceptions (MBEP), leader monitors deviations in rules and standards, and only interferes if the standards are not met. Alternatively, transformational leadership style (TFLS) discussed four components named, idealized influence (II), which implies that visionary leaders who are charismatic (Yang, Zhou, & Zhang, 2015), credible, and trusted influence and inspire followers -either by attributes (IIA) or by behaviors (IIB) - to willingly follow them and identify themselves with the leader’s targets, and not their personal ones. Inspirational motivation (IM) occurs when the leaders set, communicate and act on inspiring targets to achieve. The leaders show a high level of ambition, enthusiasm and optimism that affect teams’ spirit, through communication leaders guide followers to feel the value of

their work. Intellectual stimulation (IS) entails encouraging and promoting followers creative, innovative and rational thinking to leverage their problem solving and decision-making skills especially in critical situations. While through individual consideration (IC) the leader devotes attention, advise, coach and nurture, and also builds followers' abilities and competencies, taking into consideration their needs personally and as distinguished people (Bass, 1985; Bass & Avolio, 1990; Yammarino & Bass, 1990; Avolio & Bass, 2001).

3.2- Change Management

Organizations nowadays ought to continuously change their organizational activities, technological and organizational structure, and develop their human capital to sustain competitive advantage in the changing environment (Fiol, 1991; Pfeffer & Villeneuve, 1994; Jick, 1995; Nadler, 1995; Shrivastava, 1995; Betz, 2003).

Organizational change has attracted the attention of research for some decades now. Kotter (2011) viewed change as “the approach to the transition of individuals, teams and organizations to a desirable future state”. While, Nadler (1995) illustrated that organizational change could be focused on organizational activities, such as the products and services they provide, technological changes, structural, and employee changes. To assist managers while implementing change, more than ten change management modules were introduced; such as and not limited to Ackerman & Anderson in 2010, ADKAR in 2006, Bullock & Batten in 1985, Carnall in 1991, Hersey & Blanchard in 1969, Havelock in 1971, Kotter in 1995, Lewin's model in 1951, Lippitt, Watson & Westley model in 1958, and Schein in 1995.

3.3- Change and Leadership

Change resides at the heart of leadership (Latta, 2009). Scholars generally agreed about the role of leadership styles, skills and behaviors on the successful implementation of

change. These researches included the study of leadership and change in dynamic environments (Santora & Sarros, 1996), leaders' communication styles and commitment to change (Luo, Song, Gebert, Zhang, & Feng, 2016), leaders' cognitive styles and leading change (Prato Previde & Rotondi, 1996), leadership behaviors and successful change implementation (Gilley, McMillan, & Gilley, 2009), authentic leadership and change initiatives (Alavi & Gill, 2017), among others. There are also an extensive research focused on transformational and transactional leadership styles, that includes for example the study of transformational leadership and employee commitment during change (Hechanova & Cementina-Olpoc, 2013; Weiherl & Masal, 2016; Faupel & Süß, 2018;), transformational leadership and type of change (Eisenbach, Watson, & Pillai, 1999; Der Voet, 2014), transformational leadership and resistance to change (Groves, 2016), transformational and transactional leadership styles and employees' trust, attitude towards change, change acceptance, commitment, and innovation during change (Abrell-Vogel & Rowold, 2014; Holten & Brenner, 2015; Bligh, Kohles, & Yan, 2018; Cai, Loon, & Wong, 2018; Farahnak, Ehrhart, Torres, & Aarons, 2019;) and transformational leadership, leadership skills and successful change implementation (Mao & Long, 2008; Lirong & Minxin, 2008; Uddin, 2013; Gorgani, Nasiri, & Jafari, 2014; Der Voet, Kuipers, & Groeneveld, 2016).

However, current leadership and change research do not take into consideration the complexity of the change processes inside the organization (Yukl, 1999). These activities highly relies on leadership competencies that have been unnoticed by leadership literature (Higgs & Rowland, 2005), being confirmed that the role of leadership style and behaviors during change processes lacks an empirical investigation (Higgs & Rowland, 2000).

Kotter (2012) assured that employee commitment is essential during change. In this context, in Western countries, Herold, Fedor, Caldwell, & Liu (2008) conducted a study on organizations undergoing change to compare the relation between specific leadership change practices, TFLS and employees commitment to change initiatives. The results showed that the positive effects of TFLS on employee commitment precedes change-specific leadership practices. The study conducted by Weiherl & Masal (2016) affirmed this relation in different business sectors. In the Arabian context, Gelaidan & Ahmed (2013), found that TFLS is also positively related to commitment to change in public organizations. They also found that II and IC are significantly related to all employees' commitment dimensions while IM and IS relations varies from one dimension to another.

The relationship between leadership styles and change management from a general perspective is well established and conducted on many industries. For example, Lirong & Minxin (2008) found that both TFLS and TRLS positively impact organizational change, Al-Qura'an (2015) and der Voet, Kuipers, & Groeneveld (2016) found that TFLS is positively related to organizational change, while Uddin (2013) found that this relation was mediated by employee trust. More specific studies conducted by Gorgani, Nasiri, & Jafari (2014) showed that leaders' cognitive, practical and social skills positively impact organizational change. While, Alqatawenh (2018) found that II, IM, IS and empowerment components of TFLS facilitate change. With respect to the planned change approach – same as the Kotter model- der Voet (2014) found that transformational leadership contributes a little to planned change approaches, especially in emergent changes.

Linking leadership to change models, three main publications have examined the relation between leadership styles and change models. Kakucha (2015) theoretically

linked charismatic leadership style behaviors and Lewin's change model. The relationship between the aforementioned model and authentic leadership was empirically tested by Bakari et al. (2017) to find that leaders ought to make employees ready for change in the unfreezing stage, develop commitment during moving stage and provide support for change during the refreezing stage. Finally, Seijts & Gandz (2018) listed several dimensions of leader characters and theoretically linked each dimension with Kotter change model process based on real life incidents occurred with top executives.

From these previous works, it is noticed though some limitations. For example, Seijts & Gandz (2018) followed a qualitative approach in their work, focused on leadership character dimensions and not leadership style. They did not either empirically proved the relationship between these dimensions and each of the 7 steps of Kotter change model implementation. Regarding the previous studies that examined the relationship between charismatic (Kakucha, 2015) and authentic leadership styles (Bakari et al., 2017) and Lewin's change model, there have been critiques with regard to the linear approach of this change model (Palmer & Dunford, 1996), its inapplicability for continuous change (Weick & Quinn, 1999), and inability to integrate leader-follower relationship subtleties (Bartunek & Woodman, 2015).

According to Kotter (1995) and Burnes (2015), the majority of change initiatives fail, due to reasons mainly related to understanding change initiatives, lack of support, problems of communication, of dealing with the impact of change on employees, as well as flaws in the implementation process (Kotter, 1996; Choi, 2011; Georgalis, Samaratunge, Kimberley, & Lu, 2015). In order to reduce these shortcomings, change models and leadership behaviors and dimensions, categorized

under leadership styles, have evolved, to facilitate manager activities to implement change during change initiatives.

The present work aims at investigating the relationship between the most researched leadership styles in the last decade, transformational leadership style (Tal and Gordon, 2016; Batistic, Cerne and Vogel, 2017) and transactional leadership style, and the most contemporary change models, Kotter and ADKAR models.

3.3.1- Kotter Change Model

To assist managers during change, Kotter (1995) introduced the 8 steps Kotter Change Model (KCM). Kotter (2012) stated in the 1st step named “Create Sense of Urgency (SU)” that people will not accept change unless they see the need for it. This need can be identified by examining market and environment competitive forces for available opportunities and potential threats. The 2nd step “Form a Powerful Coalition (PC)” implies that employees who are credible, powerful, expert and have leadership characteristics are identified to initiate the change process, communicate the plans, build teams and convince employees to accept change. In the 3rd step “Create a Vision and Strategy (VC)”, Kotter (2012) pointed out that stakeholders in general seeks to know how the future will be, thus the leaders shall provide direction to the employees, motivate them and coordinate their actions by providing functional, flexible, desirable and communicable vision. The 4th step named “Communicate the Vision (CV)”, highlighted the importance of communicating the established vision to keep the change process on the right track. For this, leaders should use every possible communication channel to ensure that employees know what and why the change is needed and how to achieve it, as well as confirming that the vision is

well understood (Kotter, 1995). With respect to the 5th step “Remove Obstacles (RO)”, Kotter advised to remove barriers, identify people who oppose change, alter organization structure, policies and procedures, encourage risk taking, creative ideas and actions, and provide employees with essential knowledge, skills and resources to perform tasks in new ways. Leaders should also empower employees to better understand their role, the change direction and its goals. The purpose of the 6th step, named “Create Short-term Wins (CSTW)” is to motivate employees by providing positive feedback on their achievement at early change stages, in addition to recognizing and rewarding them to be more motivated. The 7th named “Build on Change (BC)” underlined the role of leaders to report achieved success and direct employees on future changes. Leaders also encourage more employees to participate in change by fostering and persisting on the ongoing change process (Kotter & Rathgeber, 2006). The 8th step named “Anchoring Approaches in the Culture (AC)” aims to make the achieved changes as the new standard operating procedures. These action will improve performance and ensure that the new practices are embedded into the culture to be performed by new and old employees (Kotter, 1995).

In general, Kotter’s change model provided a practical approach to manage change. The model has all the essential elements to set foundations for success especially at the first two stages. Open communication during the change process provide drive for employees to enact change and attract resistors to be engaged in change at several stages, this will help to make change as a standard practice. However, knowing that the trust is an important factor during change (Sverdrup & Stensaker, 2018), the approach may not work well if the trust between employees, managers and guiding coalition is low especially in tall

hierarchal structures, thus continues feedback on implementation is necessary to make change a successful one.

The relevance of Kotter change model has been proved useful during change initiatives in different sectors and activities, including educational domain (Du Plessis, 2011; Cheng & Ko, 2012) , health care domain (Campbell, 2008; Guzmán et al., 2011), library management system implementation (Sidorko, 2008), quality management (Smith, 2011), and organizational learning (Gupta, 2011; Pollack & Pollack, 2014).

According Kotter (1995) 70% of change initiatives fails. He also stated that successful change implementation heavily relied on leadership. Leadership is intertwined with vision, mission, shared goals and objectives concepts. Such concepts underline the importance of leadership to achieve goals that can't be usually achieved (Hunt & Conger, 1999). Grint (2005) and Wood (2005) discussed that leadership has been traditionally viewed as results leadership, person leadership, position leadership and process leadership. Alternatively, other scholars discussed that leadership is more than a person, it is about an intensity and drive that gives followers common direction and vision; these are characteristics of transformational leadership (Daft, 2004; Crevani, Lindgren, & Packendorff, 2010). Yet, Drath & Palus (1994) predicted that characteristics such as motivating and influencing followers, in addition of interpersonal skills and systematic relationships are the competencies for the future leaders. Thus, leadership is based on an interaction style between leaders and followers (Katz, Maccoby, & Morse, 1950; Stogdill & Coons, 1957), to make an exceptional, huge and positive contribution to actions and processes in the organizations (Crevani et al., 2010).

Researchers concluded that successful change heavily relies on the leaders who can promote positive attitude (O'Toole, 1995), prepare employees to accept and participate in the change (Evans, 2001), and ensure that the change will achieve its intended results (Hart & Fletcher, 1999; Pitkethly & Prosser, 2001; Kavanagh & Ashkanasy, 2006).

Yukl (1999) illustrated that most of leadership studies that examined the relationship between leadership and change do not take into consideration the complexity of the processes inside the organization including planned change initiatives and implementation, failing to provide a complete picture on the link between leadership styles and change management models. As noticed from provided literature, most of the researchers investigated the relationship of leadership skills or styles and change from a general perspective, in addition none of the researches that entailed change models were empirically conducted. To the authors best knowledge, none of the previous conducted researches investigated the relationship between transformational leadership style developed by Bass (1985), and Kotter process change model introduced by Kotter (1995). To fill this gap, we argue that organization leaders with transformational and transactional leadership styles ensure successful implementation of Kotter 8 steps change management model. We also argue that the contribution of leadership styles components on successful implementation would vary based on the Kotter change model stage.

3.3.2- Kotter Change Model, leadership styles and hypotheses

This section of the thesis establishes a theoretical relationship between Kotter change model eight stages and each of transactional and transformational

leadership styles dimensions theoretically, aiming to test these relationships empirically in a posterior section.

3.3.2.1- Leadership styles and sense of urgency

Through imagination, transformational leaders create future vision (Curtis & Cerni, 2015). Moreover cognitive thinking and behavioral coping are positively related to transformational leaders (Curtis, King, & Russ, 2017). SU is needed to convince and motivate employees to see the need for change (Kotter, 2012). Arousing employees with a purpose and promising a better future through building trust and emotional attraction with them can be achieved by role model leaders through IIA and IIB. IS component herein creates awareness, thought and imagination, especially in conceptualizing, understanding and visioning the problems along with their solutions. As for TRLS, Bass (1995) expressed that CR could set the ground to initiate structure as same as goal-path theory. This was argued by Antonakis & House (2014) saying that instrumental leader factors affect more than CR. Linking between the two theories under study, we propose that CR is positively related to SU, but we did not notice links between IM, IC components of TRLS, MBEA component of TRLS and this stage.

3.3.2.2- Leadership styles and forming a powerful coalition

In changing environments, it is essential for leaders who manage communication, to ask the right question and involve the right people, in order to define responsibilities for activities that are personally meaningful (Remund, 2011). Kotter (2011) affirmed that the powerful coalition group that leads the change should have expertise and skills to

continue building momentum and urgency. Group members who have weaknesses are identified and provided with initial support to overcome their gaps. Thus, the pride for belonging to a change group with collective shared vision can be achieved through IIA/IIB. IM practices instill enthusiasm and encourage team spirit to achieve the group purpose. IS encourages finding solutions for the problems related to the group collective tasks and duties, while IC entails supporting team members and enhancing their skills. Kotter (2011) indicated that the change leaders should always monitor, act and support any deviation to implement change; this could be supported through MBEA, especially at the group level. Yet, the literature did not notice any link between CR and forming a PC.

3.3.2.3- Leadership styles and creating the vision

The future vision should be feasible, clear, concise, inspiring and take stakeholders aspirations into consideration to be supported, serve change purpose, and simplify decision making (Kotter, 2012). The collective power and pride in addition to working for the organization exciting interests can be achieved through IIA/B and IM. When developing the vision, IC is essential to detect stakeholders and coalition group concerns, needs and ambitions, while IS stimulates creative and innovative thinking in setting new vision and goals. However, it is expected that MBEA and CR would not play a significant role at this stage, since this stage is mostly based on creativity.

3.3.2.4- Leadership styles and communicating the vision

At this stage, some employees still have concerns that should be addressed. Coalition leader ought to lead by example in implementing and communicating the new vision properly, to be understood and accepted; such practices aim to gain employees commitment towards achieving it (Kotter & Rathgeber, 2006; Kotter & Cohen, 2012). The actions of coalition leaders -who are seen as role models and gained followers trust and confidence through IIA/B- will be imitated by employees. Through IC leaders should address employees' anxieties and concerns openly and honestly, while relying on IM and IS leaders can show confidence and enhance creativity to perform beyond expectations towards achieving communicated ambitious goals. Employees who perform well to achieve communicated standards can be promised with CR in exchange, additionally; the leader can always monitor deviations at this stage and act accordingly through MBEA. Having a unique relationship between leaders and employees, the latest will more engaged and provide more organizational outcomes (Burch & Guarana, 2014).

3.3.2.5- Leadership styles and removing obstacles

Obstacles that oppose change, such as organization structure and reporting system, job descriptions, employees' skills and knowledge to perform the tasks, as well as troublesome supervisors who still oppose change for reasons as misunderstanding change, low tolerance, and believes that change is not important to the organization; should be addressed and eliminated by guiding coalition leaders to ensure successful implementation (Kotter & Schlesinger, 2008; Kotter, 2012).

Accordingly, the leaders through IIA/B instill more trust and enthusiasm to convince all the employees to participate in the change. They can also foster creative environment through IS to overcome structural and reporting barriers, IM can be utilized to create more confidence and sense of purpose, while through IC and MBEA the leaders can address individual fears and concerns related to job tasks and duties, skills in general and change in specific. Kotter (2012) also indicated that salaries and reward systems could also create obstacles, those can be eliminated through CR.

