

# NETWORK ANALYSIS OF THE EFFECT OF STRATEGIC LEADERSHIP ON ORGANIZATIONAL SUCCESS: EVIDENCE FROM IRAQI HEAVY INDUSTRY

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## ABSTRACT

*Iraq is considered to be a war zone for many years; this has led to the destruction of infrastructure, destabilization of social peace, corruption and negatively impacted the industrial sector, especially the cement industry, which faces a lack of competitiveness and low productivity in an unstable environment. Although the government offered a large number of subsidies to this sector through the provision of financial support, energy and raw materials, in an attempt to counter the possibility of losses to the national product. But in this sector, achieving success is a prolonged process. Therefore, to achieve proper competition and success, it is necessary to provide strategic factors. In this regard, literature has revealed that the success of the organizations is closely linked with the performance and success of the strategic leadership. This study focuses on the analysis of the impact of strategic leadership on organizational success in the Iraqi cement industry. A questionnaire was prepared and was distributed among 266 employees in two of the biggest cement factories in Iraq.*

*A conceptual model was introduced to clarify the casual relationships between the variables. The objective is achieved in this study with the aid of network analysis. The results of this study vividly elaborated the impact of strategic leadership on organizational success in Iraqi industrial sector, which needs to take into consideration strategic thinking, change to the future, clear vision, knowledge and the use of modern information technology. Finally, future studies should be conducted to explore other organizational factors that could enhance the competitiveness of Iraqi industrial sector.*

**Keywords:** Heavy Industry, Creating Vision, Cognitive Activity, Strategic Thinking, Information Technology, Change to the Future.

## INTRODUCTION

Iraq can be considered as a cement manufacturer due to the abundance of raw materials and availability of expertise and technology. There are numerous cement plants existing in several areas of Iraq. Although being an exporting state of cement, it has recently become an importer due to insufficient production in the local market as well as the poor conditions for almost 30 years. Iraq has faced difficult circumstances which began from the Iran-Iraq war in the 1980s (Marr, 2018) the Gulf war and economic blockades in the 1990s and the Iraq war in 2003 (Chatelard, 2009) and the war against terrorism followed, which significantly affected the industrial sector in Iraq including cement plants, causing a shortage of production capacity, as well as the apparent lack of power supply and prescription in many mechanisms of productive units (industry.gov.iq). Recently, after Iraq declared victory against terrorism and the launch of

building and reconstruction efforts, this industry needs to be paid necessary attention owing to the announcement of the Iraqi prime minister in 2017 (pmo.iq).

It is a proven fact that the cement industry is one of the most strategic industries as mentioned in many literature reviews (Wang et al., 2013) because it is directly linked with the reconstruction and building. The strategic success of this industry also requires various factors, the most important being the strategic leadership (Čater & Pučko, 2010).

Today, there is a dire need for a strategic leadership for working in business organizations as it is undoubtedly tough to work in these organizations (House et al., 2013); this is because there one needs to interact with individuals inside and outside the organization, which requires great attention to strategic leadership and the strategic leader's role who has the utmost ability to think strategically (Leroy et al., 2018) to make decisions capable of keeping up with the rapid changes and high risk environment, in addition to visualizing the desired future of the organization, directing its financial and human energies toward achieving the strategic goals (Kurucz et al., 2017).

A number of studies in this area have proven that the effective strategic leadership leads to innovation, creativity, excellence, leadership and promoting competitiveness (Bolman and Deal, 2017) and these have recorded many success stories in this area. Various studies have shown that strategic leadership can be considered as one of the major and crucial pillars for the success of a variety of organizations (Schoemaker et al., 2013). This largely depends on attracting qualified efficiencies that holds the capacity of dealing with the accelerating changes in the work environment and fierce competition at every stage. This is where strategic leadership is mandatory to cope with changes and developments in such environment.

To sum it up, the primary objective of this paper is to explore how strategic leadership affects organizational success in Iraqi cement industry.

## LITERATURE REVIEW

### Strategic Leadership

It became evident that leadership plays an important role in organizational behaviour studies because, since 2000, organizations have spent \$50 billion per year on the leadership development (McCallum and Connell, 2009). In recent studies, it is also pointed out that strategic leadership has many tasks and roles to perform such as vision, leadership and strategy development, responsibility for implementation and strategic application, building culture and resources, maintaining sustainability and building competitive advantage. Both individuals and teams are assisting to evolve strategic leadership to generate direction, balance and commitment which is required to achieve sustainable performance of the organization.

