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**THE FACTORS INFLUENCING INNOVATIVE WORK
BEHAVIOR AMONG ACADEMICIANS IN IRAQ**



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UUM
Universiti Utara Malaysia

**DOCTOR OF PHILOSOPHY
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**THE FACTORS INFLUENCING INNOVATIVE WORK
BEHAVIOR AMONG ACADEMICIANS IN IRAQ**

By

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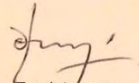
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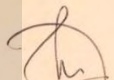
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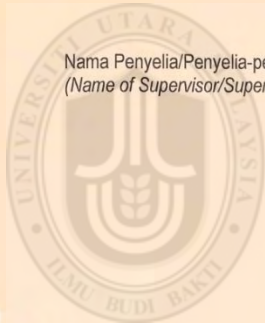
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ABSTRACT

In the recent years, higher education in developing countries, such as Iraq, has undergone through rapid changes, and to meet those changes, innovation is highly required. The present study examines the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior. It also examines the quality culture as a moderator on the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior. This research uses a quantitative approach to study the relationship between variables and the unit of analysis is individual academic staff. By using systematic random sampling technique, a total of 700 questionnaires were distributed via e-mail among the academic staff from three universities in Iraq (Baghdad University, Basra University and the University of Mosul). Of the 700 questionnaires distributed, 379 questionnaires were returned, representing a response rate of 54%. However, only 315 of the questionnaires were used for further analysis. Hypotheses regarding the direct effects and moderating effects were tested using the Smart PLS 2.0. Results of direct effects showed that extrinsic motivation, psychological empowerment and transformational leadership are positively related to innovative work behavior. The results also showed that quality culture positively moderates the relationship between extrinsic motivation and innovative work behavior but negatively moderates the relationship between transformational leadership and innovative work behavior. However, quality culture did not act as a moderator for the relationship between psychological empowerment and innovative work behavior. Overall, the research findings suggest the importance of taking into account extrinsic motivation, psychological empowerment, transformational leadership and quality culture to enhance innovative work behavior among academic staff. Based on the results obtained, theoretical and practical implications, limitations and suggestions for future research are discussed and highlighted.

Keywords: extrinsic motivation, psychological empowerment, transformational leadership, quality culture, innovative work behavior

ABSTRAK

Pada tahun-tahun kebelakangan ini, pendidikan tinggi di negara-negara membangun, seperti Iraq, telah melalui perubahan pesat, dan untuk memenuhi perubahan itu, inovasi sangat diperlukan. Kajian ini mengkaji hubungan antara motivasi ekstrinsik, pemeraksanaan psikologi, kepimpinan transformasi dan tingkah laku kerja inovatif. Ia juga mengkaji budaya berkualiti sebagai penyederhana ke atas hubungan antara motivasi ekstrinsik, pemeraksanaan psikologi, kepimpinan transformasi dan tingkah laku kerja inovatif. Penyelidikan ini telah menggunakan pendekatan kuantitatif untuk mengkaji hubungan antara pembolehubah dan unit analisis adalah individu staf akademik. Dengan menggunakan kaedah teknik persampelan rawak sistematik, sebanyak 700 soal selidik telah diedarkan melalui e-mel dalam kalangan staf akademik dari tiga universiti di Iraq (Universiti Baghdad, Universiti Basra dan Universiti Mosul). Daripada 700 soal selidik yang diedarkan, 379 soal selidik telah dikembalikan, mewakili kadar tindak balas sebanyak 54%. Walau bagaimanapun, hanya 315 soal selidik yang digunakan untuk analisis selanjutnya. Hipotesis mengenai kesan langsung dan kesan sederhana telah diuji menggunakan Smart PLS 2.0. Keputusan kesan langsung menunjukkan bahawa motivasi ekstrinsik, pemeraksanaan psikologi dan kepimpinan transformasi berpengaruh positif terhadap tingkah laku kerja inovatif. Hasil kajian juga menunjukkan bahawa budaya berkualiti dapat menyederhanakan hubungan secara positif antara motivasi ekstrinsik dan tingkah laku kerja inovatif tetapi negatif antara kepimpinan transformasi dan tingkah laku kerja inovatif. Walau bagaimanapun, budaya berkualiti tidak bertindak sebagai penyederhana ke atas hubungan antara pemeraksanaan psikologi dan tingkah laku kerja inovatif. Secara keseluruhan, penemuan penyelidikan ini mencadangkan pentingnya untuk mengambil kira motivasi ekstrinsik, pemeraksanaan psikologi, kepimpinan transformasi dan budaya berkualiti bagi meningkatkan tingkah laku kerja inovatif dalam kalangan staf akademik. Berdasarkan keputusan yang diperolehi, implikasi teori dan praktikal, limitasi dan cadangan untuk penyelidikan akan datang dibincangkan dan dikemukakan.

Kata kunci: motivasi ekstrinsik, pemeraksanaan psikologi, kepimpinan transformasi, budaya kualiti, tingkahlaku kerja inovatif

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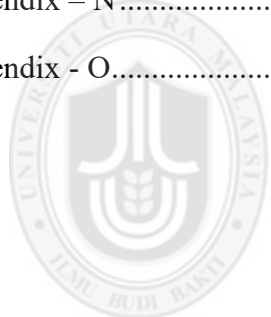
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LIST OF ABBREVIATIONS

No	Name	ABBREVIATIONS
1.	Innovative Work Behavior	IWB
2.	Extrinsic Motivation	EM
3.	Psychological Empowerment	PE
4.	Transformational Leadership	TL
5.	Quality Culture	QC
6.	Higher Education	HE
7.	Ministry of Higher Education and Scientific Research	MOHESR
8.	Higher Education Institutions	HEI
9.	Gross Domestic Product	GDP
10.	Information Technology	IT
11.	Classroom Learning Environment	CLE
12.	Common Method Variance	CMV
13.	Mahalanobis	MAH_1
14.	Variance Inflated Factor	VIF
15.	Composite Reliability	CR
16.	Average Variance Extracted	AVE
17.	Effect Size	f^2
18.	Self- Determination Theory	SDT

CHAPTER ONE

Introduction

1.1 Background to the Study

In the current global scenario, the higher education sector is faced with numerous challenges brought about by the dynamic technological changes and enhanced demands of consumers, especially in the Iraqi context (Al-Husseini & Dosa, 2016). It is pertinent for the current academic institutions to develop their abilities in order to react to the demands just as business organizations do (Kim & Ju, 2008). Higher education institutions (Henceforth HEI) are significant organizations as they generate innovation from the creation of products and services (Obendhain & Johnson, 2004). It has also been contended that academic experiences of the members of academia reflect the key HEI knowledge and that this may be considered as their major competitive edge (Maponya, 2005).

Additionally, Fullwood, Rowley and Delbridge (2013) stated that colleges, technical institutions and universities work towards providing training, expertise, and personnel to the industries requiring them. Moreover, academic institutions have a key role in the promotion and sustenance of economic growth through their research, studies and the production of graduate workforce with skills (Maponya, 2005). In fact, HEI is believed to generate entrepreneurial graduates who are capable of driving economic growth forward via projects in the economy that is knowledge-centered (Kim & Ju, 2008).

Furthermore, HEI can contribute more to the community and the society as a whole (Kim & Ju, 2008) and play a prominent role in transferring knowledge by collaborating with other relevant organizations in their support of innovation and resolution of issues (Fullwood et al., 2013). HEIs are capable of changing the world by training, resolving challenges and publishing public policy (Galang, 2010) as universities have been evidenced to bring about transformation in societies by providing education to stakeholders, leaders and academicians alike (Lozano, Mulder, Husingh & Waas, 2013). Added to this, universities and research entities comprise the social units and academia that play a key role in the creation and transmission of scientific knowledge that is deemed to be the resource and key behind the development of societies (Tian, Nakamori & Wierzbicki, 2009). In this regard, innovation is critical to the maintained survival of organizations and is a major element in the achievement of their competitive advantage.

The HE in Iraq is currently facing serious issues in terms of lack of motivation resources, self-confidence of staff members and professional contentment that lead to lower innovation (Hussain et al., 2014). To that end it is required that higher education leaders care about and encourage academic staff by using extrinsic motivation as well as the use of psychological empowerment to enhance their morale, which leads to high innovative work behavior. Despite the fact that innovative work behavior among employees has been evidenced to be a major source of organizational innovation, it is not triggered automatically and as such, leaders have to facilitate work incentives and motivation to their employees to maximize their innovative work behavior (Chen, Wu & Chen, 2010). In other words, it is important for leaders at the HE sector in Iraq to acknowledge and understand the academic staff in terms of their behavior and attitudes.

In relation to this, the formation/modification of academic staff behavior and attitudes are expected to result in them being highly productive, creative and innovative (Choong, Wong & Lau, 2011). Tehseen and Hadi (2015) indicated the need in HE sector to examine the factors that motivate good performance and innovation of academic staff through extrinsic motivation. It is a crucial function in the current organizations and it performs an important function in the attraction, retention and encouragement of employees (Zhou, Zhang & Sanchez, 2011).

In the realm of higher education, it is important to adopt innovation brought about by the innovative work behavior of the academics (Jaskyte, 2004). Innovative work behavior refers to the development, generation, adoption and implementation of novel ideas, methodologies, initiatives and policies directed towards effectively achieving organizational goals. It is considered to be an organizational growth and profitability critical success factor (Al-Husseini & Elbeltagi, 2015).

In addition, innovative work behavior enables the enhancement of learning outcomes and provision of quality education (Albury, 2005). In the context of education, innovation assists in customizing the process of education (Brodhag, 2013) and researchers have reached a general consensus as to the positive impact of education on the communities, families and individuals' welfare (OECD, 2009). In other words, innovation in higher institutions of learning is deemed to be the driver of economic and social development and this could be achieved via academic outcomes (Chen & Chen, 2008).

Moreover, in academic environment, innovative work behavior is crucial as it affects the development of professional creations such as in action research, academic studies and teachers that contribute and take part in technical R&D work and publication (Chen et al., 2010). In the same line of study, Chen and Chen (2008) revealed that innovative work behavior facilitates innovation in academia, involving research patents, communications and journals publication. Some studies (e.g., Getz et al., 1997) related that HEIs innovation may consist of telecommunication computing, library, student's life, financial services, curricula and services provided in the classroom, while others (Rogers, 2010) contended that educational institutions are channels for innovation adoption and application.

The setting of this study, i.e., Iraq was for thousands of years in the recorded history of the Arab region, a leader in the quality of social programs and education (Mahmud, 2013). Higher education in the previous years was noted to be advanced in the context of Iraq, earning the country the top honors in the Middle East and the Arabian Gulf (Al-Husseini & Dosa, 2016). Moreover, Iraq won the UNESCO award back in 1982 for being the best illiteracy-free country, owing to her endorsement of the law on free education (UNESCO, 2004). Higher education system in Iraq was provided with considerable funding and investment from the government (Sikhi, 2008). Such funding was utilized to develop teaching, and initiate research and innovation projects, develop educational infrastructure and services, curricula, laboratories, scholarships, and training, all of it directed towards disseminating literacy throughout the society.

In this regard, the UNESCO report (2011) noted that the annual budget for education as of 1989 was set at U.S. \$ 2.5 billion, constituting 6% of the GDP. However, because of the wars and the economic embargo imposed from 1991 to 2003, Iraq lagged behind the rest of the Arabian countries. In addition, the support of government for the teaching field, training and other academic services, became a thing of the past. Consequently, the infrastructure and informational technological of HEI deteriorated and the expenditure on education per student decreased from U.S. \$ 620 (1989) to U.S. \$ 47 (2002) (UNESCO, 2011). The Higher Education (Henceforth HE) sector decline could mean the decline of the country as a whole because the future leaders and the intellectual property development depend on such institutions (Faylee, 2013).