3.3.2.6- Leadership styles and creating short-term wins

Short term wins provide evidences on the well estimated chosen vision, accurate decisions and organizational improvements. It will also create more optimism, motivate followers, and keep the sense of urgency fire blazing. From another perspective, it will also turn reluctant supporters into active helpers (Kotter, 2007). Celebrating achievements would flourish IIA/B due to pride of achieving goals, the guiding coalition and the leader will gain more power, trust and credibility. This will trigger IM practices to build on the change for continues change. In addition, the leaders should apply IC for new change joiners and IS to follow the track. Positive feedback and rewards are provided at this stage to recognize and motivate change agents (Kotter,2012) those can be achieved by CR.

3.3.2.7- Leadership styles and building on change

Analyzing processes that went right and those that need improvement after every change step, leaders build on momentum, and set new goals

in cooperation with new change joiners who can add value to guiding coalition (Kotter, 2012). Based on what leader achieved at earlier stages in terms of follower's attachment, trust and optimism to achieve goals, we assume that change leaders ought to utilize both of TFLS and TRLS components to reinforce and consolidate achieved success, set new goals, and gain more support from employees and the guiding coalition to accomplish the complete new vision.

3.3.2.8- Leadership styles and anchoring approaches into organization culture.

Change will be successful only if the new practices sink deeply into the organization culture and get adopted, herein leader's actions should be directed towards communicating new values and successful change stories, consolidating team spirit, in addition to recognizing change coalition leaders; such practices can be achieved through TFLS (Kotter, 1995; Kotter, 2012). Adding to this, researches conducted by Springer, Clark, Strohfus, & Belcheir (2012) and Tipu, Ryan, & Fantazy (2012) found that TFLS is effective in changing culture. Kotter (1995) also advised to reinforce change through rewards and recognitions; employee's actions and practices should be monitored closely by guiding coalition and leaders to root and sustain the change. Accordingly, we assume that both TFLS and TRLS styles along with their components should be practiced anchoring new approaches into the culture.

Theoretically, change leaders should be proactive during the change process, Bass (1985) distinguished between active and passive MBE of

TRLS. For this, and based on the leader character, only MBEA and CR components will be subject to study in relation with Kotter change model. Based on the provided literature, we hypothesize the following:

- ***HK1: The contribution of Transformational leadership style components varies based on Kotter change model implementation stage***
- ***HK2: Transformational leadership style and Kotter change model process are positively related***
- ***HK3: The contribution of Transactional leadership style components varies based on Kotter change model implementation stage***
- ***HK4: Transactional leadership is positively related to Kotter change process***

According to the provided theoretical analysis and the four proposed hypotheses, the following research model was developed to integrate leadership styles and Kotter 8 steps change management model as described in Figure 3.1.

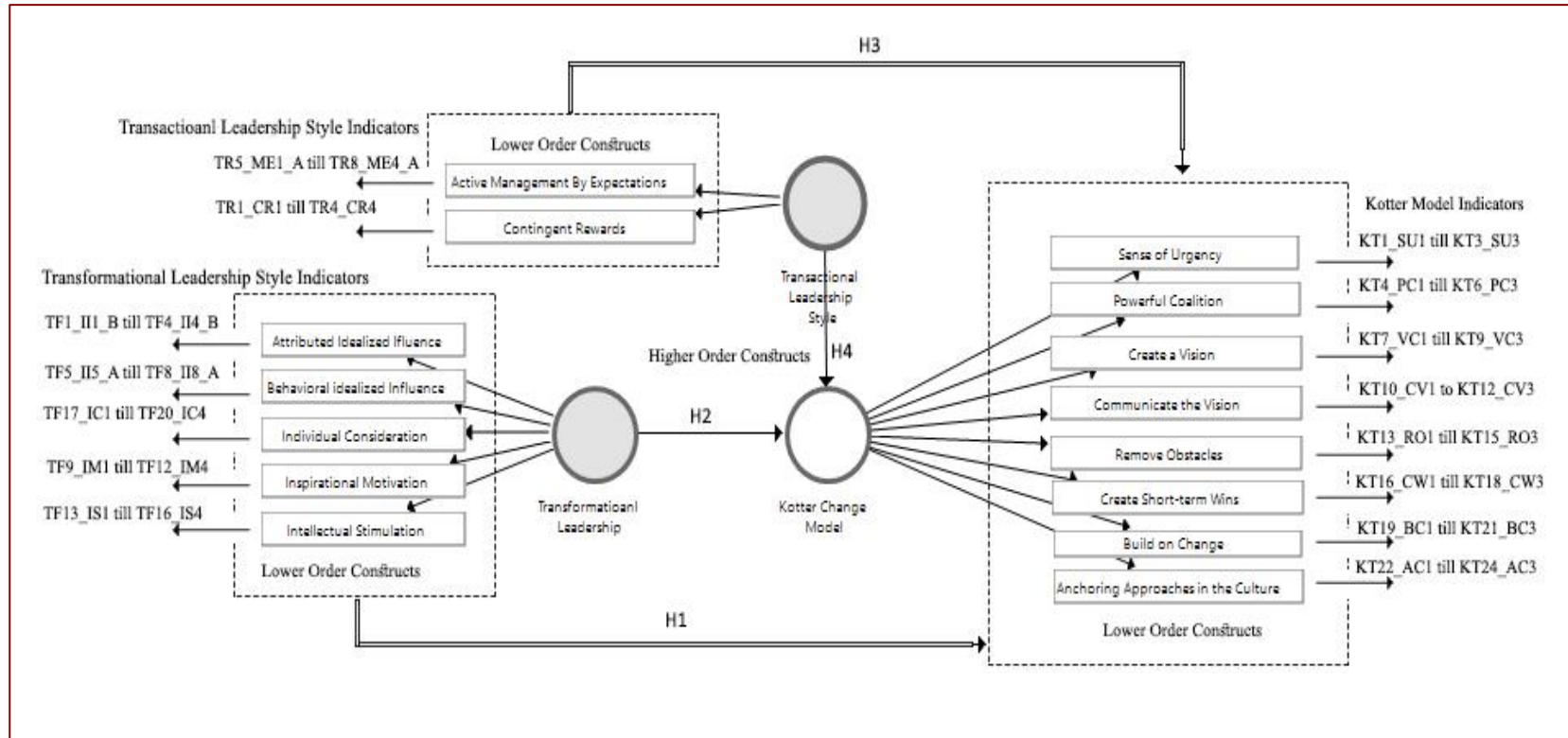


Figure 3.1- Kotter, Transactional and Transformational Leadership Styles Research Model

This research contributes in two aspects. From a practical aspect, it will guide organizational leaders who are seeking change in their organizations with the best applicable practices to adopt while applying Kotter change model. In the specific case of Lebanon (where this research was conducted), and the MENA region, this study will also set the ground for researchers to examine the proposed relationship in their countries, since the change is foreseen, especially in Syria, Egypt, Kingdom of Saudi Arabia, Qatar and Dubai (Schulz & Camp, 2018). From a theoretical perspective, we expect also to contribute on knowledge about the effects of leadership styles on change model implementation which have never been done before.

3.3.3- ADKAR change model

ADKAR planned change model was developed in 2006 by Prosci® after researching more than 900 organizations over a period of ten years. This model is composed of five sequence blocks, which are “awareness”, “desire”, “knowledge”, “ability” and “reinforcement”. This model aims at creating successful actions and a proper framework for managers and employees involved in the change process, through the development of change plans. The functionality of these plans are analyzed, as well as employees’ readiness and engagement, providing them with the proper coaching during change (Hiatt, 2006). The model assumes that organizational outcomes are based on individuals collective behaviors. Therefore, when organizational change is needed, it has to emerge from the change of groups and individuals within the organization itself (Hiatt, 2006).

In the first step of the model, “awareness”, Hiatt (2006) highlighted the most critical factors in managing change, those are communicating the vision, the reasons and scope of change, identify people involved and impacted by change, and the change timeline. At this stage also, micro and macro, internal and external environmental forces that created the need for change should be identified to make every person inside the organization well aware of them (Hiatt, 2006).

“Desire” for change constitutes the second stage. Managers can create new plans, processes, structures, purchase new technologies and promote organizational values, but the challenge is how to convince employees to be on board and gain their support. Creating awareness not necessarily would create desire for changes, thus managers should facilitate their change initiatives and eliminate barriers by listening and understanding employees’ fears and resolving their concerns to instill optimism and let them focus on the change benefits (Hiatt, 2006).

The third step named “knowledge” aims at providing the needed knowledge, skills and behavior to perform new required tasks by addressing two main questions: how to change? and how to perform after implementing change?. Four main factors determine employee capability to acquire knowledge, which are: current knowledge, capacity to learn, resources availability and access to information (Hiatt, 2006).

Furthermore, providing theoretical knowledge is not enough to implement change. Trainers should also ensure that trainees are able to practice what they learned, in terms of newly acquired skills and behaviors to achieve the desired performance level. Several factors could impact the “ability” stage, including

intellectual capability, time available to develop skills, physical abilities, and the availability of resources that facilitate the development of capabilities (Hiatt, 2006).

Finally, to ensure “reinforcement”, actions related to recognition and rewards should be provided by managers. These include celebrations, providing benefits, compensation and healthy work environment. Without reinforcement, employees may feel that their efforts towards change are not valued, thus change sustainability and achieved success will be demolished, and barriers to future change efforts will emerge (Hiatt, 2006).

The advantage of the ADKAR model is that it is more focused on the people change than on the organizational change, thus it is more concerned about the relation and interaction between leaders and followers, and how the leaders aid employees to understand, involve and implement these changes. Another advantage of this model is that it focusses on goals, and it is feasible for leaders to adapt the change to their organizational structure and culture. Moreover, if the leaders know exactly what type of change is needed and how to conduct it, this model seems the most applicable compared to the other models. The power of this model resides in its focus on the problems’ root cause, facilitating the identification of what is working and not, where the change process is breaking down and where it is being overlooked, which will lead to a better orientation towards the actions needed to assure the change success. The benefits of this model have attracted the attention of researchers, which explain the analysis of this model in studies on cross cultural challenges, leader characteristics and the achievement of organizational objectives (Boca, Erdoğdu, & Mukaj, 2015), studies on chain of custody (CoC) certification and truck chain management

(Gilani, Kozak, & Innes, 2018), studies on gender perception towards banking organizational change (Goyal & Patwardhan, 2018), personnel onboarding and acquiring technical and non-technical skills (Karambelkar & Bhattacharya, 2017), retaining knowledge and skills (Lok, 2007), supply chain management sustainable innovation (Paul & Zhou, 2017), and project changes (Tudor, 2014). Nevertheless, this model does also have limitations. The size of organizations affects their change implementation success, making the ADKAR model not advisable for large organizations. Another limitation consists on its focus on narrow, incremental and planned changes; if leaders are seeking macro changes and do not know the scope, the purpose and the end results, this model would probably fail upon implementation.

3.3.4- ADKAR change model, leadership styles and hypotheses

Managing change stands out amongst the most basic and enduring aspects of leadership (Ahn, Adamson, & Dornbusch, 2004). To lead change successfully during turbulent periods, organizations leaders should optimize their attitudes and leadership skills, address employees fears and interest, and gain their full cooperation and support (Darcy & Kleiner, 1991). In the following paragraphs, we will propose the relationships that could link the dimensions that characterize transformational and transactional leadership style with each stage of the ADKAR change model, as a basis for our research model and hypotheses.

3.3.4.1- Leadership styles and change awareness

At the first stage, building awareness can be achieved by communicating why the change is necessary and what are the opportunities behind it and the risks coped with unchanging (Hiatt, 2006). To create awareness managers must apply different actions. Firstly, effective two-ways

communication, which is a means to create awareness and engagement. Secondly, effective sponsorship, represented by a spokesperson who is able to engage with employees and collect feedback from them during the change process. This person should also be able to build a coalition that reinforces awareness at all organizational levels during the change. The third step is to coach employees and help them to see the reasons and benefits of the change to gain their support. Finally, the leaders should not underestimate the importance of transparency during the change process, by showing the employees information related to organization performance and environmental threats. Pitfalls in this stage include how receivers perceive the problem, the credibility of the sender, circulation of rumors and contestability of the reasons for change (Hiatt, 2006).

The role of TFLS at this stage cannot be ignored, it is suggested that through idealized influence (II) a leader who is trusted and considered as visionary can communicate the change message, while through inspirational motivation (IM) a leader can motivate employees to build the coalition that is able to lead the change. Through intellectual stimulation (IS), leaders can influence employees to look at the problem from different aspects, and through individual consideration (IC), leaders can address individual fears through two-way communication. It is also suggested that relying on active management-by-expectation (MBEA), leaders can monitor deviations in awareness creation and act on deviations when needed.

3.3.4.2- Leadership Styles and change desire

Desire for change is the most challenging step in the ADKAR change model. Relying on communicating awareness only, rather than translating it into motivating organizational factors, can demotivate and frustrate employees especially if the organization has a change fail history. At this stage, employees monitor their leaders' actions closely to check if the change is important and if they show commitment. Change sponsors role continues at this stage on building strong peer coalition that addresses employees concerns and inquiries, failing to do so will increase resistance. In addition, readiness to change, risks and resistances should be assessed at this stage to develop tactics and create more desire and support. Direct participation in the change, by creating solutions to problem at all organization levels increase engagement and adoption speed. Nevertheless, incentives and rewards at this stage should align to support desired behaviors (Hiatt, 2006).

With respect to this stage leadership style needs the idealized influence (II) dimension that is based on trust and inspiration, needed when employees monitor their leaders' actions. Again, inspirational motivation (IM) is needed to continue building the coalition, intellectual stimulation (IS) is also needed to create innovative solutions, while individual consideration (IC) helps to address employee fears that prevent them from participating in the change. Finally, contingent rewards (CR) of TRLS also emerge at this stage to creating a reward system.

3.3.4.3- Leadership Styles and change knowledge

Building knowledge is the third milestone, and it includes training and education on the skills, the processes and the roles and responsibilities necessary to know how to change and how to perform effectively in the future. In order to do so, the starting point for leaders is to assess the current level of employees' knowledge, aiming to determine if current knowledge suits future needs. If a gap exists, employees' skills and behaviors are developed to fit the transformation. During knowledge development, time and efforts are based on the employee capability to learn and retain information, yet the leaders should provide the necessary training tools and resources to provide adequate trainings. This could include one to one coaching, group forums, and job aids (Hiatt, 2006). Herein it is suggested that intellectual stimulation (IS) is appropriate to make employees think and behave in a new way and set new performance goals. As the trust in leader is essential, behavioral idealized influence (IIB) also plays a role at this stage. Most importantly, individual consideration (IC) is essential by addressing each employee training needs, while active management-by-expectation (MBEA) is effective means to monitor learning deviations.

3.3.4.4- Leadership styles and ability to change

The transformation of knowledge to ability starts at this phase. Through coaching, change leaders on purpose provide needed supportive environment, the time and resources to help employees to develop acquired skills and behaviors. Tactics at this stage could include day-to-day involvement of managers through providing one-on-one coaching and continuous monitoring and feedback when implementing new

processes and job duties. Feedback on performing duties helps to report deviation to senior managers to act upon it and correct it. Another tactic is to provide access to experts who can provide more assistance. At this stage, leaders should be aware of employees' psychological blocks that can create fear and prevent them from not acting on their full potential. Leaders should also address physiologically block represented by doing tasks based on old habits (Hiatt, 2006).

All TFLS dimensions are essential at this stage. These dimensions are needed to inspire employees to leave the old way of doing job habits and to intellectually stimulate and motivate them to perform in a new way while taking attention into their individual needs. Active management-by-expectation (MBEA) is also essential to monitor performance, interfere and provide feedback when needed.

3.3.4.5- Leadership styles and change reinforcement

Actions and events that strength individual and organizational changes are linked to reinforcement. These actions include providing corrective feedback, success celebrations and acknowledgment on achievements. According to Hiatt (2006), reinforcement builds on momentum and increase objectives accomplishments. Several factors affect reinforcement, first the perception of recognition to employees determines their future results. If the employee perceives that the reward is irrelevant the reinforcement could have negative effect and vice versa. For this, rewards should be linked to accountability, work progress and achievement, so that the employees understand that their efforts were

valued. At this stage also, training and coaching are essential means to keep things on track, sustain change and build on it for future changes.

The role of TRLS at this stage seems to precede TFLS practices. ADKAR model at this stage focuses on providing rewards that were promised at the desire stage, active management-by-expectation (MBEA) is also essential to monitor performance. However; idealized influence (II) could lead to more trust from employees towards their leader, since they touched the change and the promised rewards. Individual consideration (IC) is also practiced by mentoring employees and providing feedback. While inspirational motivation (IM) practices motivate employees to perform in the new way and sustain changes.