In general, strategic leadership can be defined as the ability and wisdom to make decisions about goals, strategies and tactics, through the combination of leadership and management on the one hand and strategic intent with tactical events on the other (Pisapia, 2009). This helps in strengthening the ability to mold the future of organizations with a vivid vision of a mechanism that can aid in achieving goals and aspirations briskly. Consequently, strategic leadership has become a process of transition of an organization by being in the place where its leader wants it to be (Dess et al., 2014).

## **Creating vision**

Vision is defined as the state that embodies the ambition of the organization and the organizational goals that induce convincing mental images of individuals. It is a lucid image of what the organization will be like in the future. The critical aspects of leadership are to have an explicit vision and be able to communicate it clearly and precisely.

## **High level of cognitive activity**

The knowledge activity extends to all the organizational processes by clearly defining its role in the strategic field of identifying alternatives and differentiation between them (Pisapia, 2009). It represents the knowledge base that enables the use of knowledge in solving problems and taking the right decisions without any hesitation (Donate and De Pablo, 2015).

## **Strategic thinking**

The importance of Strategic Thinking (ST) is that it is a competitive tool suited for the global competitive environment and that the organization's strategies and limits are for achieving the highest profits (Baloch and Inam, 2009). Some think that ST is not just a mere reflection of strategy. Accordingly, the need for ST seems to be immense and became an integral part of the strategic development process as it plays an important role in strategic planning; this is because ST demands developing options for a long-term strategy (Graetz, 2002).

## **Information technology**

By the introduction of digital economy, Information Technology (IT) has redefined the world economic concepts (Anthony and Patrick, 2013). IT defined as computers and related digital communication technology has extensive power to reduce the cost of coordination, communication and information processing. IT has successfully redefined productivity, education, social and political landscape of the world.

## **Change to the future**

The change to the future can be considered one of the most important tasks of the organizations. Change is the process of progressing from the current situation to the desired future (Champoux, 2000). It represents new ways for organizations to change reality for the better. It is a crucial tool for changing the situation to increase effectiveness and achieve goals through positive future change. It is achieved by developing a future scenario for the change process. It specializes in fabricating a series of possible events that are likely to happen in future (Von Oetinger, 2004).

## **Organizational Success**

Organizational success is defined as the ability of administration for obtaining knowledge, experience and ideas, for successfully and accurately analysing the experiences and history of the corresponding organizations or for pursuing new opportunities after achieving their objectives on time (Daft, 2010). Organizational success involves successful leadership and

management that will meet the purpose of the organization and what is happening in the business environment, anticipate events and face a long-term perspective to achieve sustainable success.

### **Manager concern for employees**

One of the essential elements for making the tasks entrusted to them successful is the manager's interest in the employees' performances. There is a difference in the individual's relationship with the organization and the individual's suitability for the job (Sekiguchi, 2004). Therefore, the organization must be attentive to its employees' conduct in order to increase their efficiency and improve their performance.

### **Working environment**

One of the major pillars of conditions, forces and elements of an organization is the environment surrounding it. The environment is defined as any organizational unit somewhere that includes natural organisms to be interactively leading to the exchange of elements and components (Robbins and Judge, 2013). These elements can affect the process of making decisions within the organization (Daft, 2010) and these can also affect the conditions and Working Environment (WE) which requires coordination between the division of labour and completion.

### **Appreciation and rewards**

For making an organization successful, one must know how to motivate its employees to bring out their best performance in the workplace and subsequently must look for the appropriate ways to achieve this goal. There are many ways by which large or small organizations can be hired to reward and motivate employees, as well as to increase their wages (Petrou et al., 2018).

### **Social relationships**

A significant and influential role within the organization is played by social relations; many organizations support the relationships between their teams (Zald and McCarthy, 2017). This relationship is positively reflected on the performances of the members of the team. Hence, organizations seeking success are encouraged to promote positive relations among their members (Bain et al., 2001).

