

The Impact of Transformational Leadership on Innovation through the Mediating Role of Knowledge Sharing in Public and Private Universities of Syria

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Abstract: Previous studies have pointed out that transformational leadership is an important factor affecting knowledge sharing and enhanced innovation in an organization. However, there is a lack of models linking transformational leadership, knowledge sharing, and innovation at universities within developing countries, particularly Syria. The purpose of this study was to examine the mediating role of knowledge sharing on the relationship between transformational leadership and innovation of the teaching staff in Syria public and private universities. The quantitative method was used in data collection. A random sampling technique was conducted which comprised of 287 valid responses to test the causal relationship between transformational leadership, knowledge sharing, and innovation. PLS-SEM technique was used to analyze the direct and indirect relationships between the variables in this study. The results of the study indicated that there was a significant relationship between transformational leadership and Knowledge sharing. The results show that there was a significant relationship between transformational leadership and innovation. Findings had revealed that the indirect effect of transformational leadership on innovation through knowledge sharing.

Keywords: Transformational leadership, Knowledge sharing, Innovation.

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I. Introduction

The higher education sector today is facing global challenges from the rapid technological change and increased demands of today's world (Mathew, 2010). Obendhain and Johnson (2004) pointed out that higher education institutions (HEIs) are important as they are producers of innovation, as a result of creating products and services. It is argued that the academic experience and performance of the staff members represents the key knowledge of HEIs and it can be said that this is the main competitive resource of such institutions (Islam, 2017).

As innovation becomes critical to the survival of organizations and a key factor in achieving competitive advantage, leadership style has been identified as an important factor affecting innovation because leaders can influence the introduction of ideas, set specific goals and create a culture for innovation (Sarrors et al. 2008).

The promotion of KS among the members of an organisation is an important part of the learning process as it helps to convert the tacit knowledge embedded in individuals into explicit knowledge through interaction (Nonaka et al., 2006). Halawi (2008) named KS as a main focal area for knowledge management. Du Plessis (2007) explained that the fundamental aim of KM is to make KS the norm in the organisation. KS is considered a useful indicator for measuring the effectiveness of organisations (Tan et al., 2010). KS is considered to be a building block of efficient performance within higher education environments and to play a key role in enhancing the innovation of universities (Mathew, 2010).

Lin (2007) noted that understanding KS enablers, processes, and outcomes is highly necessary in organizations. However, a causal link amongst three factors has not been developed to date in Syrian universities. Therefore, this study seeks to examine the mediating role of KS in the relationship between transformational leadership and innovation.

II. Literature Review

2.1 Transformational Leadership

Leadership plays a vital role in establishing high-performing teams and is one of the critical elements in enhancing organisational performance (Northouse, 2007, Betroci, 2009, DuBrin, 2012). It has been identified as one of the key factors in promoting innovation (Jung et al., 2003). According to Yukl (2010), there is no general agreement on the definition of leadership. Almost all writers who tried to define leadership have their

own definitions and there is no commonly agreed upon definition. According to Yukl (2010), there is no general agreement on the definition of leadership but most definitions cover these concepts: leadership is a “process” by which a leader can affect and be affected by their subordinates. The leader’s “influence” on the followers, is considered a necessary condition without which leadership cannot exist. Leadership occurs in a “group” and influences the individuals in that group to have the same goals as the leader. It involves the “accomplishment” of set of goals through the direction of a group of people.

Within the higher education environment, transformational leadership is essential for developing education (Butcher et al., 2000, Green, 2010). Transformational leadership can facilitate learning activities and create an environment that supports knowledge (Gunter, 2001). Transformational leadership has been found to encourage staff to participate in educational programmes that develop their skills so that they achieve higher performance (Bass and Riggio, 2006). It is argued that, within academic environments, transformational leadership can lead to changes in the strategies and structures similar to those seen in business organisations (Yu and Jantzi, 2002). Singh and Lokotsch (2005) argued that transformational leadership can create an atmosphere among teachers within public primary schools that encourages communication and teamwork.