Bass (1985) distinguished between active and passive managing by expectation (MBE), but as noticed from the provided literature, change leaders and sponsors ought to be highly proactive during the ADKAR implementation stages. Accordingly, only active management-by-expectation (MBEA) will be considered in this work.

To the author best knowledge, none of the previous researches investigated theoretically and empirically the relationships and interactions between transformational and transformational leadership styles (Bass, 1985) and the ADKAR planned change model (Hiatt, 2006). This work aims to fill this gap providing insights on the contribution of two of the most prominent current leadership styles and the whole process of change described in the ADKAR model, arguing that the transactional and transformational leadership components would vary at each change stage, and that these two styles ensure successful

change implementation. Thus, according to the identified gaps and the purpose of analyzing the relationship between TRLS and TFLS and the ADKAR change model, the following hypotheses are established:

- ***H_{A1}: The contribution of TFSL components varies with respect to the ADKAR change model implementation stage***
- ***H_{A2}: The contribution of TRLS components varies with respect to the ADKAR change model implementation stage***
- ***H_{A3}: TFLS and ADKAR change model process are positively related***
- ***H_{A4}: TRLS and ADKAR change model process are positively related***

With respect to these hypotheses, the following model represented in Figure 3.2 was generated to test the proposed hypotheses. These analyses based on these hypotheses contribute from a theoretical and practical perspectives. From a theoretical side, they provide a framework to explain the relationship between transformational and transactional leadership styles and the ADKAR change model, that has not been discussed before. From a practical side, they will aid organizational leaders with the theory needed to successfully implement change in their organizations, which could be especially relevant in the countries expecting change.

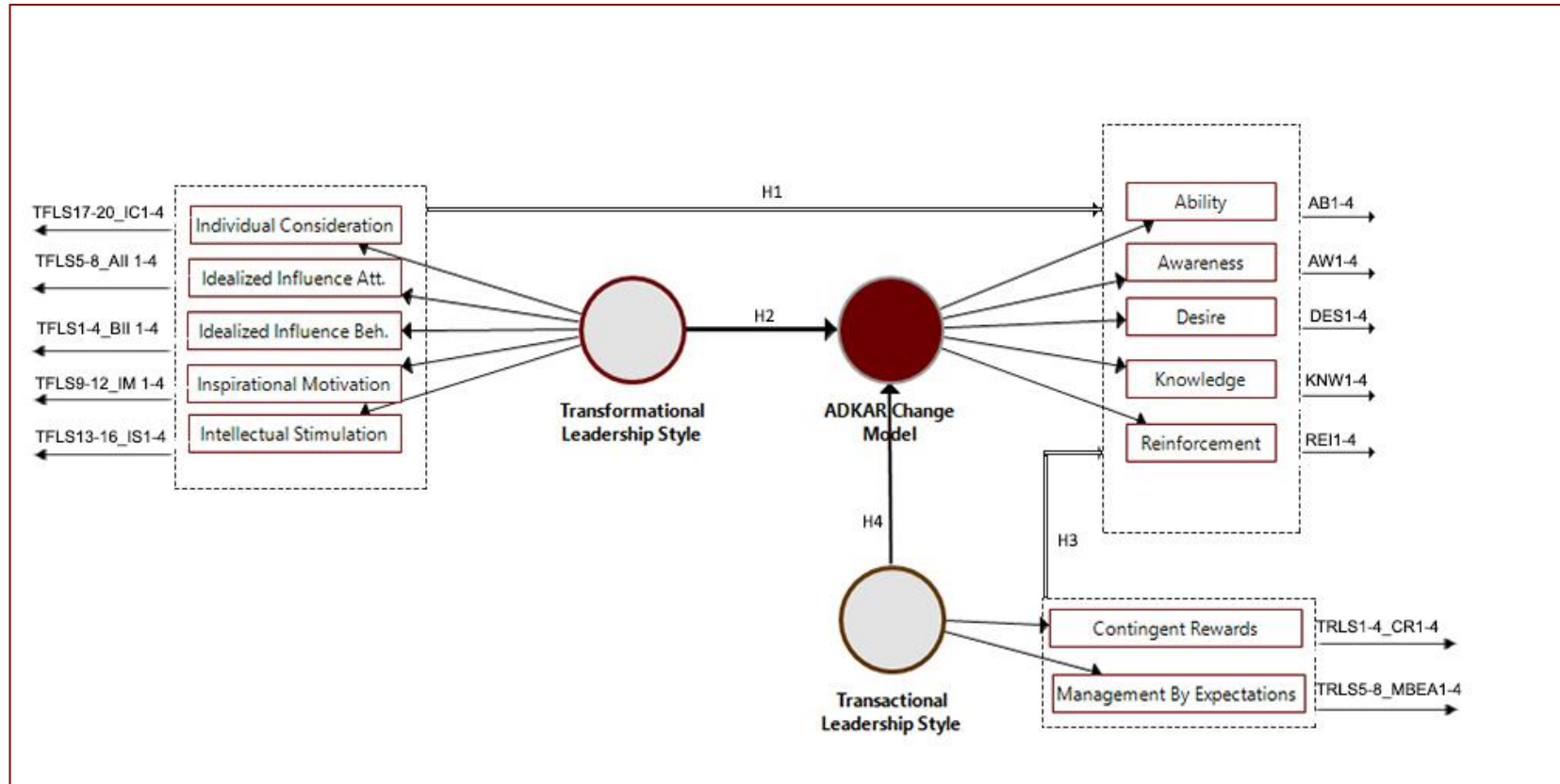


Figure 3.2- ADKAR, Transactional and Transformational Leadership Styles Research Model

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Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen



Chapter 4 Methodological Approaches

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Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen

This chapter provides insightful information on the methodological approaches utilized to collect and analyze data for each of Kotter change model, ADKAR change model, transactional and transformational leadership styles.

4.1- Data Collection

According to the report published by the Lebanese Central Administration of statistics in 2019, Lebanese total population excluding Palestinian and Syrian refugees counted 3,961,821 and is increasing (CAS, 2019). Those are distributed on the five Lebanese provinces. The highest number of populations lives in Mount-Lebanon province and constitute 1,508,720 inhabitants, 38.10% of total population, followed by North-Lebanon province to constitute 816,790 people, 20.60 % of total population. The third province is South-Lebanon that constituted 724,646 people (18.30 %), followed by Beqaa province with 533,201 inhabitants (13.45 %), and finally Beirut, the capital, with 378,464 (9.60%) (CAS, 2019).

Most of the villages in Beqaa and North Lebanon are considered as rural areas. People living in these provinces focus on agriculture business, but many factories and service organizations established their branches there. South-Lebanon witnessed an urban rise after independence in 2006. This province focusses on manufacturing and services industries. However; the most developed urban areas across Lebanese provinces are Beirut the capital, and Mount Lebanon, where several organizations and industries are operating there. However, the sample size was only based on Lebanese employees since according to Lebanese law, Palestinian refugees are not allowed to work in several industries (Moor, 2010).

Referring to Krejcie & Morgan (1970) criterion of sample size projection, and choosing 5 % as margin of error, 0.05 significance level and 95% as confidence level, the

appropriate sample size to cover Lebanese population across provinces appeared to be 385 respondents distributed among the Lebanese provinces as shown in Table 3.1.

Table 4.1- Sample Size

Province	Population	%	N
Mount Lebanon	1,508,720	38.08	147
North Lebanon	816,790.00	20.6	80
South Lebanon	724,646	18.29	70
Beqaa	533,201	13.45	50
Beirut	378,464	9.5	37
Total	3,961,821.00	100%	385

After identifying the population and its distribution, it was necessary to identify the sample method that suits this research. According to Sapsford & Jupp (2006), and since the target participants in this research are employees working in SMEs within the Lebanese provinces regardless their seniority, gender, age or other demographic information, a probabilistic two stage cluster sampling method was chosen. Thus, each province represents a cluster, whereas the overall population is considered as a homogeneous cluster, and heterogenous random selected participants are represented within each sub-cluster.

Each Lebanese province was considered as a cluster, where homogeneously of cluster is observed within the whole population, while sub-clusters are observed as heterogeneous. As a way to represent the sample size, random selected participants were chosen from sub-clusters, particularly those who are working in SMEs' that already initiated, processed, or completed any type of change. The population of Lebanese provinces' were chosen to decide on the sample size instead of the number of workforce, due to the lack of data published to describe the Lebanese workforce in Lebanese labor market by the Ministry of Labors, and because most of employers do not declare the presence of employees in their organizations to avoid taxes.

The data collection was conducted from December 2017 to July 2018. The researchers considered each Lebanese province as a cluster, while villages and cities constituted a sub-cluster within the main cluster. Lebanon yellow pages and 5index were the two main secondary data sources to find SME's in sub-clusters. The managers of SMEs were contacted through emails, phone calls and face-to-face meetings, first to ensure that their organizations experienced change, second to highlight the purpose of this research and third to allow access to their employees to participate in the research. Ethical issues such as voluntary participation, data confidentiality, participation withdrawal and responding to respondent's queries were also taken into consideration throughout this period.

4.2- The Questionnaire

Self-administered questionnaire method was carried out to ensure privacy. Respondents were asked to fill a questionnaire entailing leadership style and change management statements (Appendix Questionnaire). Additionally, employees were asked to respond to demographic and background information such as age, gender, education level, seniority, designation and type and size of their organizations. To ensure validity and to avoid random answers, several control statements were included between the main measurement statements to direct the respondent on specific answer, for example, the responded were asked to choose "sometimes" or "fairly often" for some statements; received questionnaires that missed this criterion was considered as invalid.

During the first month of the survey, a pilot study was conducted on 50 respondents to determine the validity of the indicators and to ensure that the statements are understood by the respondents. Some respondents said that the technical English business words were not clear or not understood; others said that they were not knowledgeable in English language. Accordingly, technical words were explained under

each statement and the questionnaire was translated into Arabic language by an attested translator.

Multifactor Leadership Questionnaire (MLQ 5x) subordinates rating introduced and validated by Bass & Avolio (2000) was adopted in order to measure the TRLS and TFLS. This tool was validated in several studies (Avolio, Bass, & Jung, 1999; Rowold & Heinitz, 2007; Muenjohn & Armstrong, 2008; Rowold & Kersting, 2008).

ADKAR model was measured by adopting ADKAR Dashboard, provided by Prosci®, to determine quantitatively the change progress. Referring to Prosci®, this tool is highly effective and has been utilized by many international organizations (Prosci, 2018). As for Kotter model, 28 statements were used to measure the eight change steps defined by Kotter. Those were derived from the academic literature, notes, reports, and case studies provided by Kotter & Rathgeber (2006), Kotter & Cohen (2012).

The questionnaire was constituted of a demographic section and three main parts. Part one measured leadership styles, including 4 different statements that were utilized to measure each of IIA/B, IM, IC and IS components of TFLS; and MBEA, CR components of TRLS. For these statements, 5 anchors Likert scale were used, varying between “not at all”, “once in a while”, “sometimes”, “fairly often”, and “frequently” (Bass & Avolio, 2000). The second part of the questionnaire was composed of 20 statements to measure ADKAR change model, with 4 different statements to measure each step of this model. This part also adopted a 5-points Likert scale that ranged from “strongly disagree” to “strongly agree”, that capture the respondents’ opinions regarding the approaches their leaders followed during change.

The third part of the questionnaire was composed of 16 statements to measure Kotter change model, whereas 3 different statements were used to measure each step of

this model adopting also 5 points Likert scale with 5 anchors ranged from “strongly disagree” to “strongly agree”.

Positivistic approach and deductive reasoning were adopted to collect primary data relying on simple random based sampling technique within sub-cluster, the study was based on cross sectional approach rather than longitudinal, whereas the study was conducted at a specific time between December 2017 and May 2019. During the period the field survey, and out of 540 distributed questionnaires, 422 were returned including 37 invalid responses, to have 71.29% response rate, collected data was imported to and analyzed by SMARTPLS (Version 3.2.7).

4.3- Data Analysis Description

Structural equation modeling (SEM) method was utilized to analyze the research as preferred by Gefen, Straub, & Boudreau (2000) and Chin, Marcolin, & Newsted (2003). Partial Least Squares (PLS) is an effective tool to measure SEM, and it can be used to measure both formative and reflective constructs without the existence of normality of data distribution (Chin et al., 2003). Second order constructs of transformational, transactional and Kotter change model reflective measures were generated by following two stage approach (Becker, Klein, & Wetzels, 2012; Hair, Hult, Ringle, & Sarstedt, 2016). In the first step, the (first) lower-order reflective independent construct representing leadership style components were regressed on its lower-order dependent construct (i.e. transformational leadership style and transactional leadership style on Kotter change model). In the second step, the latent variables of the regression results were extracted and then imported to a new dataset to be used as indicators for (second) higher-order constructs to measure our proposed hypotheses and estimate the models.

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Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

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Chapter 5 Results

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Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen

This chapter is divided into two sections. The first will provide the results of the relationship between Kotter change model stages and transactional and transformational leadership styles dimensions. The last section will provide the results of the relationship between the ADKAR change model stages and transactional and transformational leadership styles dimensions.

5.1- Kotter Change Model and Leadership Styles Results

PLS analyses were conducted to obtain the results of the relationships between Kotter change model and leadership styles.

In a reflective measurement model; indicator loadings, composite reliability, convergent validity and discriminant validity shall be reported (Wong, 2013). According to Hulland (1999), indicators with loading less than 0.5 threshold should be deleted to improve the model validity and reliability. Wong (2013) added, if the indicator loading is less than 0.7 it should be deleted; however, if deletion doesn't improve the construct validity and reliability, then it can be avoided.

Gefen, Straub, & Boudreau (2000) , Chin, Marcolin, & Newsted (2003) and Wong (2013) indicated that acceptable internal consistency could be achieved when, the construct Cronbach's alpha, composite reliability and item loading exceeds the threshold 0.7. In this case, it is indicated that, all the measures represent the construct, thus it is reliable. Moreover, convergent validity is examined through average variance extracted (AVE), AVE threshold should be greater than 0.5 to be adequate (Fornell & Larcker, 1981; Pavlou & Fygenon, 2006 ; Wong, 2013).

Indicator loading, composite reliability, Cronbach alfa and AVE for each construct in the first and second order model are depicted in Table 5.1 for Kotter change model and Table 5.2 for leadership styles. The lowest loading value of leadership styles appeared as 0.63 for inspirational motivation "TF10_IM2", while other loadings for

each of leadership styles and Kotter change model varied between 0.7 and 0.89. In addition, t-test results indicated that measures consistently represent their constructs by being significant at 0.01 (Wong, 2013). Composite reliability for all constructs at the first and second order level varied between 0.83 and 0.9, the value of Cronbach's Alpha for all construct is also greater than 0.7, while the AVE varied between 0.63 and 0.7, indicating the existence of reliability and convergent validity.