## **MATERIAL AND METHODS**

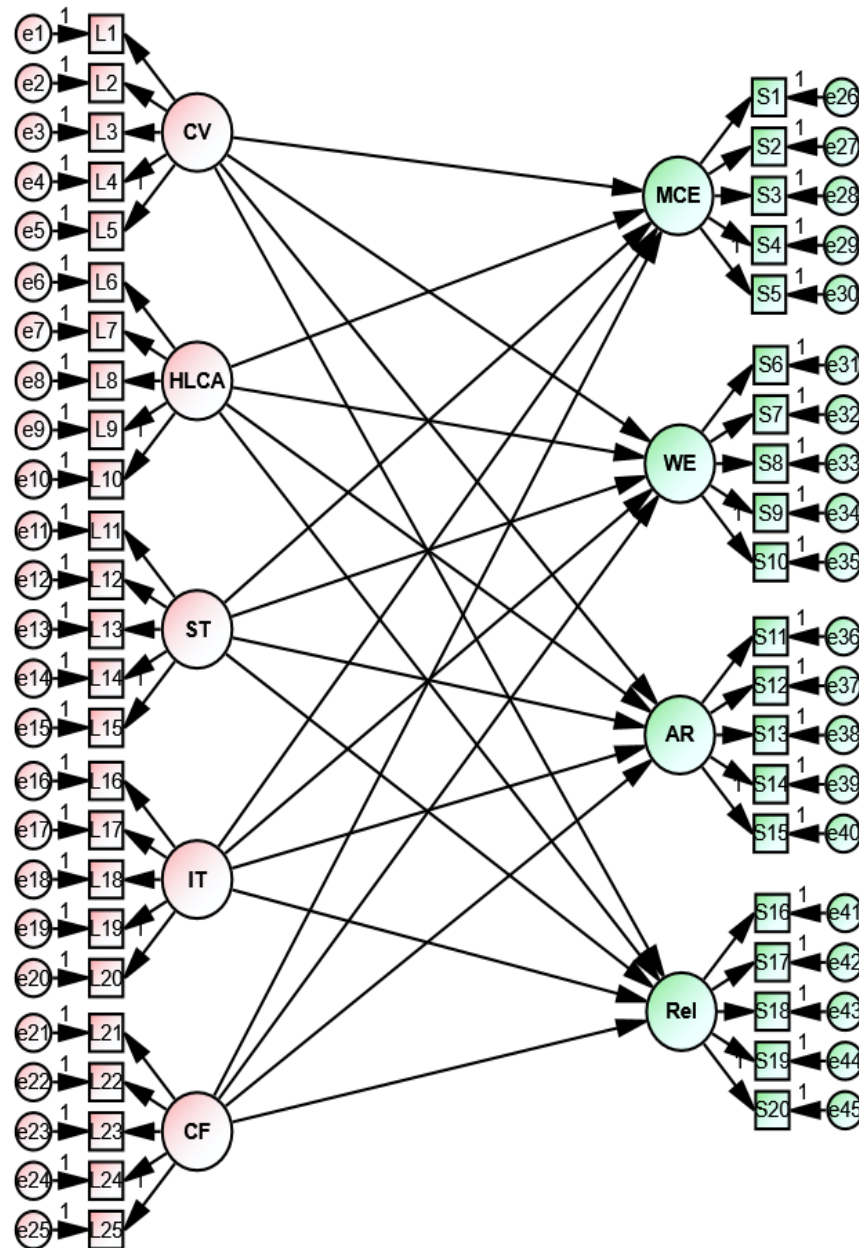
In this study, to evaluate the relationship between strategic leadership and organizational success, we appointed a group of engineers in two of the most prominent Iraqi cement factories (Najaf and Kufa). This study included 266 respondents as the sample; these were chosen based on random and convenience selection.

For obtaining information on satisfaction, we collected primary data with the help of 5-point labelled Likert-type scale questionnaires, which anchored from "*Strongly Agree*" to "*Strongly Disagree*."

The questions about strategic leadership were divided into five subgroups: Creating a Vision (CV), High Level of Cognitive Activity (HLCA), ST, IT and Creating Future (CF). Moreover, the question about the success of an organization comprises of four different groups:

Manager Concern for his Employees (MCE), WE, Appreciation and Rewards (AR) and Social Relationship (Rel). Each subgroup has five questions to specify the topic which can be found in the supplementary material. A conceptual framework is demonstrated in Figure 1.