In addition, the UNESCO report (2003) revealed that the adverse effect of the fact that Iraqi professors could not keep contact with professors in different countries of the world since 1991 to date has left an impact that has been detrimental to the growth of Iraqi universities in the way that they lagged behind others at international level. The report placed emphasis on the dire need to reclaim the historical reputation of educational institutions in the country. Furthermore, the business of providing education is becoming extensively global in the current times and the system of higher education in Iraq to pave her way to reach the global market requires sweeping changes in the curricula, strategies and the leadership style. In this regard, the higher education in Iraq calls for forward looking leaders as opposed to traditional leaders in order to create its niche in the current educational field and environment (Al-Husseini, 2014).

Moreover, In Iraq, HE suffered from weaknesses in terms of lack of motivational resources, such as incentives, rewards, bonuses (and salaries of academic staff in Iraq are considered low compared to salaries in neighboring countries), and the destroyed infrastructure (Hussain, Talib & Shah, 2014; Harb, 2008) prevents the development of intellectual capital. This has led to skilled and knowledgeable human resource leaving the country (Neama, 2009; Alfathel, 1999). Consequently, majority of the HE institutions in Iraq are not in working capacity (UNESCO, 2011). Similarly, Neama (2009) reported that from 1991-1998, over 7350 scientists left Iraq to settle in Europe, Canada and the U.S. – out of whom 67% are university professors and 23% are scientific researchers. To compound the circumstances further, the lack of security, following the 2003 American invasion of Iraq, many academicians and scientists in varying fields and specializations abandoned universities, leading to what is called a brain drain in the country (Hussain et al., 2014).

Developments in this direction are notable in the Ministry of Higher Education and Scientific Research (MOHESR) launching an international strategic plan for the period from 2012 to 2020 that addresses HE reforms (MOHESR, 2012). The Ministry has taken steps to adopt various approaches and objectives to upgrade the provision of higher education, to achieve sustainable human development, and to establish high-quality conditions that are acknowledged at international levels. On the basis of these criteria, the present strategy encapsulates an effective work plan to be realized from 2012 to 2020 based on a timetable that provides an overview of actions, activities and responsible parties for the carrying out of each activity and deadline period for their achievement, indicators and expected outcomes. The strategy consists of various main

axes, like the improvements in curricula and study initiatives (content, methods, strategies and technologies) that are expected to boost innovation and reach distinction in scientific studies as well as develop academic expertise at all levels. It also covers the upgrading of the teaching staff skills in the use of technology for both education and learning. This strategy is expected to succeed with the pro-active role of the leaders and academic staff from different Iraqi HEIs (MOHESR, 2012).

In this connection, Mahmud (2013) mentions that the strategy plan of the Iraqi Ministry (MOHESR) points out that academic staff requires care, since it is a significant element in the education process. Thus, the main concern should be the academic staff in order that there is development and improvement in its affairs. Hence, on the basis of the above discussion, a need arises to make use of motivation and environment resources/contextual factors for the improvement of the HE academic staff's innovative work behavior in the context of Iraq (Mahmud, 2013).

As a result, in order to address the issues of practice and theory and providing deeper insight into the factors impacting innovative work behavior in HE in Iraq, this study examines the moderating effect of quality culture on the relationship of specific constructs (extrinsic motivation, psychological empowerment and transformational leadership) and innovative work behavior.

1.2 Statement of the Problem

A review of related literature thus shows that a considerable amount of interest has been dedicated to innovative work behavior in the last few decades. Some authors argued that this is because it predicts employee outcomes, organizational success, competitive advantage and financial performance in the form of total shareholder return (Al-Hussein, 2014; Hussain et al., 2014; Sethibe & Steyn, 2017). Another reason for the risen popularity of innovative work behavior studies may be its antecedents, which come from work environment characteristics, human resource management practices, and employee or individual characteristics. Innovative work behavior has antecedents that companies can control, allowing innovative behavior to be improved with planned interventions strategies.

Even though studies on innovative work behavior are substantial, the major chunk of studies were conducted in service sector (Imran, Saeed, Anis-Ul-Haq & Fatima, 2010; Imran, & Anis-Ul-Haque, 2011; Khaola & Sephelane, 2013; Kheng, June & Mahmud, 2013; Michael, Hou & Fan, 2011; Niu, 2014), public sector (Carmeli, Meitar & Weisberg, 2006; Fernandez & Moldogaziev, 2012), companies (Afsar, Badir & Saeed, 2014; De Spiegelaere, Gyes, Vandekerckhove & Hootegeem, 2012; Sethibe & Steyn, 2017; Schermuly, Meyer, & Dämmer, 2013; Tsai, Chen & Shen, 2015; Yidong & Xinxin, 2013; Zhou, Zhang & Montoro-Sánchez, 2011;), banks (Dincer & Orhan, 2013; Khan, Aslam & Riaz, 2012), industry (Janssen, 2000; Mura, Lettieri, Spiller & Radaelli, 2012; Stoffers, Neessen & van Dorp, 2015; Sapie, Hussain, Awang & Ishak, 2015), hospitals (Bammens, Notelaers & Van Gils, 2015; Masood & Afsar, 2017; Reuvers, Van

Engen, Vinkenburg, & WilsonEvered, 2008; Xerri, 2013), and education sector (Chang, et al, 2011; Singh, & Sarkar, 2012). However, not much attention has been paid to the issues of innovative work behavior among university academicians (Al-Hussein, 2014). If there are studies conducted in the higher education sector, they have dealt with limited variables, such as individual characteristic (Messmann, Mulder & Gruber, 2010), learning goal orientation, work engagement, role job performance (Chughtai & Buckley, 2011) and psychological empowerment (Rahman, Panatik, & Alias, 2014). These studies were conducted in Western countries and other developed countries, but no studies have been conducted in Iraqi higher education sector. According to the recommendations of a group of researchers (Khaola 2013; Marane, 2012; Sapie et al., 2015) the factors (e.g., transformational leadership, psychological empowerment and extrinsic motivation) are important factors in improving innovative work behavior. Thus, the present study sought to extend the body of research on innovative work behavior by investigating issues of innovative work behavior among university academics.

A thorough review of literature showed mixed results in the relationship between extrinsic motivation and innovative work behavior, which are highlighted by Baer, Oldhama and Cummings (2003) and Zhou, Zhang and Sanchez (2011) with other authors reporting positive impacts of extrinsic motivation on innovation work behavior (Eisenberger, Armeli & Pretz, 1998; Eisenberger & Rhoades, 2001; Eisenberger & Cameron, 1996; Eisenberger & Armeli, 1997). In related studies, the performance-increased salaries and bonuses relationship was found to affect innovative behavior, with specific authors indicating its detrimental effects (Amabile, Hennessey &

Grossman, 1986; Cooper, Clasen, Silva-Jalonen & Butler, 1999; Kruglanski, Friedman & Zeevi, 1971).

In some other related research works (Hennessey, 1989; Joussemet & Koestner, 1999; Zhou et al., 2011), extrinsic motivation was found to have weak/insignificant effects on the innovation and creativity of individuals. Studies of this caliber were focused on hotels (Milka, Michael & Tanui, 2015), hospitality in Taiwan (Lin & Wong, 2014), schools (Demir, 2011) and other industries (Baer, et al., 2003), with the exception of the HE sector, as explained by Hussain et al. (2014).

Psychological empowerment literature is primarily concerned with the psychological empowerment effects on job satisfaction, organizational commitment, realization of individual performance, stress and job satisfaction (Chang, Shih & Lin, 2010; Laschinger, Finegan & Shamian, 2001; Liden, Wayne & Sparrowe, 2000; Spreitzer, Kizilos & Nason, 1997). Although successful implementation of psychological empowerment is a key to improve innovative work behavior (Spreitzer, 1995), there are not many empirical research studies dealing with the relationship between the two variables (Cekmecelioglu & Ozbag, 2014). However, in the research studies carried out by Jung, Chow and Wu (2003), and Sapie et al. (2015), psychological empowerment was found to negatively affect innovation work behavior, but contrary results found by Cekmeceioglu and Ozbag (2014); Erturk (2012), Knol and Linge (2009), Rahman et al. (2014), Spreitzer (1995) and Zhang and Bartol (2010) supported the positive results. Moreover, mix results of psychological empowerment dimensions were found by Singh and Sarkar (2012) on innovative work behavior.

Added to the above, prior studies in literature took on different contexts; for instance, Cekmecelioglu and Ozbag (2014) focused on Turkish manufacturing industries, Spreitze (1995) focused on company of industry, Belhaj (2012) focused on Telecommunication Company in Yemen, and Cummings et al. (2010) focused on the health sector. In the HE sector, Rahman et al. (2014) stressed on the need for studies in this regard. This is evidenced by the importance of empowerment in universities for the improvement of activities, quality, and innovation (Sotirofski, 2014). Many scholars state that there are not many research studies tackling the effects of psychological empowerment on innovative work behavior (Cekmecelioglu & Ozbag, 2014; Marane, 2012).

A significant portion of studies that examined the empowerment-innovation relationship was confined to the organizational level (Cekmecelioglu & Ozbag, 2014; Marane, 2012) and it was addressed in the context of western countries (Cekmecelioglu & Ozbag, 2014; Spreitze, 1995; Singh & Sarkar, 2012). There are not many research studies that support the relationship between psychological empowerment and innovative behavior at the individual level in public sector (Marane, 2012), especially in Iraqi HE. Future studies are recommended to examine the relationship between psychological empowerment and organizational outcomes (innovation) as well as other factors that can affect innovative work behavior (e.g., leadership style and organizational culture, quality culture) (Marane, 2012).

In general, the plan of Iraqi Ministry (MOHESR) is to introduce new strategies for the purpose of raising the level of higher education and improving innovation, therefore, psychological empowerment is considered an appropriate strategy at this stage for

enhancement in the morale of the academic staff, which leads to high innovative work behavior. In this regard, compounding the need for more research, Spreitzer (1995) claims that innovative behavior can be forecasted by psychological empowerment in that psychologically empowered employees feel good about their work and consider them to be challenging and have meaning. Hence, they are more creative and their personal goals are more aligned to those of the organizational ones (Jha, 2014). Similarly, Zhang and Bartol (2010) reported a significant connection between psychological empowerment and innovation behavior. The SDT theory posits three fundamental psychological requirements namely autonomy, relatedness and competence and when met, all these requirements lead to enhanced autonomous motivation and behavior internalization, which lead to enhancement in performance and innovation (Ryan & Deci, 2000).

Transformational leadership has a significant role in stimulating innovation among employees and establishment of innovative environment in organizations. It would be responsible for inventiveness through political will and creating a culture of employees' creativity and more institutional innovation (Hussain et al., 2014). The transformational leadership-innovative work behavior relationship has to be studied to identify the causality direction and to motivate innovation among academic staff (Reuvers et al., 2008). In this regard, the findings in literature are mixed; there is not much consistency as regards conclusion among reviewed studies, some of them arriving at contradictory conclusions even (Masood & Afsar, 2017; Sethibe & Steyn, 2017; Weng, Huang, Chen, & Chang, 2015), some revealing a negative relationship between transformational leadership and innovative work behavior (Basu & Green, 1997), others finding a

positive relationship (Afsar et al, 2014; Boerner, Eisenbeiss & Griesser, 2007; Imran & Haque, 2011; Jung, Chow & Wu, 2003; Khaola & Sephelane 2013; Khan et al, 2012; Lee & Jung, 2006; Masood & Afsar, 2017; Reuvers et al., 2008; Shin & Zhou, 2003), while some others finding no direct relation between transformational leadership and innovative work behavior (Jaussi & Dionne 2003; Krause, 2004).

In addition, transformational leadership-innovation studies largely examined the relationship at the level of institution / organizational (Gumusluoglu & Ilsev, 2009; Jung et al., 2003) and only in the Western countries (Sellgren et al., 2008; Weng, et al, 2015). Furthermore, Imran and Haque (2011); Masood and Afsar (2017) and Reuvers et al. (2008) called for more studies to examine the relationship between the two constructs. It examines the way transformational leaders can urge employees to employ a more inventiveness at workplace. In the present study, the gap in literature is addressed by examining the role of quality culture, as one of the contextual factors, in affecting the relationship between factors (independent variable) and innovative behavior in Iraq.