Table 5.1- Kotter Model First and Second Order Research Model Measurements

Construct	Indicator		Loading ^a	t-Value	CA ^b	CR ^c	AVE ^d			
Kotter 8 Steps Change Model	KT1_SU1	Stage 1	0.845	40.02**	0.842	0.904	0.759			
	KT2_SU2		0.894	80.31**						
	KT3_SU3		0.874	74.67**						
	KT4_PC1	Stage 2	0.828	37.04**						
	KT5_PC2		0.856	51.65**						
	KT6_PC3		0.802	30.97**						
	KT7_VC1	Stage 3	0.795	36.11**	0.732	0.849	0.652			
	KT8_VC2		0.828	49.16**						
	KT9_VC3		0.798	35.48**						
	KT10_CV1	Stage 4	0.793	37.83**				0.704	0.836	0.631
	KT11_CV2		0.865	64.38**						
	KT12_CV3		0.718	25.43**						
	KT13_RO1	Stage 5	0.775	29.15**	0.719	0.842	0.641			
	KT14_RO2		0.795	34.33**						
	KT15_RO3		0.83	39.98**						
	KT16_CW1	Stage 6	0.864	55.67**				0.767	0.866	0.683
	KT17_CW2		0.824	47.88**						
	KT18_CW3		0.789	32.54**						
	KT19_BC1	Stage 7	0.729	19.9**	0.71	0.838	0.633			
	KT20_BC2		0.83	43.16**						
	KT21_BC3		0.824	50.34**						
	KT22_AC1	Stage 8	0.842	52.43**				0.82	0.893	0.735
	KT23_AC2		0.874	67.38**						
	KT24_AC3		0.857	50.84**						
Second Order					0.87	0.904	0.545			

^a **Factor loading** >0.5 indicates indicator reliability (Hulland, 1999)

^b**CA:** Cronbach's Alpha > 0.7 indicates indicator reliability (Chin, Marcolin, & Newsted, 2003)

^c **CR:** Composite Reliability > 0.7 (Bagozzi & Yi 1988; Gefen et al. 2000)

^d **AVE:** Average Variance extracted > 0.5 indicated convergent validity (Fornell & Larcker, 1981; Pavlou & Fygenon, 2006 ; Wong, 2013)

** p<0.01

Table 5.2- Leadership Styles(Kotter Model) First and Second Order Research Model Measurements

Construct	Indicator		Loading ^a	t-Value	CA ^b	CR ^c	AVE ^d
Transformational Leadership Style	TF1_II1_B	Idealized Influence Behavior	0.734	24.14**	0.771	0.853	0.592
	TF2_II2_B		0.789	38.41**			
	TF3_II3_B		0.791	34.43**			
	TF4_II4_B		0.8	37.6**			
	TF5_II5_A	Idealized Influence Attribute	0.842	56.16**	0.784	0.861	0.607
	TF6_II6_A		0.77	28.74**			
	TF7_II7_A		0.744	27.92**			
	TF8_II8_A		0.716	17.00**			
	TF9_IM1	Inspirational Motivation	0.801	35.74**	0.737	0.835	0.561
	TF10_IM2		0.63	14.16**			
	TF11_IM3		0.759	27.23**			
	TF12_IM4		0.792	36.54**			
	TF13_IS1	Intellectual Stimulation	0.737	22.79**	0.723	0.828	0.547
	TF14_IS2		0.734	26.38**			
	TF15_IS3		0.694	16.67**			
	TF16_IS4		0.79	38.29**			
	TF17_IC1	Individual Consideration	0.71	21.06**	0.758	0.846	0.579
	TF18_IC2		0.737	22.09**			
	TF19_IC3		0.792	35.16**			
	TF20_IC4		0.8	41.16**			
	Second order			0.901	0.927	0.717	
Transactional Leadership Style	TR1_CR1	Contingent Reward	0.784	35.79**	0.775	0.856	0.597
	TR2_CR2		0.755	21.87**			
	TR3_CR3		0.784	23.29**			
	TR4_CR4		0.767	21.08**			
	TR5_ME1_A	Management By Expectation	0.783	35.29**	0.711	0.822	0.536
	TR6_ME2_A		0.725	30.24**			
	TR7_ME3_A		0.72	37.18**			
	TR8_ME4_A		0.697	30.08**			
	Second order			0.79	0.82	0.708	

^a **Factor loading** >0.5 indicates indicator reliability (Hulland, 1999)

^b **CA:** Cronbach's Alpha > 0.7 indicates indicator reliability (Chin, Marcolin, & Newsted, 2003)

^c **CR:** Composite Reliability > 0.7 (Bagozzi & Yi 1988; Gefen et al. 2000)

^d **AVE:** Average Variance extracted > 0.5 indicated convergent validity (Fornell & Larcker, 1981; Pavlou & Fygenon, 2006 ; Wong, 2013)

** p<0.01

Discriminant validity refers to the degree of which items differentiate among constructs or measure distinct concepts by examining the correlation between the measures of potentially overlapping constructs. This can be assessed in two means; cross loadings and variable correlation of AVE square root. In the cross loadings, the

items that pertain to a specific construct should load in their group higher than any other construct, thus indicating that it belongs to its group. In addition, the square of AVE value of each latent variable from its indicator should be higher across and below other values (Fornell & Larcker, 1981; Chin, Marcolin, & Newsted, 2003).

For identifying the model discriminant validity, and by following Fornell-Larcker criterion, both the cross loading for the first and second order models and the correlation between each two latent variables were calculated. As depicted in Table 5.3 for the second order items loading, the items load within the construct they intend to measure, is higher than on other constructs. Table 5.4 shows that the square root of AVE of each latent variable is greater than its correlation with other construct. These measures ensure good discriminant validity.

Table 5.3- Second Order Construct Item Cross Loadings of Kotter and Leadership Styles Model

Indicator	Construct	Transformational Leadership Style	Transactional Leadership Style	Kotter Change Model
TF1 till TF20	IIA	0.862	0.55	0.523
	IIB	0.892	0.605	0.575
	IC	0.834	0.68	0.525
	IS	0.809	0.665	0.557
	IM	0.835	0.555	0.456
TR1 till TR8	MBEA	0.591	0.859	0.448
	CR	0.63	0.823	0.403
KT1 till KT24	SU	0.337	0.327	0.559
	PC	0.458	0.388	0.651
	VC	0.44	0.325	0.721
	CV	0.46	0.403	0.815
	RO	0.496	0.405	0.76
	CW	0.411	0.345	0.753
	BC	0.56	0.402	0.833
	AC	0.494	0.384	0.774

Table 5.4- Discriminant Validity Fornell and Larcker Criterion of Kotter and Leadership Styles Model

Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1 Active Management by Expectations	0.73																		
2 Anchoring Approaches in Culture	0.36	0.86																	
3 Attributed Idealized Influence	0.44	0.42	0.77																
4 Behavioral Idealized Influence	0.50	0.48	0.71	0.78															
5 Build on Change	0.37	0.67	0.51	0.51	0.80														
6 Communicate the Vision	0.36	0.55	0.36	0.43	0.64	0.79													
7 Contingent Rewards	0.42	0.28	0.49	0.52	0.30	0.32	0.77												
8 Create Short-term Wins	0.29	0.51	0.33	0.40	0.57	0.56	0.29	0.83											
9 Create a Vision	0.29	0.46	0.36	0.41	0.58	0.70	0.26	0.41	0.81										
10 Individual Consideration	0.50	0.39	0.64	0.70	0.41	0.41	0.66	0.35	0.35	0.76									
11 Inspirational Motivation	0.51	0.37	0.69	0.74	0.40	0.31	0.42	0.31	0.34	0.58	0.75								
12 Intellectual Stimulation	0.56	0.42	0.62	0.61	0.52	0.42	0.56	0.35	0.40	0.61	0.57	0.74							
13 Powerful Coalition	0.31	0.37	0.43	0.40	0.46	0.41	0.34	0.54	0.32	0.46	0.28	0.36	0.83						
14 Remove Obstacles	0.38	0.58	0.41	0.43	0.57	0.52	0.30	0.51	0.44	0.40	0.39	0.46	0.43	0.80					
15 Sense of Urgency	0.26	0.34	0.22	0.31	0.34	0.41	0.29	0.35	0.35	0.31	0.27	0.31	0.30	0.37	0.87				
16 Kotter Change Model																0.74			
17 Transactional Leadership Style																	0.51	0.84	
18 Transformational Leadership Style																	0.63	0.72	0.85

The diagonal is the square root of the AVE of the latent variables and indicates the highest in any column or row.

Second Order Model Discriminant Validity

The analysis of the proposed hypotheses included determining the values of R^2 , F^2 , standard β , t-values, p-values and confidence intervals through PLS bootstrapping. As shown in Figure 5.1, running 5000 bootstraps as suggested by Hair, Hollingsworth, Randolph, & Chong (2017), referring to Chin (1998) theory, $R^2 = 0.398$ and showed a moderate variance proportion of dependent variable (Kotter Change Model) explicated by the independent variables (Leadership Style). While Applying Cohen (1988) criterion, F^2 of transactional leadership style came as 0.01 to indicate small effect of this style on Kotter change model, however a medium effect appeared from transformational leadership style on Kotter change model with $F^2 = 0.23$. Most of the t-values showed a significance level at 0.001 except the t-value corresponding to the relationship between transactional leadership style and Kotter change model, which indicated significance at 0.05 with having a t-value of 1.991. Referring to Fornell & Cha (1994) and Hair, Sarstedt, Hopkins, & Kuppelwieser (2014), the proposed model showed adequate ability to predict results with $Q^2 = (1 - SSE/SSO) = 0.209 > 0$. Additionally, Goodness of Fit of the Model $GoF = 0.49 > 0.36$ to conclude that GoF value is large enough to consider the proposed model as a valid PLS global model and accountable at both structural and measurement level (Henseler & Sarstedt, 2013).

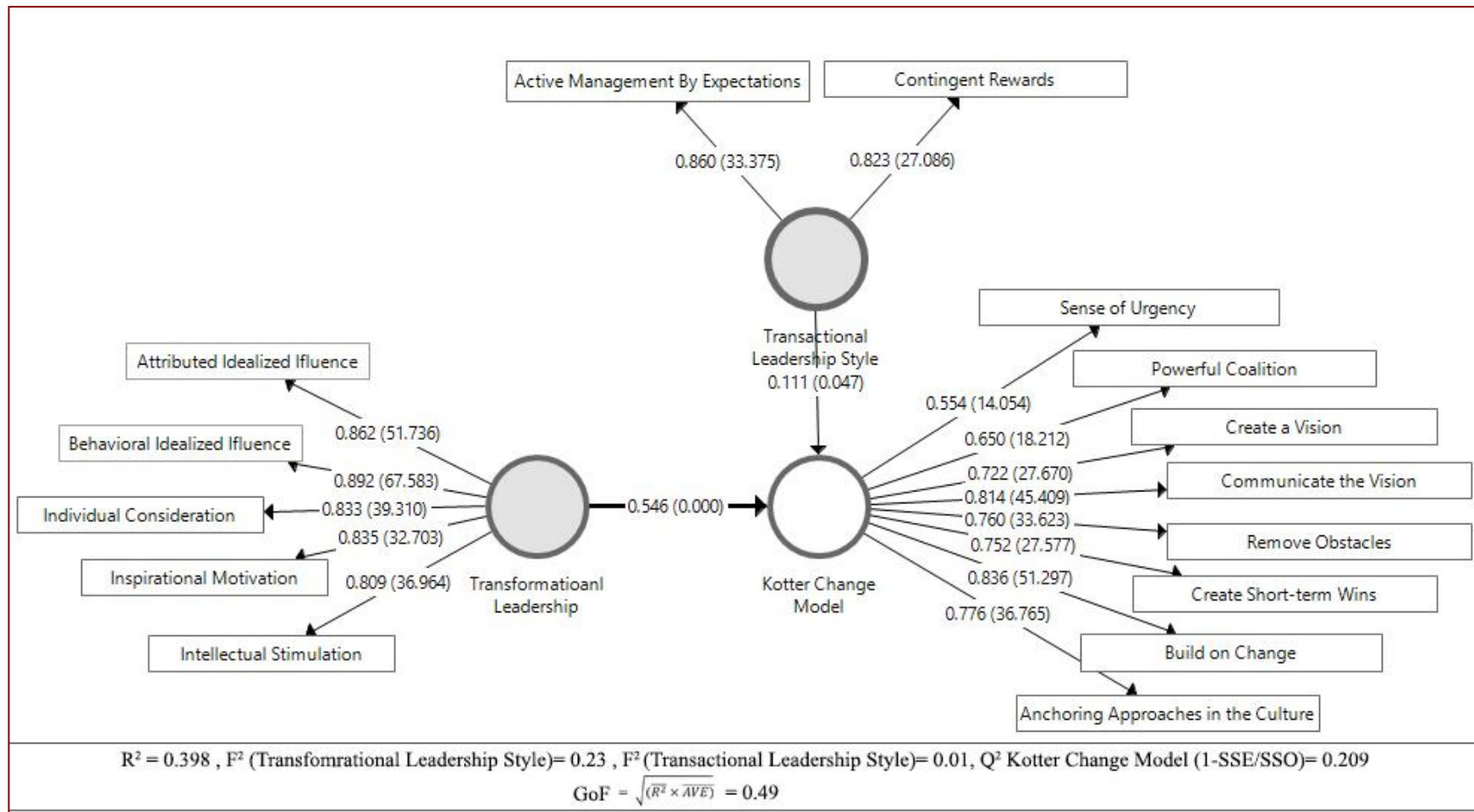


Figure 5.1 - Kotter Change Model Results

With respect to proposed hypotheses, **H_{k1}** about the relation between TFLS components and KCM, Table 5.5 summarizes the results showing that most of the relationships are significant at 0.01. For example, the results showed that IIB is significant at all KCM; in addition, IS is also significant at all KCM steps except when forming PC. Most importantly, TFLS was found to be significant at all Kotter change stages with p-value <0.001, while F values varied between 0.13 and 0.45.

The second hypothesis **H_{k2}** proposed a significant positive relation between TFLS and KCM. As indicated in Table 5.6, for ($\beta = .54$; $p < .0.01$; $F^2 = .23$), the second hypothesis is accepted indicating a medium effect of the TFLS on KCM process implementation.

The third hypotheses **H_{k3}** proposed the relationship between TRLS components and KCM stages. Table 5.7 identified the existence of relationships of MBEA with creating a PC, VC, RO, BC and AC into culture. In addition, a significant relation exists between CR and the last three stages of KCM. The relation between TRLS found to be significant at each Kotter stage, but with low effect for having an F^2 varying between 0.14 and 0.19.

The fourth hypothesis **H_{k4}** proposed a significant positive relationship between TRLS and KCM. As indicated in Table 5.8, for ($\beta = .119$; $p < .0.05$; $F^2 = .01$), this hypothesis is accepted indicating a small effect of the TRLS on KCM process implementation.

Table 5.5 – H_{k1} Hypotheses Test, Relationship between TFLS Components and KCM

H _{k1}	IIA			IIB			IS			
	Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	P Values	
SU	0.14	1.58*	0.05	0.12	1.4*	0.05	0.14	1.56*	0.05	
PC	0.26	3.1**	0	0.1	1.3*	0.04	0.02	0.35	0.36	
VC	0.04	0.73	0.23	0.2	2.3**	0.01	0.22	3.2**	0	
CV	0.03	0.45	0.33	0.24	2.9**	0	0.17	2.4**	0.01	
RO	0.07	0.93	0.18	0.13	1.5*	0.05	0.24	3.5**	0	
CW	0.01	0.2	0.42	0.25	2.6**	0.01	0.12	1.71*	0.04	
BC	0.25	3.7**	0	0.29	3.9**	0	0.29	4.6**	0	
AC	0.11	1.5*	0.05	0.3	3.4**	0	0.16	2.7**	0	
H _{k1}	IC			IM			Transformational Leadership Style			
	Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	F2	P Values
SU	0.1	1.15	0.13	0.07	0.81	0.21	0.34	7.1**	0.13	0
PC	0.25	3.1**	0	0.21	2.7**	0	0.46	9.5**	0.26	0
VC	0.04	0.7	0.24	0.01	0.06	0.48	0.44	9.8**	0.24	0
CV	0.13	1.9*	0.03	0.12	1.70*	0.04	0.46	10.6**	0.26	0
RO	0.12	2.0**	0.02	0.03	0.39	0.35	0.49	12.4**	0.32	0
CW	0.05	0.68	0.25	0.11	1.70*	0.04	0.41	8.8**	0.2	0
BC	0.04	0.55	0.29	0.14	2.2**	0.01	0.56	15**	0.45	0
AC	0.2	2.3**	0.02	0.09	1.04	0.15	0.49	12.4**	0.32	0

Table 5.6- H_{k2} Hypotheses Test, Relationship Between Transformational Leadership Style and Kotter Change Model

H _{k2} : Transformational Leadership -> Kotter Change Model	Std. β	Std. Error	T-value	P Values	Decision	F ²	2.5% CI LL	97.5% CI UL
		0.543	0.05	10.097**	0.00	Supported**	0.23	0.44

***p<0.01 *p<0.05 at Two tailed test with 0.05 Sig. Level*

Table 5.7- H_{K3} Hypotheses Test (Relationship between Transactional leadership Components and Kotter Change Model Stages)

H _{K4}	MBA			CR			Transactional Leadership Style			
	Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	F2	P Values
SU	0.063	1.001	0.159	0.094	1.256	0.105	0.376	8.3**	0.12	0.00
PC	0.104	1.617*	0.050	0.017	0.185	0.427	0.388	8.2**	0.18	0.00
VC	0.027	0.426	0.335	0.032	0.517	0.303	0.324	6.5**	0.12	0.00
CV	0.124	2.24**	0.013	0.001	0.038	0.485	0.401	9.04**	0.19	0.00
RO	0.119	2.16**	0.015	0.05	0.901	0.184	0.398	9.2*	0.19	0.00
CW	0.067	1.04	0.149	0.076	1.47*	0.046	0.344	7.42**	0.14	0.00
BC	0.073	1.44*	0.045	0.093	1.59*	0.049	0.398	8.7**	0.19	0.00
AC	0.113	2.12**	0.017	0.067	1.05*	0.050	0.327	7.1**	0.17	0.00

****p<0.01 *p<0.05 at Two tailed test with 0.05 Sig. Level**

Table 5.8- H_{K4} Hypothesis Test (Relationship between Transactional leadership Style and Kotter Change Model Process)

H _{K4} Transactional Style -> Kotter Change Model	Std. β	Std. Error	t-value	P Values	Decision	F ²	2.5% CI LL	97.5% CI UL
	0.119	0.05	2.006*	0.045	Supported*	0.01	0.013	0.227

****p<0.01 *p<0.05 at Two tailed test with 0.05 Sig. Level**

Legend: **IB:** Idealize Influence Behavioral – **IA:** Idealized Influence Attributed – **IM:** Inspirational motivation – **IS:** Intellectual Stimulation - **IC:** Individual Consideration
MBA: Management by Expectations Active – **CR:** Contingent Rewards – **SU:** Sense of Urgency - **PC:** Powerful Coalition- **VC:** Create a Vision – **CV:** Communicate Vision
RO: Remove Obstacles – **CW:** Create Short term wins - **BC:** Build on Change – **AC:** Anchor Changes in Culture

5.2- ADKAR Change Model and Leadership Styles Results

Two stage approach was adopted to analyze transformational, transactional and the ADKAR change model second order constructs (Becker, Klein, & Wetzels, 2012; Hair, Hult, Ringle, & Sarstedt, 2016). In the first stage, the (lower) first-order reflective constructs and their indicators representing leadership styles and the ADKAR components were regressed on their lower-order dependent construct. This step will create one indicator for each construct. In the second step, resulted regressed latent variables were extracted and imported to a new dataset to represent indicators for the (higher) second-order constructs to analyze hypotheses and estimate the model.