2.2 Knowledge Sharing

Wei et al. (2009) divided knowledge sharing processes into knowledge seeking and knowledge contribution. Similarly, Chen and Hung (2010) pointed out that knowledge sharing consists of knowledge contributing, collecting, and utilising. Others, such as Ipe (2003), found that knowledge sharing processes involve the transmission and absorption of knowledge. Kuo and Young (2008) noted that the transmission of knowledge includes sending knowledge to the recipients, while the absorption of knowledge reflects the effectiveness of knowledge use. Davenport and Prusak (2000) and Hussain et al. (2004) differentiate between the possession and acquisition of knowledge. Gupta and Govindarajan (2000) explained that knowledge sharing includes the sourcing of knowledge, its transmission, receiving knowledge, and absorbing knowledge. Other researchers, such as Tong and Song (2011), have distinguished between voluntary and solicited knowledge. In the case of voluntary knowledge, individuals initiate the sharing (giving) of knowledge, while solicited knowledge sharing occurs when individuals are asked by others or by an organisation to share their knowledge (receiving).

John (2001) asserted the importance of sharing knowledge within educational institutions such as universities. Similarly, Mathew (2010) indicated that the existence of knowledge and the promotion of a knowledge sharing culture among teaching staff, can generate innovation and enhance educational performance. Daud et al. (2008) found that the exchanging of ideas, opinions, and experiences among faculty is critical for developing the learning process

2.3 Innovation

It is argued that innovative behaviour is essential if organisations are to adapt and respond to rapid and unstable environmental and technological changes and survive in the present environment (Kellermanns et al., 2008, Cooper and Edgett, 2009, Trott, 2008). There is a general agreement among scholars that innovation is power for organisations all nowadays (Kamasak and Bulutlar, 2010). Herkema (2003) and Demircioglu (2016) both defined innovation as the adoption of new ideas, behaviours, products, systems, processes, policies, and programmes that are new to an organisation. Du Plessis (2007) stated that innovation refers to the creation of new thoughts, knowledge and ideas so as to make organisational outcomes possible. Additionally, Vaccaro et al. (2012) explained innovation as a product, process, or distribution method perceived as new by the organisation.

Innovation is the most important element underlying an organisation’s long-term competitive advantage (de Jong and Hartog, 2007). Lagrosen (2005) noted that innovation can provide entry to new markets and enhance the effectiveness of organisations. It is a primary source of economic growth, providing organisations with opportunities to grow faster and gain profits (Tidd et al., 2005, Trott, 2008, Tidd and Bessant, 2011). Calantone et al. (2002) and Jimenez and Vall (2011) both indicated that innovation is related to organisational learning, makes organisations aware of the latest developments, and helps them to absorb new and related knowledge. Therefore, organisations that have the capacity to be innovative will be able to respond to challenges and exploit new product and market opportunities more quickly than non-innovative organisations (Schilling, 2010).

In higher education environments, innovation is important and it has been said that universities should rely on product and process innovation (Jaskyte, 2004). Rogers (1995-2010) asserted that educational institutions were a way to adopt and apply innovation. Educational quality is reliant on both product and process being adaptive to the changing environment.

III. The Relationship Between the Variables and Hypothesis Development

Transformational leaders can encourage followers to act on an organization's vision in order to foster innovation (Chen et al., 2012, Si and Wei, 2012). Such leaders have an interactive vision and the capability to encourage an appropriate environment for innovation (Saenz, 2011, Vaccaro et al., 2012). Transformational leaders are able to build trust and respect among employees, and express confidence in the organisational vision, (Betroci, 2009, Yukl, 2010). These characteristics encourage members to work hard and be more innovative. Leaders shape the vision, gain optimistic commitment to that vision, pay maximum attention to fostering effective communication and the sharing of values, and encourage an appropriate environment for innovation (Saenz, 2011, Daft, 1999, DuBrin, 2007). Followers under transformational leadership style are not afraid of being criticised if they express a different opinion to their leaders (DuBrin, 2012). When individuals are encouraged to re-think, and know that their ideas are considered important by their leaders, they are more likely to come up with innovative ideas that could enhance innovation (Shalley and Gilson, 2004, Jung et al., 2008). Transformational leaders listen to and care about their followers' ambitions, and contributions, and show them how they can reach their goals (Saenz, 2011). This style of leadership can increase the desires of members of an organisation to take on more responsibility. When leaders are concerned with their followers' personal feelings, and offer support and encouragement, the followers will be more likely to respond with innovation (Al-omari and Hung, 2012, Khan et al., 2009, Gumusluoglu and Ilsev, 2009). From the description above, the researcher proposed the following hypothesis:

H1: Transformational leadership will positively influence innovation in Syrian public and private universities.