However, the current transition phase in Iraq's HE requires transformational leadership instead of the traditional leadership for the purpose of achieving goals and improving innovation and quality (Al-Hussein, 2014). Despite the fact that many leadership styles have been examined in the management field (Saenz, 2011), the major style acknowledged in most of the research works is the transformational leadership style (TL). Such a style works towards increasing goal-directed behavior displayed by the subordinates (Dubrin, 2012) and thereby improving performance and innovation within the organization (Yukl, 2013). Transformational leaders tend to make their followers

feel respect, provide their trust in their leader, and more inclined towards doing more than what is just expected of them. In fact, transformational leadership leads to subordinates' commitment and facilitates the carrying out a great workload and creativity in solving problems (Hawkins, 2011; Yukl, 2013).

Nevertheless, following the SDT theory assertions, this study considers quality culture's moderating role on the relationship between extrinsic motivation, psychological empowerment and transformational leadership, and innovative work behavior. Such moderating impact is attributed to several reasons:

First, SDT theory considers motivation as mostly dependent on context and emphasizes the role of the environment (culture and climate) in motivation (Ryan & Deci, 2000) which leads to enhanced performance and innovation (Vallerand, 2000). In this regard, quality culture is considered as moderating between the independent variables and innovative work behaviour.

Second, the empirical evidence with regard to the link between extrinsic motivation, psychological empowerment and transformational leadership with innovative work behavior appears to be inconsistent (Amabile et al., 1996; Bysted & Jespersen, 2014; Basu & Green, 1997; Erturk 2012; Marane, 2012; Shin & Zhou, 2003). In this respect, the weak or inconsistent relationship between two latent variables can be revitalized through the introduction of a third one (moderating variable) (Barron & Kenny, 1986).

Lastly, the studies reviewed here have suggested the moderating effects of quality culture with regard to the relationship between motivation factors and innovation

behavior (Bain, Mann & Merlo, 2001; Elenkov & Manev, 2005). However, when institution gives opportunities and provides good environment for its employees to express their new ideas, the staff will be encouraged and will have the desire to make additional efforts. Thus, if there is a suitable culture, like quality culture in the place for innovation, the relationship between extrinsic motivation, psychological empowerment and transformational leadership with innovative behavior should be stronger.

In this regards, quality culture refers to a design of sources and behaviors accepted by people as the method to resolve their problems (Mahmood, Mohammed, Misnan, Yusof & Bakri, 2006). It is obtainable as a combination of methods, rules, and principles over the background of skills, knowledge and attitudes of investors to an organization. Quality culture in HE provides a blueprint of the cultural patterns of an organization, such as its beliefs, values and daily procedures (Ehlers, 2006).

In the context of such a study in Iraq, the quality culture of Iraqi HE has largely been ignored by studies despite the importance of quality culture in enhancing organizational innovation (Wu et al., 2011). It is crucial for researchers to examine quality culture development and its implementation in higher institutions (Ehler, 2009) because despite its significance in quality and innovative work behavior enhancement, higher education in Iraq still suffers from lack of quality standards according to the Education Quality Index issued by the World Economic Forum in Davos (AL-Sharq, 2017). It revealed the exclusion of six Arab countries due to the lack of quality standards in the education which involve each of Sudan, Iraq, Syria, Yemen, Libya and Somalia. The global level of Iraqi universities has decreased significantly in recent years, according to Ranking

Web Universities (2017). The University of Babylon was the first Iraqi university to be at the level of (2652) globally, while it was ranked (60) among the universities in Arab countries (see Appendix M). Thus, the present study addresses the gap from the previous study by examining the moderating role of quality culture in the relationship between extrinsic motivation, psychological empowerment and transformational leadership with innovative work behavior of Iraqi HE academic staff.

1.3 Research Questions

Based on the research gaps mentioned in the statement of the problem, the research questions the present study will address are stated as follows:

RQ1: Is there any relationship between extrinsic motivation and innovative work behavior?

RQ2: Is there any relationship between psychological empowerment and innovative work behavior?

RQ3: Is there any relationship between transformational leadership and innovative work behavior?

RQ4: Does the quality culture moderate the relationship between extrinsic motivation and innovative work behavior?

RQ5: Does the quality culture moderate the relationship between psychological empowerment and innovative work behavior?

RQ6: Does the quality culture moderate the relationship between transformational leadership and innovative work behavior?

1.4 Research Objectives

The objectives of this study are illustrated below:

RO1: To investigate the relationship between extrinsic motivation and innovative work behavior.

RO2: To investigate the relationship between psychological empowerment and innovative work behavior.

RO3: To investigate the relationship between transformational leadership and innovative work behavior.

RO4: To investigate whether quality culture moderates the relationship between extrinsic motivation and innovative work behavior.

RO5: To investigate whether quality culture moderates the relationship between psychological empowerment and innovative work behavior.

RO6: To investigate whether quality culture moderates the relationship between transformational leadership and innovative work behavior.

1.5 Significance of the Study

This study investigates the effects of extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior moderated by quality culture. Its significance covers both theory and practice in this field of research.

1.5.1 Theoretical Significance

This study is conducted to test how extrinsic motivation, psychological empowerment, transformational leadership and quality culture as moderating factors influence innovative work behavior among the academic staff. The researcher hopes that the conclusions drawn from this study will prove beneficial to both scholars and practitioners regarding methods to increase innovative work behavior among academic staff. As regards the theoretical perspective, it is hoped that the findings from this study may contribute to the existing body of knowledge on innovative work behavior. A literature search reveals limited empirical studies on the issue of innovative work behavior among academic staff. Most of the studies on innovative work behavior were focused on employees and managers inservice sector (Imran, & Anis-ul-Haque, 2011; Imran, Saeed, Anis-Ul-Haq & Fatima, 2010;Khaola & Sephelane, 2013;Kheng, June & Mahmud, 2013; Michael, Hou & Fan, 2011; Niu, 2014), managers of companies (Afsar, Badir & Saeed, 2014; De Spiegelaere, Gyes, Vandekerckhove & Hootegem, 2012; Schermuly, Meyer, & Dämmer, 2013; Tsai, Chen & Shen, 2015; Yidong & Xinxin, 2013; Zhou, Zhang & Montoro-Sánchez, 2011),employees and managers in the banking sector (Dincer & Orhan, 2013; Khan, Aslam & Riaz, 2012), employees in the industry

(Janssen, 2000; Mura, Lettieri, Spiller & Radaelli, 2012; Stoffers, Neessen & van Dorp, 2015; Sapie, et al, 2015), hospital staffs in the health industry(Bammens, Notelaers & Van Gils, 2015; Reuvers, Van Engen, Vinkenburg, & WilsonEvered, 2008; Xerri, 2013), and teachers in education (Chang, et al, 2011; Singh, & Sarkar, 2012).

The new contribution to knowledge is the use of quality culture as a moderator between extrinsic motivation, psychological empowerment and transformational leadership with innovative work behavior in the HE sector. The present study also contributes to academic knowledge through the explanation of important model and theories that shed light on innovative work behavior. In this regard, the underpinning theory employed to explain the model of the study, including SDT Theory, has been the guiding principle in this study to explain the relationship between extrinsic motivation, psychological empowerment, transformational leadership and quality culture with innovative work behavior. Comprehensive integrated theoretical framework for further research on HE sector for enhancement innovative work behaviour among academicians.

1.5.2 Practical Significance

Additionally, this study contributes to practice as well. The findings of this study have implications for the HE sector (public universities) as it sheds light on the ways to enhance innovative work behavior of staff. It is expected that the findings will be used as guidelines to develop human capital policies, management practices and management development initiatives for the ultimate enhancement of academic staff innovative work behavior in Iraq's HE sector.

In this regard, innovative work behavior will further boost the smooth functioning of all the different parts of the university, academic as well as administrative, and hence, overall goal attainment of the university (Podsakoff, Ahearne, & Mackenzie, 1997). Specifically, this study provides important managerial tips for the efficient functioning of the three universities - Baghdad University, Mosul University and Basra University in Iraq by revealing improved techniques for developing innovative work behavior as well as achieving competitiveness.

The conclusions drawn from this study may effectively contribute to the universities' management, especially in Iraq, on the method of enhancing innovative work behavior among the academic staff. This study will provide empirical evidence on the role of extrinsic motivation, psychological empowerment, transformational leadership and quality culture on innovative work behavior. Thus, the university management will find them helpful in identifying and focusing on the most important and critical factors in achieving a more innovation-oriented academic staff. This contribution is wider in scope reaching beyond the borders of Iraq.

1.6 Scope of the Study

This study investigates the effects of extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior moderated by quality culture, among academic staff of the public HE sector in Iraq. Specifically, this study focuses on three public universities, namely Baghdad University, Mosul University, and Basra University. Because Iraqi higher education has 35 universities and a large population of

33424 academicians distributed in the whole Republic of Iraq, the study of all these universities is impractical. Moreover, all public HE sector follow the same rules and regulations regardless of the geographical location, which enhances the reliability of the representative sampling.

So, this study selected the three universities located in different parts of Iraq - the University of Basra located in the south, the University of Baghdad located in the center and the University of Mosul located in the north. The choice of academic staff for the present research as a unit of study is consistent with the efforts of academic staff toward maximizing the benefits of innovative work behavior in terms of enhancing organization's innovation, effectiveness, quality and performance, improving social capital and helping retain and attract best academic staff at universities.

1.7 Definition of Key Terms

This section presents brief definitions of some important key terms used in the study:

1.7.1 Innovative Work Behavior

Innovative work behavior is the voluntary creation, launching and use of novel thinking in a work role, set or firm, for the purpose of benefiting the role performance, the set or the firm as a whole (Janssen, 2000).

1.7.2 Extrinsic Motivation

“The extrinsic motivation is externally driven and the focus is on the outcome of the activity for the task-worker himself and the outcome could be a reward or the avoidance of punishment” (Isa et al., 2016).

1.7.3 Psychological Empowerment

Psychological empowerment is defined as a motivational construct manifested in four cognitions: meaning, competence, self-determination and impact that is reflected in an individual's orientation to his or her work (Spreitzer, 1995).

1.7.4 Transformational Leadership

Transformational leadership is defined as leadership that generates awareness and acceptance among subordinates, enables the followers to develop their potentials, encourages them to go beyond their needs to accomplish the organizational goals and motivates them through leader's behaviors (Avolio & Bass, 2004).

1.7.5 Quality Culture

Quality culture refers to the set of norms, values, concepts, beliefs and regulations that individuals and groups within an organization share and, are connected to the organizational quality (Detert, Schroeder & Mauriel, 2000).

1.8 Organization of the Thesis

For smooth presentation and organized discussion, this thesis is divided into five chapters, with each chapter containing the following:

Chapter 1: Introduction – this chapter describes the important details concerning the topic of the study. These details include background to the study, statement of the problem, research questions, research objectives, significance of the study, scope of the study, key terms definition and organization of the thesis.

Chapter 2: Literature Review- this chapter presents a review of literature available on innovative work behavior, extrinsic motivation, psychological empowerment, transformational leadership, and quality culture. In addition, the chapter provides a discussion on the relationship between different variables and innovative work behavior. Finally, the theories that underlie the study are presented.

Chapter 3: Research Methodology – the chapter presents the theoretical framework and hypotheses development, followed by research design, with topics including sampling method, construction of the questionnaire, data collection and analysis method.

Chapter 4: Data Analysis and Findings – the data analysis and findings of the present study are provided in this chapter. The chapter first presents the preliminary analysis that was performed using SPSS, followed by presentation of the results using Smart-PLS.

Chapter 5: Discussion, Implications and Conclusion—it is the final part of this research study, that is, innovative work behavior study. The topics cover discussion of the findings, contribution of the study, limitations of the present research, suggestions for future research and conclusion.



CHAPTER TWO

Literature Review

2.1 Introduction

This chapter comprises the review of literature concerning innovative work behavior and the relevant findings reported by prior researchers. The chapter is divided into several sections. To begin with, section 2.2 contains the concept and definition of innovation work behavior. This is followed by section 2.3 in which extrinsic motivation is explained. Section 2.4 is comprised of an overview of psychological empowerment and section 2.5 defines and discusses transformational leadership. This is followed by section 2.6 that provides and explanation of quality culture, and section 2.7 that contains the underpinning theories and their explanation. The next section, 2.8 explores the research gap and justification for the present research. Lastly, section 2.9 presents the chapter summary.