Referring to Table 5.9, indicators loading and t-values for each of the model constructs were calculated. The loading for all constructs met the threshold by having a value greater than 0.7, thus none of these indicators were deleted. In addition t-value showed a high internal consistency of indicator with respect to its construct at 0.01 (Wong, 2013). Composite Reliability, Cronbach Alfa, and AVE for each construct in the first and second order model were also calculated. All these measures met the threshold, thus indicting model reliability and convergent validity.

Relying on Fornell-Lacker criterion, AVE diagonal and cross loadings for the second order model was calculated as depicted in Tables 5.10 and 5.11 The model ensured its discriminant validity, since the square root of AVE of each latent variable is greater than its correlation with other construct and the items load within the construct, they intend to measure is higher than on other constructs.

Table 5.9- ADKAR Model First and Second Order Research Model Measurement

Construct	Indicator		Loading ^a	t-Value	CA ^b	CR ^c	AVE ^d
Transformational Leadership Style	TFLS1_BII1	Idealized Influence Behavior	0.745	27.563	0.784	0.861	0.607
	TFLS2_BII2		0.789	35.113			
	TFLS3_BII3		0.789	32.37			
	TFLS4_BII4		0.793	35.04			
	TFLS5_AII1	Idealized Influence Attribute	0.751	25.235	0.738	0.836	0.56
	TFLS6_AII2		0.718	22.648			
	TFLS7_AII3		0.803	48.876			
	TFLS8_AII4		0.719	20.853			
	TFLS9_IM1	Inspirational Motivation	0.848	61.359	0.824	0.883	0.654
	TFLS10_IM2		0.829	44.136			
	TFLS11_IM3		0.818	40.187			
	TFLS12_IM4		0.735	20.162			
	TFLS13_IS1	Intellectual Stimulation	0.741	23.447	0.723	0.828	0.547
	TFLS14_IS2		0.726	23.691			
	TFLS15_IS3		0.699	17.236			
	TFLS16_IS4		0.789	35.357			
	TFLS17_IC1	Individual Consideration	0.79	31.215	0.814	0.877	0.641
	TFLS18_IC2		0.839	37.251			
	TFLS19_IC3		0.775	48.281			
	TFLS20_IC4		0.797	31.777			
Second order					0.827	0.878	0.595
Transactional Leadership Style	TRLS1_CR1	Contingent Rewards	0.786	31.575	0.778	0.857	0.6
	TRLS2_CR2		0.74	26.727			
	TRLS3_CR3		0.79	38.211			
	TRLS4_CR4		0.782	34.243			
	TRLS5_MBEA1	Management By Expectation	0.784	34.434	0.711	0.822	0.536
	TRLS6_MBEA2		0.727	22.755			
	TRLS7_MBEA3		0.72	22.413			
	TRLS8_MBEA4		0.695	21.452			
Second order					0.74	0.83	0.705
Kotter 8 Steps Change Model	AW1	Awareness	0.779	36.292	0.763	0.847	0.582
	AW2		0.762	24.119			
	AW3		0.767	34.17			
	AW4		0.742	21.73			
	DES1	Desire	0.705	22.123	0.794	0.866	0.618
	DES2		0.801	42.318			
	DES3		0.812	49.013			
	DES4		0.822	39.016			
	KNW1	Knowledge	0.803	43.38	0.833	0.89	0.671
	KNW2		0.852	63.304			
	KNW3		0.712	25.566			
	KNW4		0.898	64.662			
	AB1	Ability	0.723	24.579	0.741	0.838	0.564
	AB2		0.693	21.235			
	AB3		0.767	28.644			
	AB4		0.816	36.801			
REI1	Reinforcement	0.736	23.353	0.779	0.859	0.605	
REI2		0.719	24.339				
REI3		0.762	29.005				
REI4		0.883	53.99				
Second Order					0.837	0.885	0.607

^a **Factor loading** >0.5 indicates indicator reliability (Hulland, 1999)

^b **CA:** Cronbach's Alpha > 0.7 indicates indicator reliability (Chin, Marcolin, & Newsted, 2003)

^c **CR:** Composite Reliability > 0.7 (Bagozzi & Yi 1988; Gefen et al. 2000)

^d **AVE:** Average Variance extracted > 0.5 indicated convergent validity (Fornell & Larcker, 1981; Wong, 2013)

Table 5.10- Second Order Construct Item Cross Loadings of ADKAR and Leadership Styles Model

Construct	ADKAR	TRLS	TFLS
Awareness	0.70	0.41	0.44
Desire	0.81	0.41	0.56
Knowledge	0.79	0.38	0.44
Ability	0.79	0.42	0.49
Reinforcement	0.78	0.46	0.48
MBEA	0.4	0.86	0.66
CR	0.41	0.80	0.59
IC	0.29	0.71	0.73
IIA	0.39	0.46	0.72
IIB	0.57	0.60	0.86
IM	0.52	0.50	0.82
IS	0.55	0.66	0.81

Table 5.11- Discriminant Validity Fornell and Larcker Criterion of ADKAR and Leadership Styles Model

Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Ability	0.75														
2 Awareness	0.51	0.76													
3 CR	0.34	0.34	0.78												
4 Desire	0.54	0.45	0.30	0.79											
5 IC	0.19	0.22	0.39	0.25	0.80										
6 IIA	0.32	0.24	0.33	0.31	0.36	0.75									
7 IIB	0.46	0.43	0.52	0.51	0.43	0.55	0.78								
8 IM	0.42	0.39	0.46	0.49	0.35	0.51	0.66	0.81							
9 IS	0.45	0.38	0.57	0.52	0.40	0.47	0.61	0.57	0.74						
10 Knowledge	0.51	0.39	0.28	0.62	0.21	0.28	0.42	0.35	0.41	0.82					
11 MBEA	0.38	0.36	0.41	0.38	0.78	0.45	0.51	0.39	0.56	0.35	0.73				
12 Reinforcement	0.52	0.44	0.35	0.50	0.29	0.37	0.41	0.39	0.40	0.59	0.43	0.78			
13 ADKAR													0.78		
14 TRLS													0.54	0.84	
15 TFLS													0.63	0.75	0.77

The diagonal is the square root of the AVE of the latent variables and indicates the highest in any column or row.

Second Order Model Discriminant Validity

Further analyses were conducted to test the proposed hypotheses, model ability to predict and Goodness of Fit (GoF) as shown in Figure 5.2. Hair, Hollingsworth, Randolph, & Chong (2017) advised to run 5000 PLS bootstrapping to ensure adequacy of results. The model showed a moderate variance proportion of the ADKAR model (dependent variable) explained by TFLS and TRLS (independent variables) with $R^2 = 0.406$ (Chin, 1998). Referring to Cohen (1988) criterion, F^2 of TFLS appeared as 0.19 indicating a medium effect of TFLS on the ADKAR model, while TRLS indicated a small effect with $F^2 = 0.019$. Additionally, the results showed an adequate ability of prediction with $Q^2 = (1 - SSE/SSO) = 0.23 > 0$ (Fornell & Cha, 1994; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Moreover, the model is considered as a valid PLS global model and accountable at both structural and measurement level with $GoF = 0.48 > 0.36$ (Henseler & Sarstedt, 2013).

H_{A1} and **H_{A2}** proposed that TFLS and TRLS components would vary considering the different stages of the ADKAR change model. Table 5.12 summarize these relationships, showing that some effects of leadership styles components are significant at 0.01 and 0.05, while others are not significant on the ADKAR implementation stages. The results showed that a significant relationship exists between IIB, IC of TFLS and MBEA of TRLS and the 5 stages of the ADKAR model.

H_{A3} proposed a significant positive relationship between TFLS and the ADKAR model. Referring to Table 5.13. This hypothesis was accepted ($\beta = .504$; $p < 0.01$; $F^2 = 1.19$). In addition, **H_{A4}** was also accepted indicating that a significant positive relationship appeared between TRLS and the ADKAR model ($\beta = 0.16$; $p < 0.01$; $F^2 = 0.019$). It is noticed from β values that the relationship of TFLS and the ADKAR model is stronger than the effect of TRLS on the ADKAR model

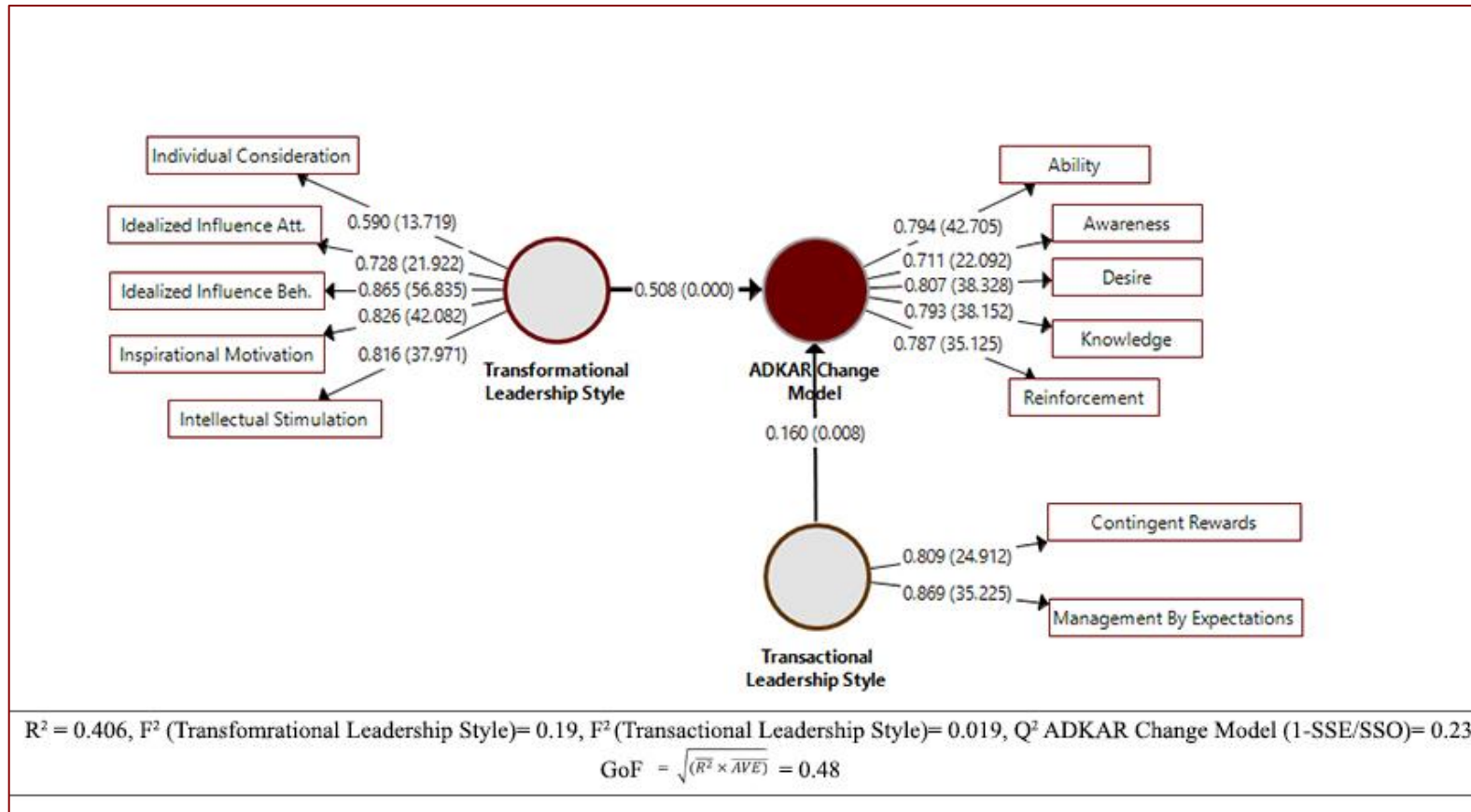


Figure 5.2- ADKAR Change Model PLS Result

Table 5.12- Relationship between Transformational, Transactional leadership components and ADKAR Change Model

Constructs			Awareness			Desire			Knowledge			Ability			Reinforcement		
			Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	P Values	Std. β	T Value	P Values
H _{A1}	TFLS	IIA	0.1	1.39*	0.05	0.1	1.29*	0.05	0.	0.26	0.39	0.09	0.14	0.44	0.1	1.95*	0.02
		IIB	0.2	2.7**	0.00	0.2	3.92**	0.00	0.2	3.43**	0.00	0.2	2.63**	0.00	0.1	1.35*	0.05
		IM	0.2	2.29**	0.01	0.2	3.86**	0.00	0.1	1.25	0.10	0.2	2.1**	0.01	0.1	1.87*	0.03
		IS	0.03	0.43	0.33	0.3	4.02**	0.00	0.1	2.02**	0.02	0.1	1.83*	0.03	0.03	0.47	0.31
		IC	0.2	2.92**	0.00	0.1	2.11**	0.01	0.2	2.84**	0.00	0.3	4.39**	0.00	0.2	2.39**	0.00
H _{A2}	TRL	CR	0.1	1.61*	0.05	0.1	1.5*	0.05	0.08	0.18	0.43	0.1	0.96	0.16	0.1	1.83*	0.03
		MBE	0.3	4.06**	0.00	0.2	2.51**	0.00	0.3	3.63**	0.00	0.4	4.75**	0.00	0.4	4.48**	0.00

** $p < 0.01$ * $p < 0.05$ at Two tailed test with 0.05 Sig. Level

Table 5.13- Relationship between Transformational, Transactional leadership and ADKAR Change Model

Hypothesis	Std. β	STDEV	T-value	P Values	Decision	F ²	2.5% CI LL	97.5% CI UL
H _{A3}	0.508	0.056	9.002	0	Supported **	0.191	0.399	0.622
H _{A4}	0.16	0.057	2.801	0.008	Supported **	0.019	0.048	0.27

** $p < 0.01$ * $p < 0.05$ at Two tailed test with 0.05 Sig. Level



Chapter 6 Discussion and Conclusion

UNIVERSITAT ROVIRA I VIRGILI

Transactional and Transformational Leadership Styles: Bibliometric Review, Relationship With ADKAR and Kotter Change Models

Ali Mohamad Mouazen

This chapter aims to provide conclusion and recommendations, theoretical and practical discussion, as well as implications. We will also highlight limitations and future researches on leadership and change model research. We will structure this chapter considering both, Kotter and ADKAR change models.

6.1- Kotter Change Model and Leadership Styles Research Discussion

6.1.1- Kotter model theoretical contribution

The literature preview indicted the existence of a research gap due to the limited research on leadership and strategic change management relationships. Previous researches mostly focused on the relationship between transformational leadership styles or skills and change in general, ignoring to examine this relation in terms of the vast available change models. For example, some studies indicated a positive relation between employee commitment to change and transformational leadership style (Herold, Fedor, Caldwell, & Liu, 2008; Herrmann, Felfe, & Hardt, 2012; Gelaidan & Ahmed, 2013; Hechanova & Cementina-Olpoc, 2013; Weiherl & Masal, 2016). Other studies showed a positive relation between transformational leadership style, or skills and successful change management, such as the studies conducted by (Lirong & Minxin, 2008; Mao & Long, 2008; Uddin, 2013; Gorgani, Nasiri, & Jafari, 2014; Al-Qura'an, 2015; Der Voet, Kuipers, & Groeneveld, 2016; Alqatawenh, 2018), while Der Voet (2014) found that transformational leadership contributes a little to planned change approaches, but this style is very effective in emergent changes. Contradicting Der Voet (2014) results, the findings of this research indicated that both transformational and transactional leadership styles are positively related to successful planned change implementation.