It is argued that transformational leadership is able to promote and cultivate norms and values that encourage knowledge sharing (Eisenbeib and Boerner, 2010, Sook Lee, 2017). Such leaders can create a collaborative team environment, and encourage communication, negotiation and the sharing of knowledge (Bass and Riggio, 2006, Northouse, 2007). It is noted that this style of leadership can inspire among followers and leaders trust and loyalty, which are the core components of knowledge sharing (Hsu et al., 2007, Hock et al., 2009, Shih et al., 2012). Transformational leadership builds a collaborative climate among members, providing them with direction and energy. Such leaders can encourage knowledge sharing through communication, dialogue, and negotiation (Northouse, 2007). Leaders who promote discussion, reviews, and the open sharing of ideas are more likely to encourage knowledge sharing activities (Carmeli et al., 2011). Transformational leaders are aware of their followers' needs and concerns as individuals and develop their strengths through coaching and consulting, providing advice and hands-on guidance to their followers (DuBrin, 2007). They enhance self-efficacy and self-confidence, thereby providing them with opportunities to share their unique knowledge. From the description above, the researcher proposed the following hypothesis:

H2: Transformational leadership will positively influence knowledge sharing in Syrian public and private universities.

Innovation is shown to solve problems and improve performance (Cooper, 1998, Tsai, 2001). Innovation depends on employees' knowledge, skills, and experience of value creation (Wang and Wang, 2012, Skerlavaja et al., 2010, Ologbo et al., 2015). New knowledge is critical to developing innovative ideas for new products (Tsai, 2001). Since knowledge is embedded in individuals, it is necessary for it to be shared among organisational members so that they can establish new routines and mental processes that may help them to solve their problems (Cheng, 2012, Nonaka et al., 2006, Nonaka and Takeuchi, 1995).

Chen et al. (2010a) identified a positive relationship between knowledge creation and sharing and innovation in a supportive climate that stimulates and encourages the transfer of knowledge into innovation, while organisational structure attenuated the relationship. A qualitative study conducted by Porzse et al. (2012) within professional services firms in Eastern Europe found knowledge to have a unique connection with innovation and suggested that collective organisational knowledge could stimulate innovation.

Within an educational environment, very few studies look at the KS innovation relation. Zaqout and Abbas (2012) found that knowledge formed a bridge between trust, social networks, and performance in Malaysian public universities. Cheng's (2009) findings suggested that KS via interpersonal interaction and communities of practice is essential to improving teaching practice and curriculum implementation. From the description above, the researcher proposed the following hypothesis:

H3: Knowledge sharing will positively influence innovation in Syrian public and private universities.

Knowledge is the key to innovation in organisations. Innovation is a process of defining problems and creating new knowledge to solve them (Nonaka et al., 2006, Damanpour et al., 2009, Ahmed and Shepherd, 2010). Tacit knowledge is embedded in different individuals and has to be converted into explicit knowledge. KS processes followed by organisational members help them to convert the knowledge, create new

routines and mental models, and solve problems (Nonaka and Takeuchi, 1995, Nonaka, 1994, von Krogh et al., 2012). To fully leverage the knowledge and exchange the skills and experiences that reside in individual minds, TL can encourage and promote a KS culture among employees through instilling admiration, trust, faith and respect among organisational members (Saenz, 2011, Northouse, 2007). Leaders can create team spirit by encouraging commitment and communication (Northouse, 2007, Tichy and Devanna, 1990, Yukl, 2010). Leaders encourage members to think, look, and seek out new approaches to old problems. Leaders are able to pay special attention to their followers, encouraging them to solve their problems (Bass and Riggio, 2006, Northouse, 2007).

According to the knowledge-based view, when knowledge can be shared among organisational members through donating and collecting, the stock of knowledge will be made available, and this will help to generate new ideas, which in turn can improve innovation (Liao and Wu, 2010, Ferraresi et al., 2012, von Krogh et al., 2012, Wang and Wang, 2012). Therefore, this study argues that TL encourages a KS among members of staff. From the description above, the researcher proposed the following hypothesis:

H4: Knowledge sharing will positively mediate the impact of transformational leadership on innovation in Syrian public and private universities.