2.2 Innovative Work Behavior (IWB)

2.2.1 Innovative Work Behavior - Concept

The past few years have noted the increasing change in varying business sectors all over the world, necessitating firms and institutions to develop creative solutions to resolve issues and to achieve successful performance (Agarwal, 2014). In the same line of argument, organizations have to practice ongoing operational innovations when it comes to their products and processes. From the important aspects involving this enhancement

is to leverage staff abilities and capabilities in order to develop and promote innovation (Gupta, Guha & Krishnaswami, 2013). Employee creativity is a source of novel ideas that can be applied by the team or by the whole organization and is significant for the survival and sustenance of the organization (Agarwal, 2014).

In particular, innovative work behavior is described as the process producing change in light of firm's products, processes or procedures (Sapie et al., 2015). It is deemed to be a motivational and cognitive process of an employee or a group of them, reflected through specific tasks (Masood & Afsar, 2017). In a related study, Damanpour (1991) referred to innovative work behavior as the generation, growth and use of new ideas/behavior that could be introduced as a new product or service, development or system of management and novel initiatives for the members of the organization. Thus, innovative work behavior comprises of the generation of ideas and behaviors required for the ideas implementation and improvement that will bring about an overall enhancement in individual and business performance (De Jong & Hartog, 2008). According to Farr and Ford (1990), individual behavior is the initial step for the voluntary production of new and useful ideas, methods, processes as well as products.

Furthermore, innovative work behavior is characterized as containing the determination of alternatives and the production of novel ideas, and it may also consist of behaviors that are focused on the application of change, new knowledge or enhancing methods catering to individual or business performance (Farr & Ford, 1990). Nevertheless, the innovative work behavior is a concept that is new and literature on creativity often touches upon its relationships with other constructs.

(De Spiegelaere, 2014). More importantly, according to the innovation theory, innovation is more extensive than creativity, and entails ideas application (King & Anderson, 2002). However, before proceed further, it becomes pertinent to stress on the overlapping aspects of creativity and innovation.

To start explaining the distinction between the two, we shall go by McLean's (2005) view who stated that creativity and innovation are terms that have often been used synonymously with each other in numerous studies. However, while creativity entails the generation of new and invaluable ideas, innovation entails the generation/employment of such ideas (Amabile, Barsade, Mueller & Staw, 2005; Khan, Rehman & Fatima, 2009). With regard to decision variation, researchers have consensus that creativity is confined to innovative behavior (Ayranci, 2011; De Jong, Den Hartgog, 2008; Moreno, Morales & Montes, 2008). In other words, creativity can be considered as an element of innovative work behavior that is clear from the first step of the process of innovation, wherein issues or gaps of performance stand out, and ideas are produced in answer to the perceived innovation requirement (West, 2002). Similarly, De Jong and Hartog (2007) make a distinction between the two terms (creativity and innovative work behavior) saying that the difference lies in importance as opposed to substance.

Nevertheless, in studies dedicated to the topic, creativity of employees, specifically in the early process steps are well concentrated so much so that other authors recommended expanding the studies to examine scientific ideas of application (Mumford, 2003; Rajaei, Jalili, Abadi & Azizkhani, 2015; Zhou & Shalley, 2003). For instance, in De Jong and Hartgog's (2008) study, innovative work behavior is claimed to

be consistent with the generation of ideas and this calls for the exploration of ideas in practice in order to enhance the performance of business (Dzulkifli & Md Noor, 2012). Hence, innovative work behavior can be described as a significant factor in both public and private institutions and businesses (Al-Husseini, 2014).

Innovation is specifically crucial in the public HE sector, where innovation development and diffusion is required (Borins, 2001). Generally speaking, organizations are faced with considerable challenges stemming from the external environment owing to its dynamic changes. The main factor that enables organizations to support any innovation type is their human capital as it brings about the shift to the natural behavior of the workforce that reinforces the organizational activities (Hormiga, Hancock & Pasola, 2013).

2.2.2 Innovative Work Behavior – Definition

From the onset of the introduction of the innovative work behavior concept back in 1994 and 1998 by Scott and Bruce, literature on the concept has expanded so much that by the end of 2012, a total of 31 publications were noted in well-known Dutch and other international journals that employed the concept in the studies' analysis (De Spiegelaere, 2014). The studies adopted various research methods (qualitative and quantitative) and methods of variable use (innovative work behaviour as both dependent and independent variable).

However, despite the robust empirical literature dedicated to the subject, the conceptual development of innovative work behavior is still scarce as majority of the studies failed

to provide the definition of the concept (Holman et al., 2012; Janssen, 2005; Krause, 2004). This includes the two pioneering authors of the concept, namely Scott and Bruce (1994, 1998) who failed to provide a working definition of the concept and as a result, articles defining the concept mostly cite West and Farr's (1990) definition (e.g. Kleysen & Street, 2001; Reuvers et al., 2008; Yuan & Woodman, 2010). Definitions that have been developed for innovative work behaviour were rarely adopted by other authors indicating that there is no generally accepted definition of it (Reuvers et al., 2008; Yuan & Woodman, 2010). One of the reasons of non-use of one specific definition is the difference in the definitions according to the field of study and specialization (De Spiegelaere, 2014).

However, to begin with, West and Farr (1990) provided a description of innovative work behavior in that it introduces and applies within a role set or institute of thinking, methods, procedures, products that are new to the relevant adoption unit, and are created to profit the personnel, group, firm or the society as a whole. In another definition, Spreitzer (1995) proposed that innovative behaviors are the creation of new and diverse behaviors that bring about a change as they involve development of new product, service, idea, procedure or process. service, idea, procedure, or process. Most generally, intrinsic task motivation contributes to innovative behaviors. More specifically, because empowered individuals believe they are autonomous and have an impact, they are likely to be creative; they feel less constrained. than others by technical or rule-bound aspects of work (Amabile, 1988). Furthermore, because empowered individuals feel self-efficacious, they are likely to be innovative in their work and to expect success.

On the other hand, Janssen (2000) defined innovative work behavior as the voluntary creation, launching and use of novel thinking in a work role, set or firm, for the purpose of benefiting the role performance, the set or the firm as a whole. Innovative work behavior is also defined by Dorenbosch, Engen and Verhagen (2005) as the readiness by employee to set up work innovations like the upgrade of working methods, communication with co-workers, and the employment of computers, or the development of novel services/products.

Moreover, in other studies, like the one conducted by Carmeli, Meiter and Weisberg (2006), innovative behavior was defined as the several stage process wherein an individual identifies an issue upon which new thoughts, solutions and outcomes are promoted and support is built for them, after which an applicable archetype or model is generated to profit the institute, or some parts of the institute. In another related study, Tuominen and Toivonen (2011) contended that innovation and change activities should be considered as they contribute to the development and use of invaluable novelties in an organization (De Spiegelaere, 2014). Also, the definition of Innovative Work behavior means directing the behavior of all members of staff to the generation, promotion and application (regarding a position, unit or institution) of new processes, products, ideas, procedures and service, (De Spiegelaere et al., 2012). Innovative work behavior is described as the voluntary ideas production, promotion and achievement in the workplace to enhance performance of the individual, group and organization (Afsar, et al, 217). Employees' innovative work behaviour defined as the development, adoption and implementation of new ideas for products, technologies and work methods by employees (Anna, Bondarouk & Nijenhuis, 2017).

Therefore, in the present study the definition of innovative work behavior means directing the behavior and creating desire in employees to generate, support, and implement new ideas, processes, new products and services in the organization.

2.2.3 Dimensions of Innovative Work Behavior

The innovation characterization involves several stages that shed light on the conceptualization of innovative work behavior employed in the present study. Innovation related literature shows a consensus among scholars as to the multi-stage element of the innovation work behavior (Kanter, 1988; Wheelwright & Clark, 1995). Aligned with Kanter's (1988) idea, there are three innovative work behavior stages, namely, idea generation, promotion and implementation. Four stages were advocated by other scholars beginning with recognition of an issue, production of ideas/solutions, new or developed. This is followed by seeking sponsorship for the new idea via coalition building. Lastly, the individual brings about idea implementation – for instance, through the generation of a prototype/model of the innovation or laying down the steps for the implementation of the idea (Jong & Hartog, 2008).

From the innovative work behavior forms discussed above, Scott and Bruce (1994) came up with the idea of general generation that covers producing ideas and recognizing problems. Based on creativity research studies (Basadur, 2004; Runco & Chand, 1994), these two behaviors are dependent on specific cognitive abilities. On a similar line of contention, the entrepreneurship literature views opportunities discovery as a behavior that precedes the generation of ideas, and this has been illustrated to possess specific determinants in terms of personality and environment (Krueger, 2000; Shane, 2003). In

the present study, the perspective that innovative work behavior entails, i.e., the complete behaviors that an individual display across innovation stages, is employed. Thus, this study deals with clarifying the dimensions of innovative work behavior, which includes three dimensions, namely idea generation, promotion and application.

2.2.3.1 Idea Generation

Coming up with ideas is crucial in innovation, and in this regard, the best source of new ideas is often found among individuals (Mumford, 2000). Idea generation arises when employees direct their behaviors towards the generation of concepts for the sole purpose of improvement. In the study conducted by Yeoh (2012), it is stated that the generation of ideas can be described as a dynamic process involving the creation, association, generation of representation / categories of opportunities, and dissemination of abstract, concrete or visual ideas.

Moreover, the process of innovative work behavior also involves generating ideas for new as well as revised services, products, processes or supporting technologies as contended by Amabile (1988), Kanter (1988), Maute and Locander (1994) and Van de Ven, (1988). Ideas basically emerge when information and existing concepts on the way a problem can be solved, or a performance can be improved, are combined and revised (De Jong, Den Hartog & Zoetermeer, 2003). In relation to this, the combination and reorganization of concepts take the skills needed in a creative realization (Mumford, Baughman & Palmon, 1997). The innovation process is initiated when a performance gap is highlighted – such gap stems from the divergence between the expected and

actual performance (Zaltman, Duncan & Holbek, 1973). Thus, new ideas can be copied and tweaked or they can be created to bring about significant changes. The idea generation concept seems akin to creativity concept as explained by Amabile (1996) and Rank et al. (2004). Nonetheless, in the literature concerning employee innovation, the generation of ideas is generally considered to cover ideas that are new but not original, and those that are new and original, while creativity is only confined to the latter. After the idea generation step, the process of innovation moves on to the promotion of the idea (Holman et al., 2012).

2.2.3.2 Promotion

Promotion is deemed to be an important innovative work behaviour aspect following the generation of ideas – with majority of ideas requiring acceptance. Despite the legitimacy of ideas and their seeming filling of a performance gap, majority of them are ambiguous in whether or not their benefits will exceed their development and implementation, and the resistance to the change (Kanter, 1988). An innovation often requires coalition building for its implementation and this entails obtaining power by marketing and selling an idea to potential allies. In majority of cases, the users of a proposed innovation, such as colleagues, leaders, customers, among others, may perceive uncertainty regarding the value of the innovation and as such, it needs to be sold to users first. The individual who is responsible to introduce innovations frequently takes such position by volunteering as he/she may feel personal commitment to a specific idea and has the ability to sell it to others (Kanter, 1988). According to Shane (1994), someone who takes on an informal role of pushing an innovative idea through roadblocks in the

organization is known as a champion while Kleysen and Street (2001) described a champion as someone who arises from the masses to attempt on realizing creative ideas and in boosting their acceptance. This may entail the ideas of the champion or other people's ideas. The role of a champion covers behaviors that are linked to determining support and developing coalitions, like persuasion and influence over other employees or management – it may also involve urging and negotiation (King & Anderson, 2002; Van de Ven, 1986).