Moreover, being more specific, this doctoral thesis contributes to theoretical advances in this field in two folds. First, this study fills the research gap between transactional, transformational leadership styles and Kotter change model. Second, Kotter (2018) asserted on the role of transformational leadership on successful change implementation. Although several studies concluded that Kotter change management model is effective when implementing change, yet, none of the previous studies conceptualized and provided theoretical and practical investigation on this link, taking an example the research of Seijts & Gandz (2018) who discussed leadership character dimensions and Kotter change model, without taking an quantitative empirical investigation approach. Accordingly, this research is the first in type that has succeeded in providing a model to test and investigate the relation between not only transformational leadership style and its components, but also transactional leadership theoretically and empirically with every Kotter change management implementation stage. Comparing the results of this thesis to the results of the beforementioned researches, our results indicated that change leaders should undertake specific actions, skills and behaviors that are related to transactional and transformational leadership style dimensions, those if applied would increase employee commitment and ensure successful change implementation relying on Kotter change model stages. Those were indicated by testing H_{k1} and H_{k3} hypotheses.

6.1.1- Kotter model practical contribution

In practice, at the **first stage** of Kotter change model implementation, we proposed that a relationship exists between attributed and behavioral idealized influence, individual considerations and intellectual stimulation components of

transformational leadership style and creating a sense of urgency. The findings supported our view and our arguments on non-existence of relationship between inspirational motivation and individual consideration components of transformational leadership style. With respect to transactional leadership style, Bass (1995) illustrated that contingent reward is effective when ground to initiate structure, while Antonakis & House (2014) argued that instrumental leader factors (monitoring and providing feedback) have more effects than contingent rewards. Our results showed that there is no significant relation between each of contingent rewards, active management by expectations when creating sense of urgency.

At the **second** stage, we emphasized on the role of leadership style and forming a powerful coalition, and we proposed that idealized influence, inspirational motivation, and individual consideration components of transactional leadership style are essential at this stage. The results of this research supported our view, where a strong significant relation appeared between behavioral idealized influence, attributed idealized influence, inspirational motivation and individual consideration and creating a powerful coalition. With respect to transactional leadership style, the results supported our view showing that active management by expectations is needed to monitor employee's actions during this stage. As expected, no relationship was found between intellectual stimulation, contingent rewards and creating powerful coalition . Such results supports Holten & Brenner (2015) results and proved that transformational leadership style would leverage managers change engagement, those according to Kotter support change throughout the process.

At the **third stage**, we assumed and proposed that all transformational leadership style including idealized influence (attributed and behavioral), inspirational motivation, intellectual stimulation and individual considerations would be effective when creating vision. In general, the results of the tested hypotheses did not support all our view. Whereas, a significant strong relationship only existed between behavioral idealized influence component of transformational leadership style and creating the vision. Conversely, no relation was detected between active management by expectations, and contingent reward components of transactional leadership style and creating a vision.

When communicating the vision at the **fourth stage**, we assumed that all transformational leadership style components are linked to communicating the vision. The findings supported our assumption, a strong significant relation between communicating the vision and behavioral idealized influence and individual consideration components of transformational leadership style. In addition, the results also indicated that the relationship is also significant between this stage and intellectual stimulation and inspirational motivation. As for transactional leadership style, our results supported the need of active management by expectations practices with a significant relationship. In addition, no relation was detected between attributed idealized influence component of transformational leadership style, contingent rewards of transactional leadership style and communicating the vision.

When removing obstacles at the **fifth stage**, we suggested that behavioral idealized influence, inspirational motivation, individual consideration and intellectual stimulation components of transformational

leadership style are needed to motivate employees who are not participating in change. The results showed a strong significant positive relationship between individual consideration, intellectual stimulation and removing obstacles Kotter stage, and also a positive relationship between behavioral idealized influence and removing obstacles. However; no significant relation was found between attributed idealized influence, inspirational motivation and this stage. As for transactional leadership style, we assumed that active management by expectations is effective at this stage to monitor employee behaviors with respect to the assigned task and job description. The study results supported our view, where a strong significant positive relation appeared between this component and removing obstacles, while there was not proved any relation between contingent rewards and this stage.

The leaders have to celebrate achieved changes at the **sixth stage** of Kotter change model. At this stage, we proposed that through attributed idealized influence, leaders will gain more trust due to successful achievements that would be clear enough to gain more support. We also proposed that inspirational motivation will motivate followers to work on future tasks; nevertheless, intellectual stimulation employees will allow them to think and behave in a new way. However, we did not notice any relation between intellectual stimulation and creating short term wins. The results supported our argument. Behavioral idealized influence was strongly significantly positively related to creating wins; inspirational motivation, intellectual stimulation were also positively related. However; the results also indicated that there is no significant relation between attributed idealized influence, inspirational motivation and contingent rewards. While celebrating wins, leaders should

reward the guiding coalition and provide continuous feedback on performance (Natter, Mild, Feurstein, Dorffner, & Taudes, 2001; Kotter, 2012). Accordingly, we assumed that, at this stage that contingent rewards component of transactional leadership style is positively related to creating short term wins. The study findings assured this view, in addition no significant relation was found between active management by expectations and this stage.

In the **seventh** stage, we considered that leadership will flourish when building on change, thus the leaders should use both and most of transformational leadership style and transactional leadership style components to create new changes. The research findings supported our assumption, with respect to transformational leadership style components, a strong significant positive relation appeared between attributed idealized influence, behavioral idealized influence, inspirational motivation, intellectual stimulation and building on change, while we have failed to prove that a relationship exists between individual consideration and building on change. With respect to transactional leadership style, our assumption was also true, where the study results showed a significant positive relation between each of contingent reward, active management by expectations and building on change stage.

At the **final stage**, Kotter (1995) emphasized the role of transformational leadership style on reinforcing changes in the organization culture. Herein, we assumed that transformational leadership style in general while idealized influence, individual consideration and intellectual stimulation in specific would ensure the implantation of this stage. The study results supported previous studies conducted by Springer, Clark, Strohfus, & Belcheir (2012) and Tipu, Ryan, & Fantazy (2012) and our view, whereas a strongly significant

positive relation was determined between each of idealized influence, individual consideration, intellectual stimulation and anchoring approaches into culture. In addition, there was no significant relation between inspirational motivation and this stage. Kotter (1995) also advised to reinforce new norms and values through incentives, rewards and promotions. Adding to that, leaders at this stage ought to monitor closely the new practices to keep things on track, practiced and sustained. The study results also supported our assumptions. A strongly significant positive relation was found between active management by expectations, contingent rewards and anchoring new approaches in culture.

From a practical perspective also, the study results confirmed that the leaders who adopt transformational style would be way successful when implementing change than transactional leaders. This result was concluded from the results of the hypotheses named as H_{K2} and H_{K4} . Referring to these hypotheses, H_{K2} that measured the relationship between transformational leadership style and Kotter change model showed a strong positive relationship with high degree correlation in addition to medium effect of transformational leadership style on Kotter change model, while H_{K4} that measured the relationship between transactional leadership style and Kotter change model showed a positive relation, weak correlation and small effect of transactional leadership style and Kotter change model implementation.

Therefore, it is advised that change leaders specifically in Lebanon, must pay attention to their leadership styles and practices at every stage of Kotter change management process implementation as indicated in Figure 6.1, which shows the relative importance of transformational and transactional leadership styles components with respect to Kotter change model stages. While relying

on their transformational style component differently at every stage, leaders should be aware to use transactional style components especially when creating short term wins, building on change and anchoring approaches into the culture.

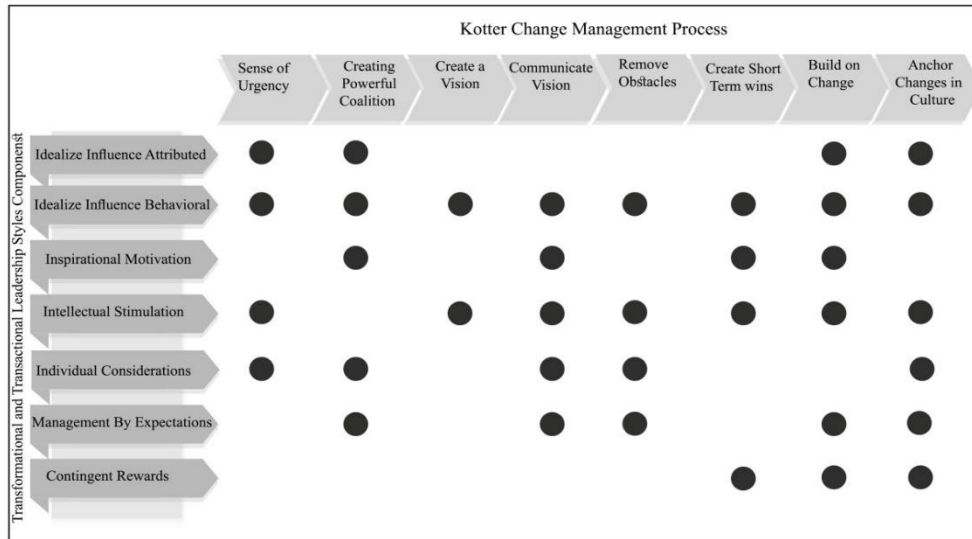


Figure 6.1- The relative importance of each leadership style component in Kotter Change Process

6.2- ADKAR Change Model and Leadership Styles Research Discussion

6.2.1- ADKAR model theoretical contribution

Another aim of this study was to explore the relationship between both transactional and transformational leadership styles and the ADKAR planned change model. To do so, we establish a positive relationship between the aforementioned styles and the ADKAR model. We also hypothesized that the applicability of these styles would differ based on the change model implementation stage.

The current research on leadership styles and change management models remains limited, even if there are some previous works that have been devoted to this kind of analyses. Good examples are the works conducted by Seijts & Gandz (2018), who theoretically discussed the relationships of leaders' general characters and the 8 implementation stages of the Kotter model,

although they did not provide any model or empirical investigation. Also, there have been works focused on the analysis of the Lewin's change model, like the studies of Kakucha (2015) who theoretically analyzed the relationship between charismatic leadership style and Lewin's model, and Bakari et al. (2017) who considered that this model is still effective if it is applied while having an authentic leadership style. However, although Lewin's model has provided the basis for many change management models, it has been also profusely criticized (Palmer & Dunford, 1996; Weick & Quinn, 1999; Bartunek & Woodman, 2015), due to its linear approach, its inapplicability for continuous change and inability to integrate leader-follower relationships. The ADKAR change model, on the other hand, is focused on a more contemporaneous and specific approach that, differently to the Lewin's model does not describe change actions from a general perspective, but provides a detailed approach on the practices that should be taken into consideration during change. The ADKAR model also places people as the cornerstone of the change processes, differently to the Kotter model which is focused on the change of organizations, and not the people within them, who are the real architects of the process (Hiatt & Creasey, 2012).

Accordingly, one of our main purposes is centered in the analysis of the ADKAR change model, trying to provide different contributions. From a theoretical perspective, it will fill the research gap on the effects of transactional and transformational leadership styles and the ADKAR change model, by empirically investigating the role of each of these leadership styles' components on each stage of the change implementation. Also, this study contributes testing the general relationship between these leadership styles and the ADKAR change

model. From a practical perspective, this model provides a road map for the leaders willing to implement change to adjust their leadership practices during the ADKAR model implementation, to ensure that the change will reach its intended results.

The results of this research indicated the existence of relationships between transformational and transactional leadership styles, on one hand, and the ADKAR change model on the other. Our results also proved that leaders, especially through their communication during the awareness and desire stages, play a crucial role for successful change. Such results supports those of Luo, Song, Gebert, Zhang, & Feng (2016), who emphasized the role of communication, considered as the key for implementing change initiatives. Hence, proper and continues communication can be provided through inspirational motivation, intellectual stimulation, individual consideration and active management by expectations dimensions of transformational and transactional leadership styles.

Theoretically, with respect to the proposed hypothesis, the research findings showed a stronger significant positive relationship between transformational leadership style and the ADKAR change model than between transactional leadership style and the ADKAR change model. It was also found that leaders should adjust their practices and leadership style during every stage of the change implementation.

6.2.2- ADKAR model practical contribution

From a practical perspective, our finding showed that leaders can leverage some practices to ensure successful change implementation as indicated in Figure 5.2.

To start with, during the **awareness stage**, organizational leaders can benefit from transformational leadership dimensions, especially trust, charisma, integrity and honesty that are classified under the idealized influence dimension. Leaders should also focus on inspirational motivation dimension, by providing a clear compelling vision and expectations to gain employees commitment, noticing that their individual consideration is essential at this stage especially by addressing employee's fears and needs. At the awareness stage also, leaders through management by expectation dimension of transactional leadership should always monitor performance and act on deviations whenever it occurs. Leaders should also promise rewards for employees for achieving future targets.

At the **second stage** of the ADKAR model, the aforementioned practices should be applied, altogether with the intellectual stimulation dimension of transformational leadership style, trying to make employees creative, by arousing their thoughts and imagination to find new ways to solve problems.

With respect to the **knowledge stage** of the ADKAR model, the results indicated that the most important practices were trust, honesty, integrity with the leader providing knowledge and information about change, intellectual stimulation for employees to find new solutions, individual considerations to address employees needs and management by expectations to act upon needs when deviation occurs.

During the **ability change stage**, most of the dimensions of transformational leadership style are needed during change. For example, leaders should lead by example and actions to show that they are able to do things in a new way, this should be followed by always inspiring employees to be more motivated towards change, taking into consideration to always

intellectually stimulate employees to be creative and find new solutions, never to forget that the leaders should also find individual employee needs, and address it. As for the transactional style, continues monitoring for employees through management by expectations should be practiced by leaders to ensure the success of ability step implementation.

While during the last stage **reinforcement** stage, leaders should mainly focus on the transactional leadership style practices, mainly by providing contingent rewards by praising and reward employees who successfully implement change and through active monitoring for employees to ensure that change is embedded in the culture. In addition, leaders should also pay attention to the transformational leadership style dimensions, especially idealized influence, inspirational motivation, and individual consideration. It is noticed from these results that the efforts needed by the leaders during the reinforcement stage is the same as the efforts needed at the beginning of change cycle, mainly awareness stage.

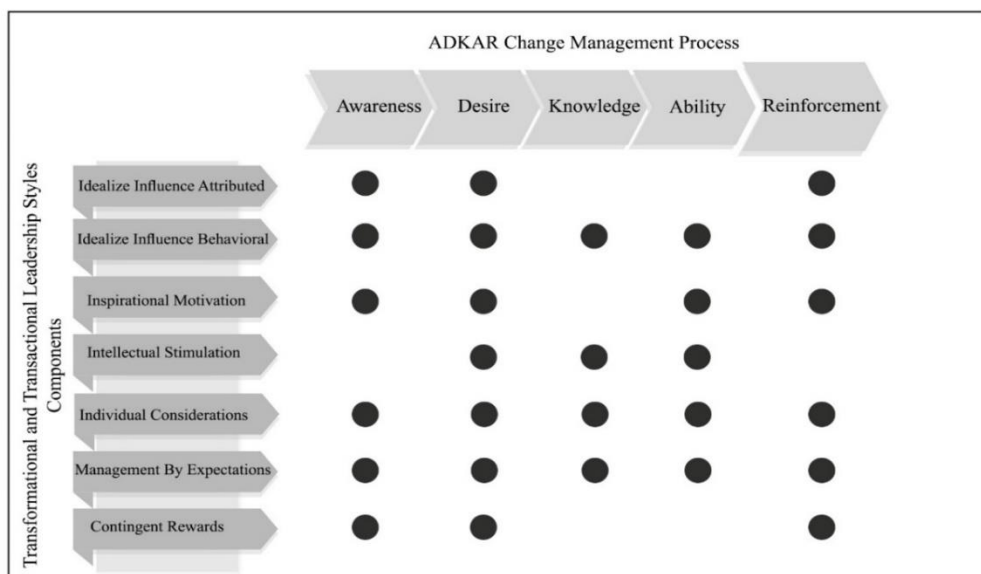


Figure 6.2- *The Relative Importance of Leadership Styles Component in the ADKAR Change Process*

6.3- General Discussion and Conclusions

This doctoral thesis contributes to international management and leadership research in numerous ways. Most significantly, from the statistical background this research developed theoretical models or framework under a new empirical research setting derived from contemporary theories to study the impact of transformational and transactional leadership styles and their components on each of Kotter and ADKAR change model implementation stage. Through Partial Least Square (PLS) analyses, these models (i.e. Kotter and ADKAR) proved its Goodness of Fitness to be considered as PLS global model and accountable at both structural and measurement level.