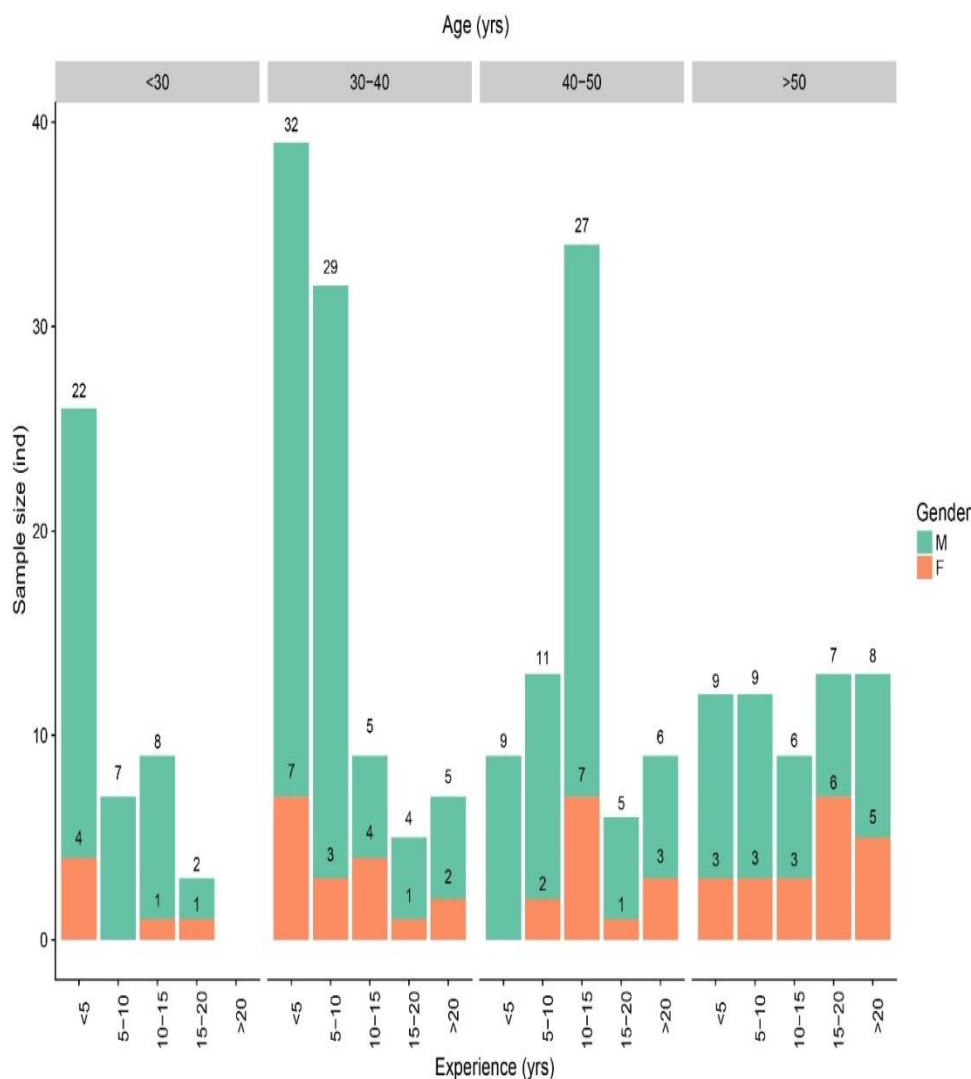
All analysis were performed in R environment (R development core team, 2011) by using the combination of packages MASS (Venables and Ripley, 2013); qgraph (Epskamp et al., 2012; Costantini et al., 2015); glasso package (Friedman et al., 2014); lavaan (Rosseel, 2012); semPlot (Epskamp, 2014); ggplot2 (Wickham, 2016).