In several cases, innovation ideas stem from people who are committed and those who are convinced that their ideas are acceptable in the eyes of others rather than from people who are appointed by the entrepreneur (De Jong, Den Hartog & Zoetermeer, 2003). The former group of people are often referred to as idea champions – those who exert effort in developing a creative idea (Kleysen & Street, 2001), or those having no formal position but are able to propose a workable idea by overcoming the barriers in the organization (Shane, 1994).

Despite the fact that in majority of successful manufacturing organizations, idea champions are often used and kept, the scenario differs in the service organizations (Martin & Horne, 1993). This study defines promotion as a socio-political behavior (involving activities) that mobilizes resources, persuades and influences, urges and negotiates, challenges and accepts risks – behavior that is required to bring about possible ideas, solutions and innovations.

2.2.3.3 Application

The last dimension is the implementation of the idea for practical purposes. Implementation refers to the enhancement of existing products/procedures, or the development of new ones. For this to happen, employees have to exert effort and possess a results-oriented outlook (De Jong & Hartog, 2008). In essence, the behavior of application is linked to the individual's efforts in developing an idea chosen to implement practically (Kleysen & Street, 2001), and to specific behaviors oriented towards new product/process development, testing and alteration (Kanter, 1988; Van de Ven, 1986; West & Farr, 1990).

2.2.4 Measurement of Innovative Work Behavior

In the current times, it is important for firms to be capable of ongoing renewal and development of services and work methods, and for this, the employees have to be ready and skilled to come up with innovations if need be (Janssen, 2000). However, in the literature concerning innovation, the notion in the academic literature is that employees' activities are significant for ongoing innovation and development (Janssen, 2000), although other management principles, like total quality management (McLoughlin & Harris, 1997), and corporate entrepreneurship (Sharma & Chrisman, 1999) have also acknowledged it.

With regard to personal innovation, it has been examined in light of outputs, characteristics of personality and behaviors, among others – more specifically, West's (1987) notion of role innovation encapsulates the several changes that an individual has

adopted in his work compared to the last role occupant. In this regard, Hurt, Joseph and Cook (1977) stressed on the basic inclination to change, as a personality-based aspect of personal innovation. Along a similar line of contention, Axtell et al. (2000) assessed the individual's self-ratings of their achieved innovations through an output-based individual innovation view. Meanwhile, Scott and Bruce (1994) defined individual innovation as a part of discretionary employee behaviors.

The archetype of innovative work behavior encapsulates the investigation of alternatives and the production of novel thoughts in what is commonly known as creativity related behavior. However, it may also cover behaviors that are geared towards applying change, implementing new knowledge, or enhancing procedures to enhance the performance of individuals or firms (implementation-oriented behavior) (Mumford, 2003; Zhou & Shalley, 2003). Majority of past studies concentrated on creativity displayed by the employees and the production of novel ideas in the first phases of innovation process (de Jong, & Hartog, 2008). On the other hand, in the present study, the generation, promotion and implementation of ideas as innovative work behavior is dealt with as one construct.

Academics have often called for the extension of the innovative work behavior and its scientific view in thoughts application (Mumford, 2003; Zhou & Shalley, 2003). Similarly, innovative work behavior is primarily viewed to cover extensive behavioral groups related to the production of ideas, creation of their support, and assistance towards their application (Janssen, 2000; Scott & Bruce, 1998). However, the existing innovative work behavior measures are often short and empirical findings on their

validity are limited. Other researchers have evidently depended on one source data, whereby personal employees provide their innovative work behavior ratings and relationships. For instance, in De Jong and Hartog's study (2008), the researcher's objective has been to add to the existing body of knowledge on individual innovation by validating a measure of innovative work behavior. Thus, there are many types of measurements used by researchers in the past years; some of them used one dimension while others were multidimensional in their approach. Innovative work behavior measurements are presented in the following table (2.1).

Table 2.1

Innovative work behavior measures

Study	Items And Dimensions	Samples/ and Ratings	Reliability And Validity
IWB (one-dimensional):			
Scott and Bruce (1994)	6 Items	Managers Of Engineers, Scientists And Technicians In An R&D Department; Other-Ratings, Single Source	172 A = 0.89; Significant Correlation With Objective Measure Of Filed Invention Disclosures (R = 0.33)
Bunce and West (1995)	5 Items	Sample 1 435 Employees From A National Health Service; Self-Ratings, Single Source sample 2281 Employees From A Nationalhealth Service; Self-Ratings	Sample 1 = 0.75; No Validity Reported Sample 2 = 0.80; No Validity Reported

Table 2.1(Continued)

Spreitzer (1995)	4 Items	Subordinates Of 393 Managers Of An Industrial Company; Other Ratings, Multiple Source	A = 0.91; No Validity Reported
Basu and Green (1997)	4 Items	Supervisors Of 225 Employees Of A Printing Manufacturer; Other Ratings, Single Source	A = 0.93; No Validity Reported
Janssen (2000)	9 Items	Self-Ratings Of 170 Employees Of A Food Manufacturer, And 110 Supervisor (Other) Ratings Of Innovative Behavior, Multiple Source	A = 0.95 (Self-Ratings) And 0.96 (Supervisor Ratings); Significant Correlation Between Both Scales (R = 0.35)
Kleysen and Street (2001)	14 Items	225 Employees From Different Organizations; Self-Rating, Single Source	A = 0.97; No Support Of Validity (Inadequate Fit Of Structural Equation Model)
Agarwal et al. (2011)	9 Items	979 Indian Managerial Employees Working In Six Service Sector Organizations	A = 0.92. Measures Used A Response Scale Ranging
Sagnak (2012)	6 Items	710 Teachers In School, Single Source	A= 0.87
Leonga and Raslib (2014)	17 Items	395 Male And Female Administrative Employees	A= 0.77
Odoardi (2014)	9 Items	395 Males And Female Administrative Employees	Measure Three Highly Correlated Variables (A/0.93
Sethibe et al. (2016)	8 Items	A Sample Of 3 180 Respondents From 52 South African Companies Leaders	A= 0.85.

Table 2.1(Continued)

Javed, et al. (2016)	9 Items	257 Employees Working In Various Hotels Across Pakistan	A=0.95.
Afsar, et al.(2017)	10 Items	441 Nurses And 73 Doctors	A Reliability Of 0.84.
IWB(multi-dimensional):			
Krause (2004)	8 Items Related To Two Dimensions (5 Items On Creativity, And 3 On Implementation)	399 Middle Managers From Different Organizations; German Self-Ratings, Single Source	A-Values Of 0.78 And 0.81 Are Reported; Exploratory Factor Analysis Shows The Two Factors Are Factorially Distinct.
Dorenbosch et al. (2005)	16 Items Related To Two Dimensions (10 Items On Creativity And 6 Items On Implementation)	132 Non-Managerial Employees In A Dutch Local Government Organization; Self-Ratings, Single Source	A-Values Of 0.90 And 0.88 Are Reported; The Additive Scale Of Both Dimensions Had A = 0.92; No Validity Reported
Afsar, et al. (2014)	10 Items Idea Generation And Idea Implementation	639 Followers	A=Values Of 0.78 And 0.81 Are Reported
Spanuth (2017)	&Wald 22 Items With Four Dimensions	583 Professionals,	Problem Recognition Cr = 0.751, Idea Generation Cr = 0.902, Idea Championing Cr = 0.938 And Idea Realization Cr = 0.912;

In the present study, the measurement of innovative work behavior proposed by Janssen (2000) is adopted with nine items and one dimension, where the reliability was found to be 0.95. He devised items specifically tapping idea generation, promotion and

implementation, but a strong correlation was noticed by him, so, his conclusion was that the items devised by him could best be combined and used as a single scale. In addition, in the past studies the researcher found some of the studies used the same measurement, for example, Reuvers et al. (2008), Agarwal (2014), and Ghani, Raja, and Jusoff, (2009). The choice of measurement selected for the present study is appropriate for the study sample and explains the full concept of innovative work behaviour.

2.2.5 Previous Studies

During three decades, the innovative work behavior has been studied by many researchers in different sectors and countries. To begin with, the study conducted by Karin, Matthijs, Nicole, Sandra and Claudia (2010) examined the relationship between leader member exchange, satisfaction and human resource management practices, and innovative work behavior. They obtained data from Dutch and German technical firms by using a sample involving 272 employees and they found positive relationship between leader member exchange and satisfaction with innovative work behavior, but the reward is negatively related to innovative behavior. In another study, Imran, Saeed, Haque and Fatima (2010) studied the predicting role of organizational climate and innovative work behavior by using a sample comprising 320 managers employed by the Fast Moving Consumer Goods (FMCG) firms around Pakistan. Their results show a significant and positive impact of good organizational climate on innovative work behavior.

Another related study is by Imran and Haque (2011) that viewed organizational climate as a mediator between the transformational leadership-innovation work behavior

relationships. Their study involved a sample of 320 managers working in the Fast Moving Consumer Goods firms in Pakistan. The results showed that organizational climate functions as a full mediator in the transformational leadership-innovative work behavior relationship. On similar lines, a study by Lu, Zhou and Leung (2011) investigated the task conflict-innovative work behavior relationship among 166 supervisors in the Chinese context. Their results hint at a positive link between task conflict and innovative work behavior.

Moreover, Dincer and Orhan (2012) tested the relationship between emotional intelligence and innovative work behavior, through the application of questionnaire among 332 employees in the banking sector in Turkey. They found significant and positive relationship between the two factors. Meanwhile, Marane (2012) considered trust as mediating the relationship between psychological empowerment and innovative behavior in his study involving 245 managers in the manufacturing sector in Iraq. His findings showed partial mediating impact trust can have in the mentioned relationship, and psychological empowerment enhances innovative behavior directly.

Added to the above studies, Kheng, June and Mahmud (2013) conducted an experimental study to define the relationship between pro-innovation climate, leader-member exchange (LMX), and social capital with innovative work behavior. They applied their experiment on the knowledge-centered business services in the context of Malaysia through a quantitative study involving 1520 respondents to questionnaires. They found a significant relationship between pro-innovative climate, social capital and leader-member exchange, with innovative work behavior of the said workers.

More recently, Niu (2014) examined the moderating effect of job satisfaction on the personality-employee innovative behavior relationship in the service sector, with a sample totaling 626 employees working in five service industry types in Taiwan. The study revealed a positive and significant effect of job satisfaction on employee innovative behavior, and job satisfaction moderating impact on the impact of personality traits on innovative behavior. Also, Agarwal (2014) studied the impact of social exchange relationships on innovative work behavior using a quantitative method involving 510 managers working in two West Indian service firms. The study findings showed that social exchange relationships positively affected innovative work behavior at the organizational level.

In addition to the above studies, De Spiegelaere et al. (2012) conducted an experimental study to define the relationship between job demands-resources with innovative work behavior. They applied their experiment on the 17 different companies from various sectors of the Flemish region in Belgium, through a survey completed by 952 employees. They found a significant relationship between job resources (autonomy, organizing tasks & learning opportunities) and innovative work behavior of the said employees. However, the results between routine tasks and innovative work behavior were found to be significantly negative, and on the other hand, the Job challenges seem to relate positively to innovative work behavior and a significant relation between job content insecurity and innovative work behaviour was not found.

Also, Khan et al. (2012) studied the role of transformational, transactional, and laissez-faire leadership styles in predicting innovative work behavior among managers of bank at Islamabad and Rawalpindi in Pakistan, using a quantitative method involving 100 bank managers. Their conclusion is that transformational leadership style predicts a positive innovative work behavior, while transactional and laissez-faire leadership style negatively predicted it.

In short, various factors have been tested in the past to predict innovative work behavior. Some factors, such as leader member exchange, transformational leadership style, job resources, social capital, task conflict and social exchange, etc., were found to be positively related to innovative work behavior. While factors like rewards, job insecurity, routine tasks, transactional leadership style and laissez-faire leadership, etc., were negatively related to innovative work behavior. These mixed findings on innovative work behavior have provided justification for future researchers.