Fundamentally, from theoretical perspective, the research on leadership and its impact on successful change implementation started focusing on the needs of specific behaviors for the change to be effective (Colville & Murphy, 2006). Many researches emphasized on the significant relation between leadership and successful change (Higgs & Rowland, 2011; Kotter, 2012), but most of the researches does not go beyond general description of leadership without discussing those specific behaviors and skills (Higgs & Rowland, 2011). For example, Lirong & Minxin (2008) found that both transformational leadership style and transactional leadership style positively impact organizational change, Al-Qura'an (2015) and Der Voet, Kuipers, & Groeneveld (2016) found that transformational leadership style is positively related to organizational change. More behavioral and leader skills studies conducted by Gorgani, Nasiri, & Jafari (2014) showed that leaders cognitive, practical and social skills positively impact organizational change. While, Alqatawenh (2018) found that idealized influence, inspirational motivation, intellectual stimulation and empowerment components of transformational leadership style facilitate change. Moreover, Seijts & Gandz (2018) listed several dimensions of leaders' character including drive,

collaboration, humanity, humility, integrity, temperance, justice, accountability, courage, transcendence and judgment; and then linked each dimension with Kotter change management process. In this article Seijts & Gandz (2018) noticed that dimensions needed would differ based on Kotter change model stage; for example, collaboration, humanity, humility, integrity, temperance, justice, transcendence and judgment are mostly needed when creating a powerful guiding coalition, while all the 11 listed characters should be practiced by the leader at the final stage of this model. Their assumption was based on real life incidents happened with the top executives of the world leading organizations and not quantitatively investigated.

This doctoral thesis went beyond this general investigation and asserted on the results of Lirong & Minxin (2008), Al-Qura'an (2015) and Der Voet, Kuipers, & Groeneveld (2016) where transformational and transactional leadership styles positively impact change, and added more value to the work of Gorgani, Nasiri, & Jafari (2014), Alqatawenh (2018) and Seijts & Gandz (2018) by identifying and pinpointing to the behaviors needed by the organization leaders during change by relying mainly on two main leadership styles theories along with their dimensions (transactional and transformational) and two planned change models theories (mainly ADKAR five steps change theory and Kotter eight steps change model). The aim was to find how each dimension of transformational and transactional leadership styles relates to each stage of ADKAR and Kotter change stages.

As discussed earlier, this research took place in the context of Lebanon, where relevant changes are expected to occur, motivated by new contextual factors that will encourage the modification of the traditional way of acting, for companies that would like to take profit of the new scenarios. Therefore, leaders seeking to implement change successfully in Lebanese organizations, should develop transformational leadership

styles behaviors. To be more specific, leaders who are seeking to rely on Kotter change model to change their organizations, should focus on developing their transformational leading style behavioral and mainly focus on idealized influence, intellectual stimulation dimensions that are found to be relevant at each stage of Kotter change stages, as well as individual considerations and inspirational motivation that are relevant to five stages of the Kotter model. As for transactional leading style, leaders should be aware to utilize this style when forming a powerful coalition, communicating vision, removing obstacles, building on change and anchoring change in culture. While contingent rewards would be utilized when creating short term wins, building on change and anchoring change in culture. Moreover, leaders who wish to utilize ADKAR change model, should also develop their transformational leadership style and focus mainly on behavioral idealized influence and individual considerations at all ADKAR stages, followed by inspirational motivation practices that are when creating awareness, desire, ability and reinforcement. Then intellectual stimulation practices that are needed when creating desire, knowledge, and ability. In addition, the results showed that active management by expectations dimension of transactional leadership style is needed at all ADKAR stages followed by contingent rewards that should be provided when creating awareness, desire and reinforcement.

A comparison between the change models let us to conclude that awareness stage of ADKAR model seeks to create almost the same change status in the organization as sense of urgency and powerful coalition in the Kotter model. Relating these stages to leadership styles, it is noticed from the study results, that all leadership styles dimensions in both models are needed to be practiced when unfreezing the current status of the organization. Desire stage of ADKAR change model almost represents creating and communicating vision of Kotter change stages, the difference

noticed between leadership style practices is that both of transactional and transformational leadership styles along with their dimensions are needed at the desire stage, while no relationship was detected between attributed idealized influence, contingent rewards and creating and communicating vision in Kotter change model. In addition, the leadership style dimensions of both transformational and transactional leadership styles are needed the same when creating knowledge in ADKAR model or removing obstacles in Kotter change model. These two stages seeks to create the same status in the organization in terms of educating and training employees and convince other employees to participate in the intended change. The main difference between the two models appears at the last stages, while Kotter model aims to celebrate wins and create more changes before anchoring approaches into culture, the ADKAR model aims to make employees trust themselves and be able to apply new practices before embedding and reinforcing these practices into the organization culture. The difference noticed herein that contingent rewards are needed when creating short term wins and building on change in Kotter model while it is not needed during the ability stage of the ADKAR model. Conversely, individual consideration dimension is not essential when creating short term wins and building on change while it is related to the ability stage. Finally, at the last stages of the two change models, its concluded that contingent rewards are essential when implementing both individual or organizational change, those stages aims to reinforcing or anchoring changes into the organization culture. Yet, the difference appeared at this stage is that intellectual stimulation dimension is not related to reinforcement stage of the ADKAR model, while it is related to anchoring approach into culture in Kotter change model. On the other hand, inspirational motivation dimension is related to ADKAR change model reinforcement stage and not related to anchor approaches into culture stage in Kotter stage model.

In the specific context of Lebanon, leaders at the higher hierarchal levels should identify those who have these characteristics and dimensions that make them the most suitable people to lead change and apply change model that suits their current skills. Furthermore, organization executives who are expecting change, can initiate training programs for their managers to assure that they acquire these characteristics in order to facilitate and assure successful change implementation.

The general recommendations that should be useful for leaders implementing organizational changes, have not been proved in the Arab countries, where previous research has been centered mostly in finding the commonalities and differences between Islamic and Western leadership styles (Beekun & Badawi, 1999; Ather & Sobhani, 2007; Ahmad & Ogunsola, 2011; Galanou & Farrag, 2015). However, the applicability of the proposed model is not guaranteed unless it is tested in these countries, mainly due to the profound contextual changes that are expected in some of them, which undoubtedly will have an impact on their organizations.

6.4- Limitations and Future Research Direction

Although this doctoral thesis followed a comprehensive research method and rigorous analysis procedure, is not exempt of limitations. These limitations along with the future research directions are discussed below.

First, although the data have been collected from all Lebanese provinces with different cultural backgrounds, this is considered as limitation since in this research we considered the country province as heterogenous while Lebanon as a whole country as homogenous. This process ensured diversity, but also lead to generalizability of the findings.

Second, the findings represents respondents self-reported cross-sectional data. This, to some extent, would not represent the changing situation and the series of

relationships between leaders' actions, change process and its success. Nevertheless, the cross-sectional data might be affected by the respondent's predisposition of any actions that occurred in the past or mental disposition when filling the questionnaire.

Third, most of the Lebanese companies belongs mostly to the service industry where 92% of the organizations are considered as service organizations and small to medium enterprises in nature, employing -most of the cases- between 50 to 130 employees. In this research, the manufacturing organizations that also contributes to the Lebanese economy and may encounter change are represented by 7.5% of the total respondents in the study, more studies that are focused on manufacturing industry is needed to understand the nature of the relationship between the study variables.

Fourth, leadership styles and change processes were only measured quantitatively through developed questionnaires. While critics advise to use observation data to support survey measures, this study was unable to observe leaders while interacting with their employees nor identifying the stage of the change process.

Finally, although this study has succeeded to provide the fundamental base for the research on leadership styles and planned change approach, it remained limited to two contemporary change models, Kotter and ADKAR. Yet, the theory on leadership and change management encompassed with many definitions and classifications. For example, Cameron & Green (2015) identified four main metaphors to classify change models based on organization goals. *Machine metaphor (MM)* describes organizations as machines that works to achieve specific goals; this model assumes that concepts such as efficacy, control, performance, authority and optimization are applied. *Organism metaphor (OM)* suggests that organizations are healthy organisms that adapt to the surrounding environment continuously. The *political system metaphor (PSM)* describes organizations as entities having negotiations, leadership and power struggles.

The *flux and transformation metaphor (FTM)* views organizations as self-regulating entities. The classification of change models metaphors as described by Cameron & Green (2015) are listed in Table 6.1. As noticed, most of the change models are related to the organism metaphor, which considers organizations as healthy entities that adapt to its environment, as well as to the organism metaphor. Some of the change models were also considered applicable to adopt in the machine metaphor and the political system metaphor, or both.

Table 6.1- Change Models Metaphor Classification

Nr.	Change Management Model	Year	MM	OM	PMS	FTM
1	Lewin's Model	1947	X	X		
2	Lippitt,Watson & Westley	1958	X	X		
3	Hersey & Blanchard	1969		X	X	X
4	Chin & Benne	1969		X	X	
5	Havelock	1971		X	X	
6	7-S	1980	X	X	X	
7	Bullock & Batten	1985	X			
8	Beckhard & Harris	1985		X		
9	Bridges	1991	X	X		X
10	Carnall	1991		X	X	
11	Burke & Litwin	1992	X	X	X	
12	Schein	1995	X	X		
13	Kotter	1995	X	X	X	
14	Nadler & Tushman	1997		X	X	
15	Senge	1999		X	X	X
16	Ackerman & Anderson	2010		X	X	
17	Nickols	2010		X	X	
18	Prosci-ADKAR	2006	X	X		

Source: (Cameron & Green, 2015)

Legend: Machine metaphor (MM), Organism metaphor (OM), political system metaphor (PSM), flux and transformation metaphor (FTM)

Moreover, the theories on leadership are not limited to transactional and transformational styles. Yet, scholars discussed several theories and styles that encompass trait theory, contingency theories, situational theory, behavioral theory, participative theory, skills theory, autocratic Leadership style, bureaucratic leadership style, servant leadership style, and Islamic leadership style (Amanchukwu, Stanley, & Ololube, 2015)

Although the model of this study provided a solid ground for future researchers to test its applicability in their countries, future researches could not be limited to transactional and transformational leadership styles or to Kotter and ADKAR change models only. Future researches could entail other types of leadership styles that could be studied with respect to change theory based on the organization metaphor discussed above. Because, it would be beneficial by continually theoretically and empirically investigating the essential leadership styles, skills or behaviors for leaders who are implementing change and relating these styles to change models.

In the specific context of Arab countries, leadership styles that are more influenced by the Islamic culture could also be analyzed through longitudinal approach that could help to consider the temporal dimension of the relationship between Islamic leadership style and change models. However, the well-developed leadership styles such as autocratic, democratic, transformational and transactional styles can be utilized in these countries along with the change models discussed in this thesis to ensure smooth organization transition in the upcoming years.



References and Appendix

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Appendix- Questionnaire

Good Day,
My name is Ali Mouazen, I am a Ph.D student at URV university, I am conducting this survey as a requirement of my Ph.D thesis to find " the influence of leadership behaviors on strategic change management".
In this survey, 400 randomly chosen employees will be to answer the following questions that entails their manager's practices and their own thinking style. It will take approximately 25 minutes to complete the questionnaire. Your participation in this study is voluntary. Your survey responses will be strictly confidential. If you have questions at any time about the survey or the procedures, you may contact me at alimouazen@gmail.com
Thank you very much for your time and support

القسم أ – اسلوب القيادة وفعاليتها
هذا القسم من الاستمارة سيستعمل لوصف اسلوب القائد او المدير المباشر لك كما تراه. الرجاء الاجابة على العبارات ادناه واحكم على وصفها. الرجاء اختيار مدى موافقتك او عدم موافقتك على الجمل التالية باعتماد وحدة القياس ادناه.

Section A – Leadership Style
This Part of the questionnaire is used to describe the leadership style for your immediate leader or manager as you perceive it. Please answer the following statements anonymously and judge how frequently each statement you are describing. Please select the best reflects your agreement/disagreement, using the below scale.

Strongly Disagree لا اوافق بشدة	Disagree لا اوافق	Neutral محايد	Agree اوافق	Strongly Agree اوافق بشدة
1	2	3	4	5

Code	Transformational Leader	اسلوب القائد المتحول	Scale				
TF5_II5_A	Instills pride in me for being associated with him/her	يغرس في شخصي الفخر كوني مرتبط به	1	2	3	4	5
TF6_II6_A	Specifies the importance of having a strong sense of purpose	يحدد أهمية وجود شعور بالغاية او الهدف	1	2	3	4	5
TF7_II7_A	Emphasizes the importance of having a collective sense of mission	يشدد على أهمية وجود حس جماعي للمهمة	1	2	3	4	5
TF8_II8_A	Acts in a way that builds my respect	يتصرف بطريقة تبني احترامي	1	2	3	4	5
TF1_II5_B	Displays a sense of power and confidence	يظهر شعور بالقوة والثقة	1	2	3	4	5
TF2_II6_B	Goes beyond self-interest for the good of the group	يتجاوز المصالح الشخصية لصالح فريق العمل	1	2	3	4	5
TF3_II7_B	Talks about his /Her most important values and beliefs	يتحدث حول اهم القيم والمعتقدات عنده	1	2	3	4	5
TF4_II8_B	Considers the ethics and moral consequences of decisions	ياخذ بعين الاعتبار النتائج المعنوية والاخلاقية للقرارات	1	2	3	4	5
TF9_IM1	Talks enthusiastically about what needs to be accomplished	يتحدث بحماس حول ما يمكن انجازه	1	2	3	4	5
TF10_IM2	Talks optimistically about future	يتحدث حول المستقبل بتفاؤل	1	2	3	4	5
TF11_IM3	Articulates a compelling vision of the future	يوضح رؤية واضحة ومقنعة للمستقبل	1	2	3	4	5
TF12_IM4	Expresses confidence that goals will be achieved	يعرب عن ثقته في ان تتحقق الاهداف	1	2	3	4	5
TF13_IS1	Gets me to look at problems from many different angles	يدفعني للنظر في المشاكل من زوايا مختلفة	1	2	3	4	5
TF14_IS2	Seeks differing perspectives when solving problems	يسعى للحصول على وجهات نظر مختلفة عند حل المشاكل	1	2	3	4	5
TF15_IS3	Re-examines critical assumptions to question whether they are appropriate	يعيد النظر في كون ان الافتراضات الحاسمة اذا كانت مناسبة	1	2	3	4	5
TF16_IS4	Suggests new ways of looking at how to compete assignments	يقترح سبلا جديدة للنظر في كيفية استكمال المهام الموكلة	1	2	3	4	5
TF17_IC1	Spends time teaching and coaching	يقضي وقتا في التدريس والتدريب	1	2	3	4	5
TF18_IC2	Treats me as an individual rather than just a member of a group	يعاملني كفرد وليس فقط بصفتي عضوا في المجموعة	1	2	3	4	5
TF19_IC3	Considers me as having different needs, abilities, and aspirations from others	يعتبر ان لي احتياجات وتطلعات وقدرات مختلفة عن الاخرين	1	2	3	4	5
TF20_IC4	Helps me to develop my strengths	يساعدني على تطوير قوتي	1	2	3	4	5
Code	Transactional Leadership Style	اسلوب القيادة عن طريق المعاملات	Scale				
TR1_CR1	Provides me with assistance in exchange for my efforts	يقدم لي المساعدة مقابل الجهود التي ابذلها	1	2	3	4	5
TR2_CR2	Discusses in specific term who is responsible for achieving performance targets	يناقش في عبارات محددة من هو المسؤول عن تحقيق اهداف الاداء	1	2	3	4	5
TR3_CR3	Makes Clear what one can expect to receive when performance goals are achieved	يجعل ما يمكن للمرء أن يتوقع الحصول عليه عند تحقيق أهداف الاداء	1	2	3	4	5
TR4_CR4	Expresses confidence that goals will be achieved	يعرب عن ثقته في أن الاهداف ستتحقق	1	2	3	4	5
TR5_ME1_A	Focuses attention on irregularities, mistakes, exceptions and deviations from standards	يركز الاهتمام على المخالفات والاشغالات والانحرافات عن المعايير	1	2	3	4	5
TR6_ME2_A	Concentrates his/her full attention on dealing with mistakes, complaints and failures	يركز اهتمامه الكامل على التعامل مع الأخطاء والشكاوى والفشل	1	2	3	4	5