**FIGURE 1**  
**CONCEPTUAL FRAMEWORK**

### RESULTS

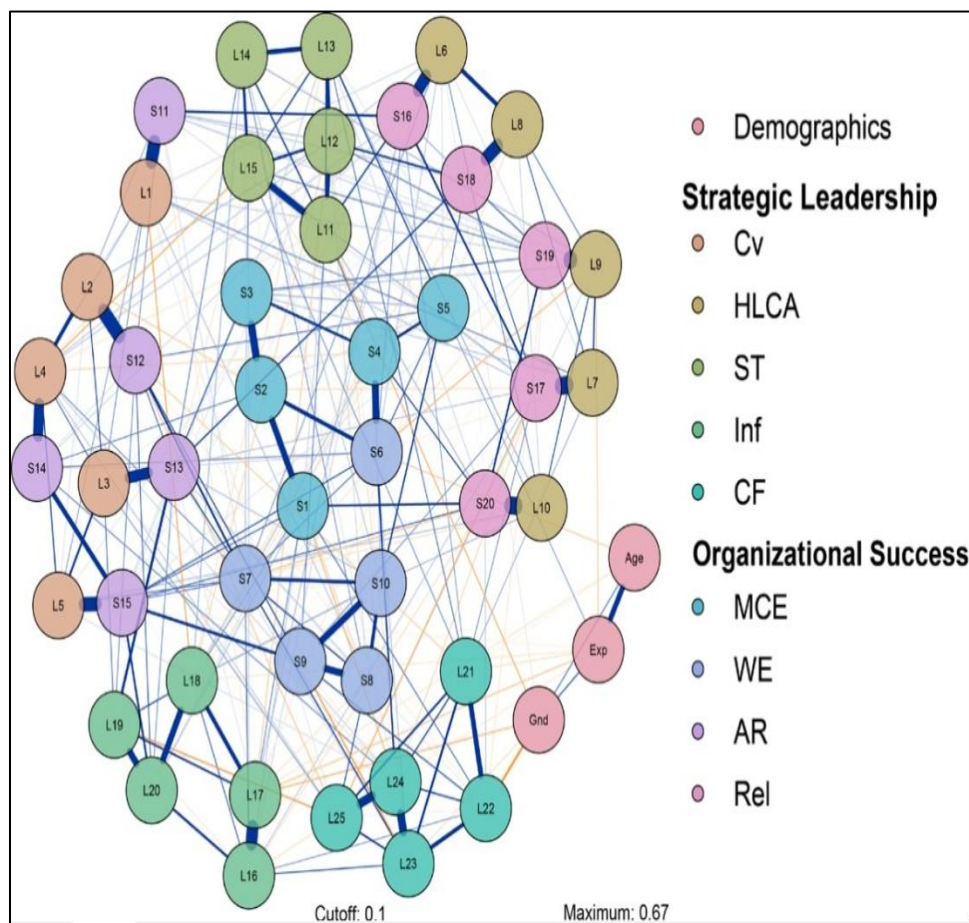
A total of 266 people answered the questionnaire-78.4% men and 22.6% women. Altogether, this group was more evenly distributed toward age, with a slightly higher predominance of people from 30 to 40 yrs old (34.2%), followed by the group aging between 40 and 50 yrs (26.4%), the group older than 50 yrs old (21.9%) and lastly by a group younger than 30 yrs old (17.5%). When we consider experience, the majority of responders (55.8%) had less than 10 years of experience; then, the group with 10-15 yrs of experience comprised 22.7% of the interviewed. It is confirmed in Figure 2 that the respondents with less than 10 years of experiences are dominant, except for the group between 40 and 50 yrs old, which seems to belong to a more experienced group with a dominance of work experience ranging between 10 and 15 yrs. Significantly, the oldest group (>50 yrs) represented a more evenly distributed group based on both work experience and gender.



**FIGURE 2**  
**DISTRIBUTION OF SAMPLE POPULATION BASED ON GENDER, AGE AND YEARS OF EXPERIENCE**

We performed a network analysis for identifying more linked groups of questions to determine the interactions between strategic leadership and organizational success. Figure 3 displays the connection attained by Spearman correlation between different groups of questions. Our study revealed that three groups of items such as ST, IT and CF presented more strong internal relationship on being clustered together. We also noticed that few connections were introduced by the demographic data (gender, age and experience) and the rest of results indicated a weaker influence in the outcomes obtained for this present research. However, we observe a strong positive link between the questions regarding the HLCAs and the Rels. Significantly, the L6 statement (knowledge provided by the organization) related positively with the S16 statement (someone to look for solving a personal problem). S18 (the presence of someone to give advice) also has a strong connection with L8 (the organization encouraging for sharing knowledge).

We also accentuate the fact that strategic leadership statements for evaluating the organization vision (CV) strongly connected with the working policy of the organization (AR). The expectation of the employees for the organization vision and goals (L1) related positively to the recognition received by each employee (S11). Moreover, when respondents agree to the certainty that the organization vision and goals are essential for them (S2), they are also more likely to agree that they do receive a satisfying number of rewards and benefits (S12).