In addition, in the present study, variables different from prior studies are adopted to determine its relationship with innovative work behavior, and they are; extrinsic motivation, psychological empowerment, transformational leadership, with quality culture as a moderating variable. In this regard, majority of the studies reviewed in the review of literature concentrated on the direct relationship, but the present study used quality culture as moderator. In addition, previous studies deal with organizational level but in this study, the focus is on individual level where the sample comprises of academic staff in higher education in the context of Iraq for the first time. Added to this, the Partial Least Squares (PLS) technique is adopted in the current study for analyzing

the gathered data. These obvious differences between previous studies and the current study on innovative work behavior have provided an avenue for future researchers to further examine other potential factors in other contexts of studies to capture a more comprehensive understanding.

2.3 Extrinsic Motivation- Concept

In most countries, performance-based incentives are basically used in the public sector as mandated by the remuneration laws established for organizations (Demir, 2011). Such incentives are provided externally to the employees regardless of their work type (Cho & Perry, 2012) and despite their effect (less than intrinsic motivation) as explained by Deci and Ryan (2004), they have the potential to positively affect behavior of employees. Additionally, its direct influence on motivation interacts with that of intrinsic motivation (Calder & Staw, 1975). As laboratory research has shown and modern theories have confirmed it, increase in extrinsic motivation may result in a positive influence on employee's attitudes and behaviors (Cho & Perry, 2012).

In the study conducted by Battistell and Nonino (2010), economic extrinsic motivation is related to all the activities in that they result in the economic benefits of the employer. Such extrinsic motivations comprise of financial rewards (Antikainen, Makipaa & Ahonen, 2010; Wasko & Faraj, 2000), free goods as well as free services (Anderson, 2009). Economic motivations are of different types, such as sharing intellectual property rights and providing privileges (Anderson, 2009; Avenali, Battistella, Matteucci & Nonino, 2013; Tapscott & Williams, 2006). Similarly, Jeppesen and Frederiksen (2006) explained that individual's extrinsic motivation comprises the entire activities leading to

advantages to the provider, like his reputation. This also includes company recognition (Bagozzi & Dholakia, 2002), professional status development (Wasko & Faraj, 2000), career benefits (Lerner & Tirole, 2002), as well as reciprocity (Raymond, 1999).

Despite the importance of intrinsic motivation as a motivation type, majority of the individual's actions are not stimulated intrinsically (Deci & Ryan, 2000). It is evident that most actions in workplaces are not so and the use of policies contributing to the improvement of such motivation is not practical (Gagne & Deci, 2005). On the other hand, extrinsic motivation requires an instrumentality between the action and distinct rewards that lead to physical or verbal rewards (Deci, Vallerand, Pelletier & Ryan, 1991; Ryan & Connell, 1989) as the behavior is not adopted for its sake but in return for compensation, or to avoid any kind of penalties if the work is completed (Pelletier, Tuson & Haddad, 1997).

This study assumes that extrinsic motivation does not minimize intrinsic motivation and may even work towards the latter's enhancement, indicating that extrinsic motivation is basically manipulated (Demir, 2011). On the basis of prior studies' findings, a more honed extrinsic motivation analysis exists (Pelletier et al., 1997; Vansteenkiste, Lens & Deci, 2006). In relation to this, the SDT theory was proposed by Deci and Ryan (2000) to extend prior extrinsic motivation methods and determine appropriate determinants of regulation of behaviors when it comes to internalization and integration. In particular, there are different extrinsic motivation types that are different in terms of their level of autonomy that hinges on the level to which individuals achieve internalization of the external behavior regulation (Vansteenkiste et al., 2006).

Nevertheless, the reward system of the organization is one of its ways to encourage certain characteristics of employees. The key aspects of the reward system are the salaries, bonuses and privileges. The system is meant to support employees' innovation and as such, it is a fairly mechanical but nevertheless effective management technique. After understanding the rewards provided, it is expected that members are more interested to work in a creative manner. Although the plan of providing financial and non-financial rewards to employees that contribute innovation and innovative ideas is pertinent to organizations, it is equally critical to steer clear of negatively viewing creativity when it does not pan out to a new innovation (Milka et al., 2015).

The importance of reward systems lies in their preference to service over self-interest, indicating the need to practice equitable wealth distribution. Among the tests of equity is the effective way of checking the fact that successful institutions follow equity of employees in all levels. In other words, the wealth and value of an institution are generally created by the community (Block, 2005), with money being the most evident extrinsic motivation. It has a role as significant motivating power as it reflects innumerable intangible goals, and it plays the role of a symbol in various ways for different individuals and for the same individuals at different periods. Additionally, it can also boost motivation in the right situation, because of people's need and want of it and because it serves as a highly tangible way of recognizing people. Money can therefore be deemed as a scorecard upon which employees can carry an evaluation of their innovation's value in the eyes of the organization (Milka et al., 2015).

Finally, majority of scholars are in consensus that motivation is the core engine behind creativity, innovative processes and outcomes, and majority of empirical studies have stressed on the extrinsic motivation's impact on the creativity of individuals (e.g., Amabile, 1996; Hammond et al., 2011). On the basis of the literature reviewed, work motivation elements are related with the generation of innovation (Rezaie, 2014). This is supported by Yidong and Xinxin (2013) who stated that extrinsic motivation can improve innovation work behavior through the provision of additional efforts to employees in order to discover innovative solutions to problems in the workplace.

2.3.1 Definition of Extrinsic Motivation

Several definitions have been proposed for extrinsic motivation in literature. According to Constanta and Madela (2011), Ryan and Deci (2000), and Yousaf, Yang and Sanders (2015), extrinsic motivation refers to the completion of work to get some distinct outcome. Also, several authors (e.g. Deci & Ryan, 1985; Guay, Vallerand & Blanchard, 2000) stated that extrinsic motivation is related to various behaviors where the main aim is to cover further than those innate actions themselves. Contrary to intrinsic motivation, extrinsic motivation is related to different behaviors that are deemed to be a means to an end and not for the sake of the work itself (Deci, 1975; Pelletier et al., 1995).

According to Pavlas (2010), extrinsic motivations are developed via external factor rewards or incentives, while Demir (2011) highlights their need for instrumentality between activity and distinct results, like material and moral awards, in which case, satisfaction does not stem from the activity itself but from the external outcome of the

activity. Moreover, Locke and Latham (2004), Milka, Michael and Tanui (2015), and Shih (2006) stated that extrinsic motivation refers to extrinsic elements that can incentivize an action.

Furthermore, Sansone and Harackiewicz (2000) expounded that the top outcome from externally managed extrinsic motivation are compensation / wages / charges, material belongings and positive appraisal from others (Marry, 2010; Tehseen & Hadi, 2015). Also, extrinsic motivation is described as the inclination to conduct activities to acknowledge external rewards in the form of money or psychological/mental rewards (Brown, 2007). Recently, Isa et al., (2016) state that extrinsic motivation is externally driven and the focus is on the outcome of the activity for the task-worker himself and the outcome could be a reward or the avoidance of punishment.

Based on the discussion of literature above, the present study adopts the following definition of extrinsic motivation: extrinsic motivation is external factors that encourage people to accomplish the work that needs to be an instrument between activity and desired results, such as financial and psychological rewards. The satisfaction does not stem from the activity itself but from the external outcome of the activity.

2.3.2 Extrinsic Motivation and Innovation Work Behavior

Existing literature on the issue advocates that personnel having intrinsic motivation can enhance innovative behavior but directors or executives continue to stress on the employment of extrinsic motivation through financial rewards or appreciation in order to promote workers' creativity and innovation (Frese, Teng & Wijnen, 1999; Van Dijk

& Van den Ende, 2002). Unfortunately, researchers lack consensus as to the potential direction of the impacts of extrinsic motivation on innovation behavior (Amabile, 1996). Consequently, a debate exists as to the provision of extrinsic motivation for creativity that would improve employees' innovative behavior (Eisenberger, 1992). Scholars hold the opinion that motivation factor works very strongly to motivate people to creativity and optimum results and majority of the empirical studies lay stress on the extrinsic motivation's positive influence on the creativity of an employee (e.g., Amabile, 1996; Hammond et al., 2011).

In relation to the firm's perspective of creativity and innovation, the former as reflected by employees should be recognized and rewarded as evidenced in past studies (Amabile, 1988; Amabile et al., 1996). In firms, the primary activities involving the management of creativity and innovation include managing the attention of employees (Van de Ven, 1986) in a way that they are acknowledge and rewarded for their creativity through pay increases, advancements or promotion. According to Scott and Bruce (1994), innovation behavior should be a salient aim for employees so that they will have a higher tendency towards innovation.

Previous research suggests that when individuals perceive that extrinsic motivation can be obtained through innovation, they become more creative, so they require accomplishing the task creatively and looking for new ways to implement it. Extrinsic motivation can also enhance innovative work behavior by increasing interest and internal motivation. Extrinsic motivation for higher performance increases recognition

of self-determination and competence, both of which increase the innovative work behavior (Eisenberger & Shanock, 2003).

Extrinsic motivation system is considered as an effective means to support academic staff's innovation within the university. Once the academic members of university understand that they will be rewarded for such activities, they are more likely to work for innovation. When the academic staff receives extrinsic motivation (rewards, high salary, bonus, and promotion) by the administration of the university, they will feel appreciated by the university and they feel proud in the work place. This feeling makes them motivated to exert more efforts in order to gain more money and recognition, and this is reflected on their behavior at the work and thus they present innovation works and find innovative ways to solve job problems (Milka et al., 2015).

However, it is important not to view rewards as a right or contract rather than a privilege on the basis of competence and creative employees' activities, as if viewed as a right, employees may lose interest in their work (Amabile et al., 1996; Amabile, Hennessey & Grossman, 1986). Generally speaking, rewards such as, raise, pay/promotions for innovation are promoted over those relating to continuous activities as the former can be considered as the acknowledgement of creative achievement as opposed to a mechanism used to control employees (George & Zhou, 2002).

2.3.3 Previous Studies

Majority of studies dedicated to examining the topic include extrinsic motivation as the independent, mediating and moderating variable, and they were carried out in different settings, after which the results of the studies varied. For instance, Amabile et al. (1986) investigated the relationship between reward on creativity of children and adults, sampling 80 students, and the results were found negative. Also, Joussemet and Koestner (1999) in their research tested the influence of reward on the creativity of children in Montreal with the sampling of 61 children. Results showed that rewards had no significant effects upon creativity. Around the same time, Cooper, Clasen, Jalonen and Butler's (1999) study was to examine the effects of intrinsic and extrinsic motivation upon creativity. The results showed that intrinsic motivation influenced creativity, while extrinsic rewards did not. The sampling was from among university students in the USA.

Janssen (2000) also found positive influence results between job design and innovative behavior moderated by rewards, among 170 employees from Dutch industrial organization. Likewise, Baer et al. (2003) in a study examined the potentials of existence of a linkage between extrinsic rewards and employee creativity behavior. Their conclusion is that there is a positive relationship between extrinsic rewards and employee creativity among 171 employees working in a US manufacturing company. Similarly, Zhou, Zhang and Sanchez (2011) aimed to empirically determine the human resource rewards management-innovative behaviors relationship between the utilitarian and romantic reward approaches, and workplace creativity. They concluded with three

major findings: first, extrinsic rewards impact the employees' innovative behavior in an inverse -U shape and second, intrinsic motivations significantly and positively affect personnel's innovative behavior. Finally, both motivations (intrinsic and extrinsic) positively impact individual creativity at work. The sample was from among 216 employees in Chinese enterprises.

Accordingly, Chang et al. (2011) tested the relationship between team cohesion and innovative work behavior moderated by effort-reward fairness. The instrument was used to examine the model as multiple hierarchical regression analysis; the sampling involved about 546 administrative staff of schools in Taiwan. The results displayed that team cohesion and reward with innovative work behavior had a significant positive impact. Lin and Wong's (2014) aim of study was to explore the effects of classroom learning environment (CLE) and motivation with creativity of hospitality students in Taiwan. The results of the study displayed that intrinsic motivation did enhance creativity, but extrinsic motivation did not influence creativity. Nezhad et al. (2015) aimed to examine the relationship between personality traits of employees, motivation with innovative behavior, among bank employees. The results were positive and significant.