TR7_ME3_A	يتتبع كل الأخطاء	1	2	3	4	5
	Keeps Track of all mistakes					
TR8_ME4_A	يوجه انتباهي نحو الفشل في تلبية المعايير	1	2	3	4	5
	Directs my attention towards failures to meet standards					

Section B: Organizational Change	القسم بـ التغيير في الشركة
<p>Knowing that organizational change could be applied to the mission and strategy, organization structure, people (training, roles, responsibilities, team orientation etc.), organization culture, knowledge, policies, rules and procedures, technology, equipment's, production, and marketing.</p> <p>The following Statements are about how you perceive change and how your managers act when a change is proposed or is in process. Please read each statement carefully and decide on your level of agreement on each statement.</p>	<p>إذا بعين الاعتبار ان التغيير في المؤسسة ممكن ان يطال رؤية مهمة استراتيجية، الهيكلية التنظيمية، الموظفين (من خلال التدريب، الاموار والمسؤوليات، العمل كفريق الخ) ثقافة الشركة، القوانين وطرق سير العمل، التكنولوجيا المستعملة، المعدات طرق التصنيع والتسويق.</p> <p>العبارات التالية تعبر كيف ننظر الى التغيير وكيف يتصرف المسؤولون عنك بحال التغيير الرجاء قراءة كل عبارة بتمعن وقرر كيف تتشعر خلال العمل باستعمال وحدات القياس ادناه</p>

Strongly Disagree لا اوافق بشدة	Disagree لا اوافق	Neutral محايد	Agree اوافق	Strongly Agree اوافق بشدة
1	2	3	4	5

Kotter Change Model						
Code	Kotter Step 1 – Sense of Urgency	Scale				
KT1_SU1	في هذه المؤسسة نحدد النقاط الحرجة والازمات المحتملة أو الفرص المهمة ونناقشها من أجل معرفة ما سنواجهه في المستقبل. At our organization we identify critical points, potential crises or major opportunities and we discuss them in order to know what we will face in the future.	1	2	3	4	5
KT2_SU2	المدراء في هذه المؤسسة يبادرون الى نقاشات صريحة ، ويطولون اسباب ديناميكية ومقنعة لرؤية الحاجة الى التغيير وأهمية التصرف مباشرة The managers start honest discussions, and give us dynamic and convincing reasons to see the need for change and the importance of acting immediately	1	2	3	4	5
KT3_SU3	كموظفين، نحن على اطلاع وعلم حول اي مبادرة للتغيير وحاجته للمؤسسة As an employees, we are informed and educated on any change initiative and its need within the organization	1	2	3	4	5
Code	Kotter step 2 - Form a Powerful Coalition	Scale				
KT4_PC1	لدينا قادة لديهم القدرة على التأثير وإدارة التغيير، هؤلاء القادة هم ذو مصداقية ونزاهة، ولديهم مهارات قوية في التواصل والتحليل In our organization we have leaders who can guide and influence any change, those leaders are credible, honest, and have strong communication and analytical skills.	1	2	3	4	5
KT5_PC2	القادة في هذه المؤسسة يشجعون الموظفين على العمل معا كفريق واحد حتى لو انهم يملكون مهارات مختلفة ومن اقسام مختلفة In our organization leaders who can encourage employees to work together as a team with different skills and from different departments	1	2	3	4	5
KT6_PC3	نحن ملتزمون عاطفيا بقيادةنا وجهود التغيير التي يمكن ان يبذلها We are emotionally committed to our leaders and their possible change efforts	1	2	3	4	5
Code	Kotter step 3 - Create a Vision for Change	Scale				
KT7_VC1	لدينا رؤية واضحة حول مستقبل الشركة، ونحن نعلم ان المستقبل سيكون مختلفا عن الماضي We have a clear vision about the future of our organization, and we know that future will be different from the past	1	2	3	4	5
KT8_VC2	مديرينا وضع استراتيجيات وخطط لتحقيق رؤية الشركة من أجل جعل المستقبل حقيقة واقعة Our managers develop strategies and plans to achieve the organization vision in order to make the future a reality	1	2	3	4	5
KT9_VC3	إن قيمه أي تغيير واضح لنا دائما، وهذا يساعدنا على توجيه جهودنا The values of any change are always clear, this help us to direct change efforts	1	2	3	4	5
Code	Kotter step 4 - Communicate the Vision	Scale				
KT10_CV1	يستخدم المدراء في هذه المؤسسة كل قناة اتصال متاحة مثل الاجتماعات والخطب وكل فرصة ممكنة للتواصل باستمرار والاعلام عن التغيير المطلوب، والرؤية والاستراتيجيات الجديدة Our managers use every communication channel such as meetings, speeches and every possible opportunity to continuously communicate and spread out the change needed, the new vision and strategies	1	2	3	4	5
KT11_CV2	مديرينا يتصرفون بمثابة نموذج يحتذى به وفدوة لتغيير سلوكياتنا، ويعالجون قلقنا ومخاوفنا بصراحة وعلانية Our managers act as role model to change our behaviors, they openly and honestly address our concerns and anxieties.	1	2	3	4	5
KT12_CV3	أنا على استعداد لتقديم التضحيات لأنني أعتقد حقا أن أي تغيير تطلبه الإدارة مفيد للمؤسسة I am ready to make sacrifices because I truly believe that any change requested by the management is useful for the organization	1	2	3	4	5
Code	Kotter step 5 - Remove Obstacles	Scale				
KT13_RO1	تدعم الإدارة المجازفة في العمل، وتساعدنا على إزالة أي عقبات ذات صلة بالعمل لجعل التغيير فعالا Our management support taking risks and they help us to remove any work related obstacles to make the change effective	1	2	3	4	5
KT14_RO2	تتخذ الإدارة سلسلة من القرارات مثل تغيير الهيكل التنظيمي والمهام والواجبات والرواتب من لتسهيل أي تغيير ودعم رؤيتهم المستقبلية Our management would take series decisions such as changing organization structure, tasks, duties and salaries in a way to facilitate any change and support their vision	1	2	3	4	5
KT15_RO3	تحدد الإدارة الموظفين الذين يقاومون التغيير وتساعدهم على رؤية ما هو مطلوب Our management identify employees who resist change, and help them see what's needed..	1	2	3	4	5
Code	Kotter step 6 - Create Short-term Wins	Scale				
KT16_CW1	تميزنا المؤسسة وتكافئنا عندما نحقق اهداف التغيير We are recognized and rewarded when we achieve change targets.	1	2	3	4	5
KT17_CW2	نلاحظ في شركتنا محاولات التغيير الناجحة والتحسينات، ويتم اعلامنا ان عمليه التغيير اعطت النتائج المطلوبة In our organization we can notice the successful change attempts and improvements, and we are notified that the change process produces the expected results.	1	2	3	4	5

KT18_CW3	يشجعنا القادة في هذه المؤسسة لدعم التغيير عبر اعطائنا اهداف قصيرة المدى We are often encouraged by leaders to support change effort by setting short term goals	1	2	3	4	5
Code	Kotter step 7 - Build on the Change	Scale				
KT19_BC1	بعد أن نصل إلى هدف التغيير، تدعم الإدارة التحسينات التي تمت After we reach a change goal, the management support the improvements.	1	2	3	4	5
KT20_BC2	بعد أي تغيير، تقوم الإدارة بتحليل ما تم بشكل صحيح وما هو بحاجة إلى تحسين خلال عملية التغيير After any change, the management analyze what went right and what needs improving during the change.	1	2	3	4	5
KT21_BC3	بعد نجاح تطبيق التغيير، توفر لنا الإدارة ردود فعل على جهودنا ونمضي قدماً لتحقيق أهداف جديدة After a successful change implementation, the management provide us with feedback on our efforts and move forward for new goals..	1	2	3	4	5
Code	P2H- Kotter step 8- Anchor the Changes in Corporate Culture	Scale				
KT22_AC1	إن جهود التغيير الناجحة تحسن أدائنا وسلوكياتنا، وبالتالي تصبح جزءاً من قيمنا ومعتقداتنا وطريقة القيام بالأمور في المؤسسة A successful change efforts improve our performance and behaviors, thus it become a part of our values, beliefs and way of doing things in our organization	1	2	3	4	5
KT23_AC2	يروى مديراننا قصص النجاح حول عملية التغيير، ويكررونها في كل مناسبة Our managers tell success stories about the change process, and repeat it in every occasion.	1	2	3	4	5
KT24_AC3	عندما ينضم موظفون جدد إلى مؤسستنا، يتم إبلاغهم بالنجاحات التي حققناها لتشجيعهم على التصرف مثلنا When new employees join our organization, our success stories are transmitted to them in order encourage them to behave as us.	1	2	3	4	5

P3: ADKAR Change Model									
Strongly Disagree بشدة 1	لا اوافق 2	محايد 3	اوافق 4	Strongly Agree بشدة 5					
Code		P3A: Step 1 - Awareness			Scale				
AD1-A1	أنا أفهم محفزات أي تغيير في المؤسسة التي يمكن أن تحدث وخطر المجازفة بعدم التغيير I understand the triggers of any organization change that could happen and the risk of not changing.				1	2	3	4	5
AD2-A2	أدرك كيف يتطابق التغيير مع استراتيجية المؤسسة ورؤية القادة I understand how change aligns with our organization strategy and Leaders vision				1	2	3	4	5
AD3-A3	أنا أفهم ان التغيير ممكن ان يؤثر على كفرد وعلى عملي وعلى فريق العمل. I understand that a change's could impact on me, my work and my group.				1	2	3	4	5
AD4-A4	الشخص الذي يشرح ويعلنا عن حاجة التغيير فعال وموثوق به ونزيه The person who explain and communicate the need for change is effective, credible and trusted.				1	2	3	4	5
Code		P3B: Step 2 - Desire			Scale				
AD5-D1	أنا أفهم ان التغيير ممكن ان يؤثر بطريقة ايجابية على كفرد وعلى عملي وعلى المؤسسة بشكل عام. I understand how a change could positively affect me, my team and our organization..				1	2	3	4	5
AD6-D2	اؤمن أنني ومديري وزملائي في العمل متحمسون وداعمون لأي تغيير وسنشارك في تطبيقه I believe, that I, my managers and my teammates are motivated and supportive to any change and we would participate in it				1	2	3	4	5
AD7-D3	اؤمن ان اي تغيير سيكون ناجحا اذا قمنا بتطبيقه I believe that we if we apply any change, this change will be successful.				1	2	3	4	5
AD8-D4	أنا دائما قادر(ه) على التعبير عن اعتراضاتي , هذه الاعتراضات يتم اخذها بعين الاعتبار I am always able to voice my objections and they are taken into consideration				1	2	3	4	5
Code		P3C: Step 3- Knowledge			Scale				
AD9-K1	أدرك بوضوح أن أي تغيير قد يكون له تأثير على سلوكياتي, طريقة عملي , الأدوات التي استعملها وسير العمل I clearly understand that any change could have impact on my behaviors, processes, tools, and workflow				1	2	3	4	5
AD10-K2	لتحقيق النجاح, توفر منظمتي التدريب والمعرفة لسد الثغرات قبل وأثناء تنفيذ التغيير To be successful, my organization provides the training and knowledge to close gaps before and during change implementation				1	2	3	4	5
AD11-K3	تزوئني المؤسسة بالمعرفة التي احتاجها لكي أكون ناجح(ه) بعد تنفيذ التغيير My organization provides me with the knowledge I need to be successful after a change is implemented..				1	2	3	4	5
AD12-K4	الموارد والأدوات متاحة لمساعدتي في تحقيق النجاح Resources and tools are available to help me be successful.				1	2	3	4	5
Code		P3D: Step 4 - Ability			Scale				
AD13-AB1	أنا قادر(ه) على تنفيذ التغييرات على سلوكياتي ومهاراتي وكيفية العمل والأدوات وطرق سير العمل I am capable of implementing the changes to my behaviors, skills, processes, tools, and workflows.				1	2	3	4	5
AD14-AB2	يمكنني التغلب على أي عوائق تواجه تنفيذ التغيير في كيفية القيام بوظيفتي I can overcome any barriers to implementing the change in how I do my job.				1	2	3	4	5
AD15-AB3	أعتقد أن التدريبات التي تقدمها المؤسسة سوف تعطيني ما أحتاجه لآكون ناجحا في أي تغيير, وإغلاق الفجوة المعرفة القدرة I believe the trainings provided by my organization will give me what I need to be successful in any change, and to close the Knowledge-Ability gap.				1	2	3	4	5
AD16-AB4	أنا أعرف من أقصد إذا كان لدي مشاكل في إجراء التغيير I know where to go if I have problems making the change				1	2	3	4	5
Code		P3E: Step 5 - Reinforcement			Scale				
AD17-R1	أعتقد أن كبار المسؤولين والمدراء ملتزمون بدعم التغيير I believe my senior leaders and managers are committed to sustainment of the change.				1	2	3	4	5
AD18-R2	يسمح لي المدراء بتقديم تعليقاتي ورأيي حول أي تغيير My managers allow me to provide my feedback on any change				1	2	3	4	5
AD19-R3	أعرف عواقب عدم القيام بواجباتي وعملي بالطريقة الجديدة I know the consequences of not performing my new activities.				1	2	3	4	5
AD20-R4	يتم تقييم أدائي بطريقة جديدة بعد قيامي بعملي My performance in the new way is evaluated				1	2	3	4	5

P3: ADKAR Change Model									
Strongly Disagree بشدة 1	لا اوافق 2	محايد 3	اوافق 4	Strongly Agree بشدة 5					
Code		P3A: Step 1 - Awareness			Scale				
AD1-A1	أنا أفهم محفزات أي تغيير في المؤسسة التي يمكن أن تحدث وخطر المجازفة بعدم التغيير I understand the triggers of any organization change that could happen and the risk of not changing.				1	2	3	4	5
AD2-A2	أدرك كيف يتطابق التغيير مع استراتيجية المؤسسة وروية القادة I understand how change aligns with our organization strategy and Leaders vision				1	2	3	4	5
AD3-A3	أنا أفهم ان التغيير ممكن ان يؤثر على كفرد وعلى عملي وعلى فريق العمل. I understand that a change's could impact on me, my work and my group.				1	2	3	4	5
AD4-A4	الشخص الذي يشرح ويعلمنا عن حاجة التغيير فعال وموثوق به ونزيه The person who explain and communicate the need for change is effective, credible and trusted.				1	2	3	4	5
Code		P3B: Step 2 - Desire			Scale				
AD5-D1	أنا أفهم ان التغيير ممكن ان يؤثر بطريقة ايجابية على كفرد وعلى عملي وعلى المؤسسة بشكل عام. I understand how a change could positively affect me, my team and our organization..				1	2	3	4	5
AD6-D2	اؤمن أنني ومديري وزملائي في العمل متحمسون وداعمون لأي تغيير وسنشارك في تطبيقه I believe, that I, my managers and my teammates are motivated and supportive to any change and we would participate in it				1	2	3	4	5
AD7-D3	اؤمن ان اي تغيير سيكون ناجحا اذا قمنا بتطبيقه I believe that we if we apply any change, this change will be successful.				1	2	3	4	5
AD8-D4	أنا دائما قادر(ه) على التعبير عن اعتراضاتي , هذه الاعتراضات يتم اخذها بعين الاعتبار I am always able to voice my objections and they are taken into consideration				1	2	3	4	5
Code		P3C: Step 3- Knowledge			Scale				
AD9-K1	أدرك بوضوح أن أي تغيير قد يكون له تأثير على سلوكياتي، طريقة عملي , الأدوات التي استعملها وسير العمل I clearly understand that any change could have impact on my behaviors, processes, tools, and workflow				1	2	3	4	5
AD10-K2	لتحقيق النجاح، توفر منظمتي التدريب والمعرفة لسد الثغرات قبل وأثناء تنفيذ التغيير To be successful, my organization provides the training and knowledge to close gaps before and during change implementation				1	2	3	4	5
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AD16-AB4	أنا أعرف من أقصد إذا كان لدي مشاكل في إجراء التغيير I know where to go if I have problems making the change				1	2	3	4	5
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AD17-R1	أعتقد أن كبار المسؤولين والمدراء ملتزمون بدعم التغيير I believe my senior leaders and managers are committed to sustainment of the change.				1	2	3	4	5
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