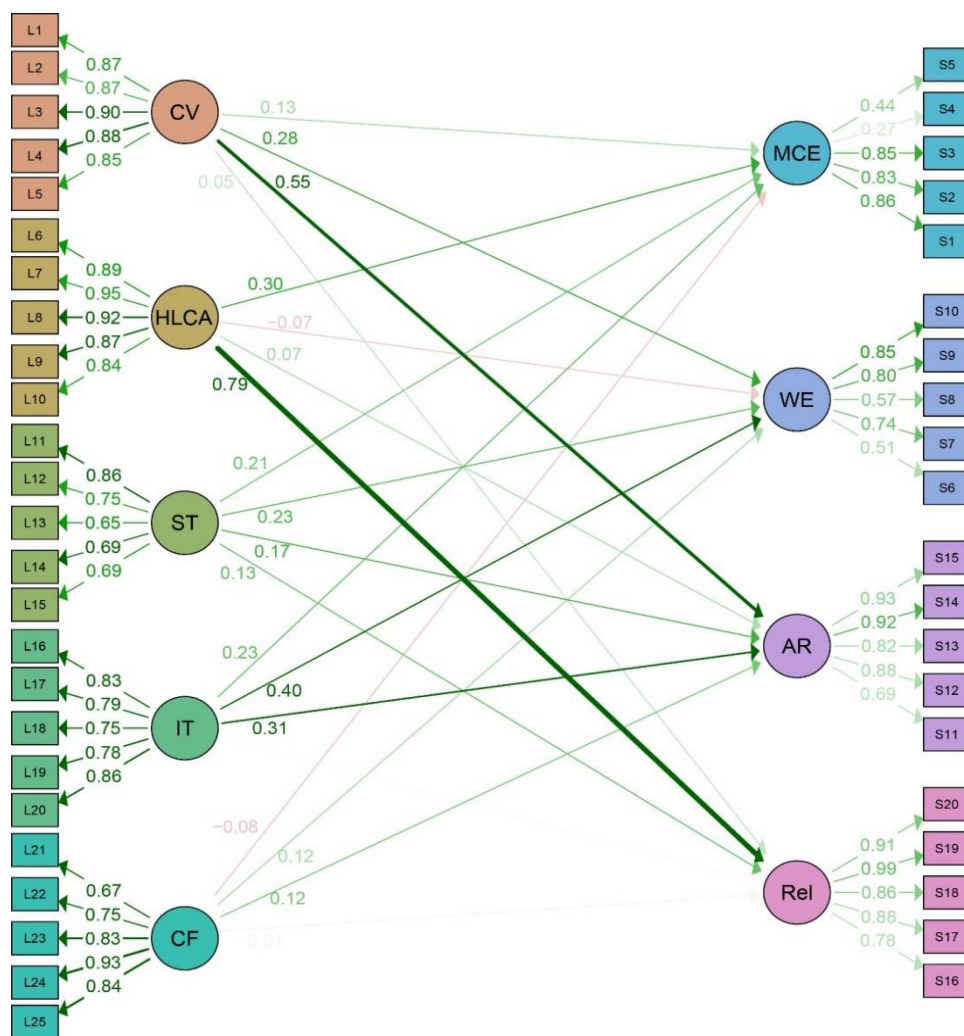


**FIGURE 3**  
**NETWORK ANALYSIS OF THE RELATIONSHIP BETWEEN LEADERSHIP AND ORGANIZATIONAL SUCCESS**



Blue lines represent positive correlations and red lines correspond to negative correlations. The correlation coefficient is determined according to the LASSO penalty to obtain an optimal sparse estimate of the partial correlation matrix. The thicker the line, the strong is the correlation coefficient until the maximum of 0.67.

Finally, with the aid of structural equation modelling, we determine the interaction between the latent variables of strategic leadership and organizational success. Figure 4 elaborately demonstrates the latent variable model indicating the influence of strategic leadership on organizational success. Here again, we observe a strong influence of HLCA on Rel, which indicates the role of cognitive active in increasing the Rel in an organization. We also draw special attention to the strong role played by the CV variables in determining AR values which presented the second highest coefficient. Following that, IT also played an essential role in determining the quality of a WE. IT also contributed greatly in establishing the perception on the MCE and AR variables; this can likely be an outcome of the availability of tools for achieving more success in the work.



**FIGURE 4**  
**STRUCTURAL EQUATION MODEL INDICATING THE INFLUENCE OF**  
**STRATEGIC LEADERSHIP ON ORGANIZATIONAL SUCCESS**



Only significant coefficients are shown according to the generalized least square estimator.