In education sector, a study was conducted by Eisenberger, Armeli and Pretz (1998). The main objective of the study was to examine the rewards and creativity, and the sampling involved 216 students; the study results found a positive relationship. In the same context, Eisenberger & Rhoades (2001) found the same results, that is, a positive relationship was obtained by examining the reward with creativity relationship through a sample involving 336 employees in the higher education sector in the USA. Also,

Kurglanski et al. (1971) had the objective of their study examining the extrinsic reward with the creativity of a sample of students in the education sector, and the results were negative.

According to the findings of prior experimental studies, both positive effects (e.g. Eisenberger, Armeli & Pretz, 1998; Eisenberger & Rhoades, 2001; Janssen, 2000; Baer et al., 2003) and negative ones in the relationship between extrinsic motivation and innovation behavior (e.g. Amabile et al., 1986; Kurglanski et al., 1971; Joussemet & Koestner 1999; Lin and Wong, 2014) were reported. Some other studies showed extrinsic motivation to have effects but negligible ones, in the relationship between extrinsic motivation with creativity and innovation of individuals (Hennessey, 1989; Joussemet & Koestner, 1999). Owing to the contrasting findings, more research is called for to determine the impact of extrinsic motivation positively or negatively or have no effect at all on creativity and innovation of employees (Eisenberger & Cameron, 1996). The results of the present study can assist in understanding where the differences in the prior findings stem from, and this study is expected to provide to the executives with an effective strategy to make optimum use of extrinsic motivation in terms of bringing about innovative behavior. While studies of this caliber have been conducted, the present study focuses primarily on filling the gap in literature.

As regards the present study, extrinsic motivation is considered to be the independent variable with innovative work behavior. Majority of the studies in literature review have been carried out in the Western settings (Eisenberger & Rhoades, 2001; Janssen, 2000; Baer et al., 2003; Joussemet & Koestner 1999; and Lin & Wong, 2014), with only

a few in the context of the Middle East, particularly Iraq. Studies were also conducted in different sectors including banking (Nezhad et al., 2015) service sectors (Janssen, 2000), education (Amabile et al., 1986) with the HE sector largely ignored (Cooper et al., 1999). The sample of prior studies comprised of employees, managers, workers and students (Nezhad et al., 2015; Janssen, 2000; Amabile et al., 1986). On the other hand, in the present one, the researcher selects academic staff working in Iraqi universities.

Thus, there were only a limited number of studies that were helpful in developing an understanding of academicians in this area. Consequently, there was demonstrated a need for this study that focused on the extrinsic motivation as independent variable of academic staff within higher education organizations (Mahmud, 2013; Tehseen & Hadi 2015). Therefore, one of the objectives of this study is to investigate the relationship between extrinsic motivation and innovative work behavior.

2.4 Psychological Empowerment

Psychological empowerment concept is explained in detail in the next sub-sections.

2.4.1 Empowerment

There are different strategies and approaches employed by organizations to manage employees and their tasks at work (Arnold, Arad, Rhoades & Drasgow, 2000). Empowerment is a concept that has been in the limelight in the past few decades and it has been extensively described by businesses as an approach to keep abreast with the challenges and competition in the business environment, specifically in the service and industry sector (Bass & Avolio, 1994; Conger & Kanungo 1988; Dewettinck & Van

Ameijde, 2011). As a consequence, several firms in the current times success in the global business context through the empowerment of their workers (Bartunek & Spreitzer, 2006).

Moreover, empowerment has been frequently mentioned in several disciplines: management, practitioners and organizational sciences (Dewettinck & Van Ameijde, 2011; Perez, 2002; Spreitzer, 2008; Thomas & Velthouse, 1990). It has been largely getting attention from organizational disciplines (Conger & Kanungo, 1988; Spreitzer, 1995; Thomas & Velthouse, 1990). Added to this, majority of studies dedicated to leadership and management skills stressed on the empowerment of followers as a crucial management and organizational success element (Ozaralli, 2003).

However, according to Conger and Canungo (1988), empowerment is the delegation of authority, source sharing and enabling those workers to motivate via improved self-efficiency. In this regard, several definitions were provided about empowerment by various researchers but the core concept obtained from them is that empowerment enhances motivation of the worker in the workplace via delegation of decision-making, power and autonomy to provide significant freedom for the carrying out of tasks (Hancer & George, 2003; Thomas & Velthouse, 1990).

Similarly, empowerment has also been defined as a set of cognitions too and it must be assessed through perceptions (Spreitzer, 1996). Another definition comes from Conger and Canungo (1988) who described empowerment as a process of improving perceptions of self-efficacy via recognizing the conditions that boost power through

formal/informal activities and approaches in the organization. It is therefore crucial at all levels (individual, team and organization) (Siegall & Gardner, 2000).

Furthermore, organizational science researchers made a distinction between two basic empowerment viewpoints – the structural/rational perspective and the psychological perspective. The former vision is primarily focused on empowerment management practices that entail decision-making delegation from top to lower levels of employees. The premise of the view (structural view) lies in the fact that employees are more inclined to work when empowered and when they are made a part of the decision making process (Conger & Kanungo, 1988; Dewettinck & Van Ameijde, 2011). This particular view of empowerment advocates that a firm can ensure that employees can access information concerning the performance of the organization and that they have the knowledge and skills to fulfill the objectives of the organization and the authorities to make decisions, after which they receive rewards in accordance with their positive performance (Chen & Chen, 2008). Moreover, the structural empowerment approach is based on the view of management and its practices (Dewettinck & Van Ameijde, 2011).

On the other hand, psychological approach of empowerment concentrates on individual cognition and awareness that leads to behavioral and psychological instances in the workplace (Conger & Kanungo, 1988; Spreitzer, 1995, 1996; Zimmerman, 1990). Viewed from this viewpoint, Conger and Kanungo (1988) stated that empowerment refers to enhancement of task motivation as reflected in how the employees develop a sense of meaning, competence, self-determination and impact (Spreitzer, 1995).

Therefore, in such a case, empowerment has its roots in the individual's point of view, and this is the most current notion in research and organizations in the hopes of adapting global competition and change. This calls for employees to display greater performance levels, initiative and innovation (Drucker, 1988; Osborne, 2002). For this reason, researchers dedicated to empowerment have shifted their focus to the individual level from the organizational level (Khany & Tazik, 2015). In other words, such perspective focuses on the individual empowerment experience (Spreitzer, et al., 1997).

2.4.2 Psychological Empowerment – Concept

Psychological empowerment refers to a group of psychological conditions required for workers to perceive a sense of control over the task at hand. As opposed laying stress on managerial practices of power sharing with employees at all hierarchical levels, this viewpoint focuses on the way employees carry out their work. It refers to empowerment as the workers' perspectives concerning their role relative to the organization (Spreitzer, 2008).

In this regard, Spreitzer (1995) described psychological empowerment as a psychological perception advocating the match between employee's job and his values, it is the notion that employee possesses enough knowledge and skills to do his job effectively in a way that makes a positive difference in the organization. Spreitzer (1995) also conducted an empirical test to create a psychological empowerment construct, and defined it in a more expansive manner reflected in four cognitions,

namely meaning, competence, self-determination and impact. These four cognitions are a reflection of the individual's work orientation.

Furthermore, psychological empowerment can be understood through the above four dimensions to determine a sufficient set of cognitions (Spreitzer, 1995; Thomas & Velthouse, 1990). The integration of the four dimensions into one construct to offer a deeper understanding and insight into the construct could engender a complete understanding of the psychological empowerment concept (Koberg, Boss, Senjem & Goodman, 1999; Spreitzer, 1995). This could also lead to the generation of a dynamic empowerment aspect (Spreitzer, De Janasz & Quinn, 1999), where the lack of a single dimension would decrease the overall level of the the empowerment experience (Spreitzer, 1995; Thomas & Velthouse, 1990). Added to this, psychological empowerment motivates intrinsically and enhances employee innovation and it can be brought about by providing effective structural empowerment programs (Masood & Afsar, 2017). The next sub-sections explain the dimensions in detail.

2.4.2.1 Meaning

Meaning is described as the value of the aim behind work/goal in relation to the individual's standards (Spreitzer, 1995; Thomas & Velthouse, 1990). It indicates the matching between the work roles and beliefs, values and behavioral needs in the eyes of the individual (Hackman & Oldham, 1980; Thomas & Velthouse, 1990) and is a reflection of the perception of the employee towards his work and abilities (Corsun & Enz, 1999). In case work activity does not match the value systems of employees,

empowerment is not felt (Thomas & Velthouse, 1990). Greater degrees of meaning are linked to job commitment and involvement in greater levels (Spreitzer, 1995).

Added to the above, the dimension of meaning covers the employee's attention to his work and it entails diversity that improves the impacts of psychological empowerment (Thomas & Velthouse, 1990). According to Conger and Kanungo (1988), the significance of meaning in work lies in the context where individuals perceive that they hold enough power to handle their co-workers and situations – contrasting to this situation, frustration has the potential to occur. Empowerment in this sense covers a just system of rewards and recognition that encourages meaning via goal achievement (Herrenkohl, Judson & Heffner, 1999).

2.4.2.2 Competence

Competence refers to the level the individual is capable of achieving job activities when effort is expended towards it (Thomas & Velthouse, 1990). It is the reflection of the individuals' perception of what they possess in order to complete the job (Thomas & Velthouse, 1990). In cases where individuals lack the sense of confidence in their abilities and they feel inadequate, this could result in the absence of psychological empowerment (Conger & Kanungo, 1988). Competence also suggests the individual's perception of his ability to skillfully perform his job (Bandura, 1977; Corsun & Enz, 1999), and it has been linked by Corsun and Enz (1999), Spreitzer (1995), Spreitzer et al. (1997), and Thomas and Velthouse (1990) to self-efficacy.

In a related study, based on the findings of Conger and Kanungo (1988), clear borders of decision power are positively related to the competence level that is felt by the individual. Added to this, Spreitzer (1995) showed that self-esteem is related to competence in a positive way and that through self-esteem, employees are able to view themselves as primary organizational resources whose talents contribute value to the organization. Meanwhile, Thomas and Velthouse (1990) stated that performance feedback is fundamental to producing and supporting competence and behavior that are both depicted as a crucial aspect of the organization. Hence, it can be contended that the role of competence is very significant in the process of empowerment, and as such, employees should extend their ability in the aims of developing themselves and their competencies as advocated by Quinn and Spreitzer (1997).

2.4.2.3 Self-determination

Self-determination is defined as the perception of workers on how to complete their tasks in terms of selection /autonomy in the initiatives, actions or task behaviors as well as methods (Spreitzer, 1995). High self-determined employees hold the power as to their performance, the effort they have to exert, and their initiation and completion of work (Spector, 1986). Employees, who believe that they are just following orders from management /supervisors, perceive less freedom, and they require empowerment (Spreitzer et al., 1999) and in regard to this, self-determination is related to autonomy as posited by the Job Characteristic Theory proposed by Thomas and Velthouse (1990).

In addition, individuals who are highly determined when it comes to their jobs have a tendency to have greater degrees of satisfaction in their jobs (Conger & Kanungo, 1998; Thomas & Velthouse, 1990). Empowered employees are those who perceive their autonomous power is separated from the commands of top management in terms of how they decide when and how to do their work and how much effort to exert to do so (Spreitzer, 1995).

2.4.2.4 Impact

Impact is described by Spreitzer (1995) and Thomas and Velthouse (1990) where the employees influence level of the results through their workplace. In other words, it is the reflection of whether or not an employee feels that his performance is making a positive difference in the organization (Spreitzer et al., 1999). Employees may not be empowered if they do not feel that they are progressing towards goals in that they should believe that their work is making a positive difference in the strategic, administrative and operative results (Spreitzer, 1995; Spreitzer et al., 1997). Added to this, impact is a reflection of the importance of self-influence and ability of individuals, after being convinced of their influence on the results of the organization (Corsun & Enz, 1999; Kirkman, Tesluk & Rosen, 2004).