From the description above, we can describe the research model as follows:

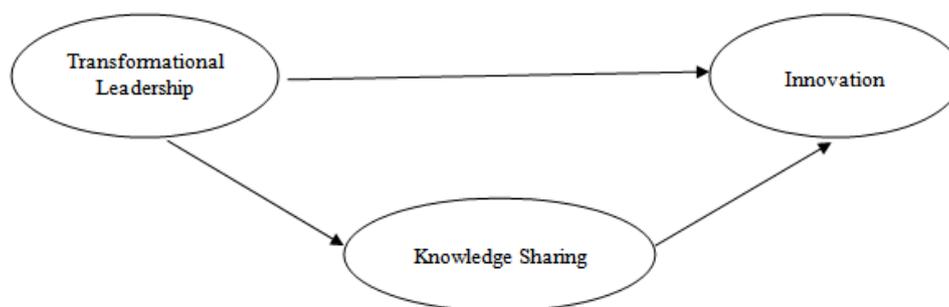


Figure 1. Framework

IV. Research Methodology

4.1 Research Design: This study uses the quantitative method approach. Thus, this study is carried out based on positivist principles with a deductive approach in order to examine the causal relationships among transformational leadership, knowledge sharing and innovation in both public and private universities in Syria. This study used a self-administered questionnaire, with closed-ended questions, to collect data from members of staff in public and private universities in Syria. The survey questionnaire was designed to be easy and quick for participants to complete. The design of the questionnaire includes five parts besides the introduction.

4.2 Population: The target population in this study comprises academic teaching staff at list of the public and private universities in Syria (assistant lecturers, lecturers, assistant professors, and professors). Eight universities were selected from 22 public and private universities in total as the sampling frame.

4.3 Sampling design: This study uses the questionnaire approach to gather data, and since the research questions require the researcher to statistically estimate the features of a population, random probability sampling is most appropriate. Since this study is using SEM, the literature suggests that a minimum sample of 200 is required in order to get a statistically significant result and a better performance analysis. Taking this rule into consideration the sample of 287 obtained for this study is therefore sufficient.

V. Results and Discussion

The results of this study show that first transformational leadership affects knowledge sharing with $R^2 = 0.152$, Path Coefficient $\beta = 0.182$, and $Q^2 = 0.076$. Second transformational leadership affects innovation with $R^2 = 0.432$, Path Coefficient $\beta = 0.316$, and $Q^2 = 0.288$. Third knowledge sharing affects innovation with $R^2 = 0.432$, Path Coefficient $\beta = 0.450$, and $Q^2 = 0.288$. This study assessed the mediating role of knowledge sharing between transformational leadership and innovation in the PLS path model. The product of the coefficient

approach using the bootstrapping re-sampling method has been used to examine the significance of the indirect effect (Preacher and Hayes, 2008).

In this study, there are 4 hypotheses tested and based on the results of test. The results showed that all the hypotheses are supported by the data.

Table 1. The Hypothesis Test of Research Model

Hypothesis	Hypothesis Statement	T-Value	Result
H1	Transformational leadership will positively influence innovation in Syrian public and private universities.	4.857	Supported
H2	Transformational leadership will positively influence Knowledge sharing in Syrian public and private universities.	2.585	Supported
H3	Knowledge sharing will positively influence innovation in Syrian public and private universities.	11.20	Supported
H4	Knowledge sharing will positively mediate the impact of transformational leadership on innovation in Syrian public and private universities.	3.677	Supported

The result of testing the hypothesis found that:

Hypotheses 1: The first hypothesis was supported and accepted. The results showed that transformational leadership has a positive effect on innovation in Syrian public and private universities.

Hypotheses 2: The second hypothesis was supported and accepted. The results showed that transformational leadership has a positive effect on knowledge sharing in Syrian public and private universities.

Hypotheses 3: The third hypothesis was supported and accepted. The results showed that knowledge sharing has a positive effect on innovation in Syrian public and private universities.

Hypotheses 4: The fourth hypothesis was supported and accepted. The results showed that knowledge sharing mediates the impact of transformational leadership on innovation in Syrian public and private universities.

VI. Conclusion

The objective of this study was to examine the impact of transformational leadership on innovation through the mediating role of Knowledge sharing in Syrian public and private universities. The specific problem addressed by this study was the lack of models developed to investigate the links between transformational leadership, knowledge sharing and innovation within universities in developing countries, particularly Syria. The study found that KS plays a pivotal mediating role in the TL-innovation relationship, and that transformational leadership would be ideal in an educational context as it would promote KS activities and influences innovation. Meaning that TL promotes and encourages a KS among teaching staff, which in turn develops innovation in public and private universities in Syria. Furthermore, KS is an antecedent of innovation and a source of competitive advantage.

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