If we come to a conclusion, we might say our analysis showed that strategic leadership strongly determines the success of an organization, especially on the basis of how the organization vision and goals relate to a successful system of rewards and benefits and more importantly how knowledge sharing contributes to a more optimized Rel between coworkers.

## DISCUSSION

The strategic leadership has an immense influence on the perception of the organizational success by the employees. It is worth noting that it helps in molding the perception of success as a necessary and beneficial progress to the collective gain of all the employees in the organization (Martins and Terblanche, 2003). Therefore, a vital role is played by the senior executives and line managers in properly administrating the organization for its success (Jung et al., 2003).

According to Boga and Ensari (2009), leadership and particularly transformational leadership, strongly determines the perception of organizational success. The results of our research showed that, in general, strategic leadership influences the social relationship, specifically concerning the skill and knowledge shared within the working team. Consequently, the leadership of the organization has first, to conceptualize the strategic course; second, leaders need to motivate the organizational constituents by means of an effort-based rewarding system; and third, the leadership should assure an efficient distribution of the resources (IT and skill sharing) to promote organizational success. Hence, it is the strategic leadership that holds the key to successful change management.

The ulterior motive of the present study was to examine the role of strategic leadership on the perceptions of organizational success. We are predominantly interested in how leadership perception influences the organizational success. In this study, we asked employees about how they perceived both the leadership and success of their organization; the major subject of this study was a group of engineers in two of the largest Iraqi cement factories (Najaf and Kufa).

Although strategic leadership and organizational success have been addressed by a number of previous studies (Fernandez and Rainey, 2006; Harris et al., 2007), few have focused on industrial organizations, for instance, the cement industry in a turbulent environment such as the Iraqi environment.

In the case of Iraq, many studies reported that the success of the Iraqi industry requires further studies to focus on a number of strategic factors, the most important of which is creating vision (Salih et al., 2009), cognitive activity (Saiedi and Jiboury, 2015); ST (Chalab and Jiboury, 2016); IT (Ibrahim et al., 2013); change to the future (Salih et al., 2009).

Similarly, researchers have exhaustively investigated the link between leadership and competitiveness and organizational success (Bolman and Deal, 2017). These results follow a study (Schoemaker et al., 2013), which demonstrated that strategic leadership is one of the essential pillars of success in a variety of organizations. Organizational success is achieved through the choice of clear strategic vision. In the same context, studies have shown that knowledge contributes remarkably to the success strategy (Liebowitz, 1999).

In addition, literature reviews supervised by Graetz (2002) proved that ST plays a significant role in strategic planning and developing options for a long-term success strategy. Many studies have revealed that IT is a strategic success factor for the organizations (Cresswell et al., 2013). The studies convince the importance of change and preparation for the future of an organization (Kotter and Cohen, 2012) and require a number of measures that include the change

from the current situation to the best situation, through the development of a clear scenario and to employ the potential to achieve (Amer et al., 2013).

In accordance with the past research, in the present study, we predicted an interaction between Rel and the leadership effort in fostering self-development and sharing the knowledge, together with the perception of the organization vision and the system of promotion and rewards by the employees. That is, we predicted that organizations managed by a distinct vision shared by their employees would rapidly reach efficiency when the vision becomes entangled with the rewards and benefits are given to the employees.

The present study justifies the previous studies that linked transformational leadership style and perceived organizational success (Lowe et al., 1996). We extend earlier researches by elaborately demonstrating the relationship between different themes in leadership and organizational success.

Moreover, as perceptions construct realities (Jussim, 1991), we argue to ensure a clear understanding of the organization vision and goal-the leadership should establish a reasonable and fair system of benefits and rewards. Once the employee understands that seeking for the organization vision and purpose will bring benefits, the organization successfully intensifies the path toward organizational success (the organization's well-being). In addition, the evaluation of performance perceptions should become a focal point to assure that everyone receives an accurate valuation of their honest efforts.

Despite its merits, our current study faces some limitations. First, the sample size and location reduces the generalizability of the results. Second, the sampling scheme should consider including more employees from different organizations so that the results obtained will be more elaborate. Moreover, as typical for this type of study is being aware of the fact that to gather information on strategic leadership and the organizational success, we have to adopt a questionnaire of multiple choices. This is a shortcoming in similar studies that examined the perceptions of the employees. Circumventing these main limitations might significantly improve the generalizability of the future research.

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