It may thus be concluded that employees are empowered when they feel what they are doing is valuable, and that they have sufficient capabilities and skills to complete their jobs in a successful manner, and are equipped with the autonomy to decide on issues that crop up in the workplace. They also have to feel that they have sufficient and

appropriate information, knowledge and ability to influence the outcome of their work (Carless, 2004). The present research trend lies in the psychological empowerment and its linkage to related innovative work behaviors.

2.4.3 Psychological Empowerment and Innovation Work Behavior

The pioneer in this field, Spreitzer (1995), referred to psychological empowerment as an element of motivation that arises in four cognitions (meaning, competence, self-determination and impact), with the dimensions taking up active work role orientations. Additionally, the meaning cognition from psychological empowerment is evident when the mission and goals of the organization match its value system, and when employees perceive that their work is important and that they are focused on their work as they care about the outcome (Thomas & Velthouse, 1990; Spreitzer, 1995). Also, when an individual perseveres in playing a role and expending efforts on knowing the issue from different sides, and searching for solutions through diverse alternatives by linking information sources (Gilson & Shalley, 2004; Zhang & Bartol, 2010), this may be linked to the production of novel ideas and in turn, with innovative work behavior.

Also, the competence cognition stemming from psychological empowerment is a reflection of the self-efficacy related to work; for instance, the employees' capability to achieve job actions with the required knowledge and skills (Spreitzer, 1995). To this end, the greater the degree of job-related competence, the more the roles are extended, and this leads to the production of novel ideas and innovation, and learning concerning the present methods that could enhance jobs and roles (Morgeson, Klinger &

Hemingway, 2005). Enhanced work towards innovation requires complex mental processes and capabilities, as they are challenging to face environmental changes and thus leave the employee to various open ideas that could antecede of innovation. Hence, competence is related to improved innovation work behavior.

Moreover, self-determination cognition materializes in decision-making, specifically one that relates to aspects of procedure, time and effort, and work methods (Spreitzer, 1995). Hence, a leader who empowers his followers has to be able to provide them with autonomy and control along with positive and effective feedback, to establish significant goals, and to bring about the development of individual's skills to motivate feelings of self-determination and creativity. This in turn maximizes the attention levels in work tasks and improves innovative work behavior (Conger & Kanungo, 1988; Oldham & Cummings, 1996).

Finally, the impact cognition is the level to which an employee is convinced that he influences the strategic output, management and workplace operation (Spreitzer, 1995). In instances where staffs feel that they can influence the organizational procedures, they are more inclined to expend effort in the generation, promotion and realization of innovative ideas for innovation than otherwise (Janssen, 2005). Specifically, this sense of having control over the organizational results in terms of their outcomes distinguishes between the effect, and other aspects of empowerment in literature, like competence and self-determination (Spreitzer, 1995). On the whole, prior to contributing to the innovative and creative action freely, personnel may need a sense of authority over their

works and work situations. Therefore, many of previous studies related to the topic are discussion below:

2.4.4 Previous Studies

The reviewed literature shows that several studies based on different organizations and contexts have been carried out to examine the effects of psychological empowerment on innovative work behavior. For instance, Jung et al. (2003) conducted a study to examine the relationship between transformational leadership and innovation by the empowerment factor. To collect data from Taiwanese manufacturing sector, the sampling involved 500 employees, and the results were found to be negative between empowerment and innovation relationship. In addition, Pieterse, Knippenberg, Schippers and Stam (2010) conducted a study using 230 employees in the Netherlands in public sector to test the relationship between transformational leadership and innovative work behavior moderated by psychological empowerment. The results were found to be positive when psychological empowerment is high.

On a similar line of study, Zhang and Bartol (2010) used analysis data from specialized staffs and their supervisors in a well-known Chinese technology firm with an attempt to investigate the relationship between leadership, psychological empowerment, intrinsic motivation and creativity. The findings highlighted that part of the psychological empowerment influence upon creativity originates from the effect on creative process engagement (directly) and through intrinsic motivation (indirectly).

In relation to the above studies, Erturk (2012) concentrated on the psychological empowerment-innovation capability relationship via the moderating impact of trust on supervisor. The study sample comprised 536 employees working in Turkish manufacturing firms. The study found three out of four dimensions of psychological empowerment namely meaning, competence and impact to have a significant and positive relationship with innovation capability. The study also revealed that trust in supervisor has a moderating effect on the meaning and impact-innovation capability relationship. Around the same time, Marane (2012) conducted a study to evaluate the mediating role of trust on psychological empowerment - innovative behavior relationship. The sampling involved 245 managers in manufacturing sector in Iraq. The results confirmed that psychological empowerment enhances innovative behavior directly and indirectly by creating trust between them.

Similarly, Singh and Sarkar (2012) focused on the relationship between psychological empowerment and innovative behavior as mediated by job involvement. The sample comprised of 401 female Indian school teachers. According to the results, there is a direct effect on innovative behavior and indirect effect through job involvement. Also, job self-determination directly impacts the innovative behavior of employees but not via job involvement. Both competence and impact were found to have no impact (direct or indirect) on innovative behavior.

Around the same time, Fernandez and Moidogaziev (2012) studied the construct and used employee empowerment to encourage innovative behavior in the public sector in the US federal government employees. The empirical results showed that employee

empowerment as an overall approach can increase encouragement to innovate. Along the same line of study, Schermuly, Meyer and Dammer (2013) examined the relationship between leadership and innovative work behavior, as mediated by psychological empowerment with the use of a questionnaire survey. The survey was distributed to 225 employees in German organizations. The researchers found that the LMX fully mediated innovation behavior through psychological empowerment.

Also, Cekmecelioglu and Ozbag (2014) defined the impacts of four dimensions of psychological empowerment, which are meaning, competence, self-determination, and impact with their effect on individual creativity, as well as relationship with firm innovativeness. 181 managers at 48 small and medium-sized Turkish manufacturing companies were used as subjects for data collection. They found psychological empowerment to significantly impact individual creativity, and it may lead to increased firm innovativeness. Just recently, Rahman et al. (2014) tested the relationship between psychological empowerment and innovative work behavior in Malaysian higher education sector. The data were gathered from 393 lecturers employed by five research universities, with emphasis on their R&D. The structural model showed that psychological empowerment is significantly related to lecturers' innovative work behavior.

At around the same time, Afsar, Badir and Saeed (2014) also tested the psychological empowerment as mediating factor between transformational leadership and innovative work behavior in Chinese companies. The sampling involved a total of 639 followers and 87 leaders in the Chinese industry companies. The results found a positive

relationship. Luoh, Tsaur, and Tang (2014) tested empowering of employees, job standardization and innovative behavior in Taiwan service sector among 580 employees, and the finding was Significant. In addition, Tsai, Chen and Shen (2015) tested the LMX, psychological empowerment and innovative behavior moderated by extrinsic, intrinsic motivation in Taiwanese companies' context. The data were collected from 359 employees and it was found that the results were positive when the extrinsic, intrinsic motivations were high.

According to the findings of prior experimental studies between psychological empowerment and innovative work behavior, both positive effects (e.g. Afsar et al., 2014; Tsai et al., 2015; Rahman et al., 2014) and negative ones were found in the relationship between psychological empowerment and innovation behavior (e.g. Jung et al., 2003; Singh & Sarkar, 2012). Some other studies showed psychological empowerment to have partial mediating effects on the relationship between the variables and innovation work behavior (Zhang & Bartol, 2010). Owing to the contrasting findings, more research is called for to determine the impact of psychological empowerment on innovative work behavior (Cekmecelioglu & Ozbag, 2014; Rahman et al., 2014).

In the present study, the researcher examines different variables and their relationship to innovative work behavior. The majority of the prior researchers focused on specific variables relationship with innovative work behavior, and the majority of them were carried out in different sectors in the Western nations, and some of them in Pakistan (Cekmecelioglu & Ozbag, 2014; Jung et al., 2003; Masood & Afsar, 2017; Zhang &

Bartol, 2010), with the Middle East largely ignored (Marane, 2012), particularly the HE sector in Iraq. Also, prior studies' sampling was taken from employees, managers, nurses and supervisors (Afsar et al., 2014; Cekmecelioglu & Ozbag, 2014; Erturk, 2012; Masood & Afsar, 2017) but not from a public university's academic staff. In addition, prior studies focused on the organizational level (Cekmecelioglu & Ozbag, 2014; Marane, 2012) in their analysis as opposed to the individual level that is focused on in the present study. Finally, this study used quality culture as moderator between psychological empowerment and innovative work behavior to solve the contradictions in the results.

2.5 Transformational Leadership – Concept

The concept of leadership has garnered increasing attention from social sciences throughout the past decades, with a great portion of pioneering studies confined to military settings, whereas the current ones are confined to modern commercial firms because of their cultures (Khaola & Sephelane, 2013; Perez, 2002). In the current times, several firms are more aware of the numerous aspects that are linked to different styles of leadership, its qualities, applications as well as theories (Owusu, Kalipeni, Awortwi & Kiiru, 2015).

Leadership is defined as the organizational spirit that is linked to work and that is needed to tackle challenges that may crop up in the future (Chen et al., 2008; Robbins & Judge, 2007). Transformational leadership has been defined as a process that effectively encourages followers to develop and perform beyond organizational expectations (Bass, 1985). Also, Avolio and Bass, (2004) explain that transformational leadership is defined

as leadership that generates awareness and acceptance among subordinates, enables the followers to develop their potentials, encourages them to go beyond their needs to accomplish the organizational goals and motivates them through leader's behaviors.

Therefore, the stress of leadership has shifted to transformational leadership – a topic that has become crucial in leadership research and world leaders (Bass & Avolio, 1990; Bass, 1999). In regard to this, transformational leaders refer to those leaders that inspire their followers to go over their self-interests in a way that they have a significant influence on them (Robbins & Judge, 2011). In other words, transformational leaders influence their followers; improve their needs to bring about work tasks and to achieve high performance (Bass, 1985).

Transformational leaders also provide their followers with inspiration to look forward to a brighter future and to boost their loyalty and their efforts and innovation to achieve the organizational goals (Avolio, Zhu, Koh & Bhatia, 2004). They provide their followers with a higher potential to use their autonomy, responsibility, self-determination and to meet challenges head-on (Liden et al., 2000). Such leaders are capable of influencing their subordinates' attitudes, behaviors, beliefs and values to achieve organizational aims (Belhaj, 2012). They form a shared vision and provide a clear picture, as well as deal with complex problems – they also think logically, boost participation and incentives, relate to their followers and share information with them, allow trust via collaborative tasks, acknowledge efforts, bring about opportunities for ongoing learning and development, and they are good role models for their followers in terms of their behaviors and establishment of goals (Bass & Avolio, 2004; Kirkbride, 2006).

More importantly, transformational leaders influence their followers to exert effort to heighten their needs via their behavior and this primarily contributes to the leader's influence in promoting positive attitudes and behaviors (Bass & Avolio, 1994; Ruggieri, 2009). Hence, employees display better outcomes under the leadership of a transformational leader (Dvir, Eden, Avolio & Shamir, 2002). More specifically, organizational innovation depends largely on the personnel's innovative behavior (Afsar, 2016). In relation to this, transformational leadership is linked to the innovation application behavior of the followers as advocated by Michaelies, Stegmaier and Sontag (2010). Consistent with this fact that firms should invest in transformational leadership training, supervisors with such leadership orientation should be chosen before starting innovation (Michaelies et al., 2010).

According to Eisenbeib and Boerner (2010), transformational leadership leverages innovation and for the promotion of innovation work behavior, it is important for organizations to foster commitment and connection among members (Lee, Jung, Chang & Jung, 2006). Leaders should boost their followers to work towards the organizational vision in order to boost their innovation (Si, & Wei, 2012). Such transformational leadership enjoys the interactive vision and the ability to promote suitable work environment to improve the innovative work behavior (Vaccaro, Jansen, Bosch & Volberda, 2012). Major firms have to leverage their transformational leaders to compensate for their difficulty, and to promote management innovation (Vaccaro, Valle & Jimenez, 2010). There are four dimensions to transformational leadership, with each presented and discussed in the next sub-sections.

2.5.1 Idealized Influence

Idealized influence refers to the strength of the influence to assist in being a role model, by reflecting high performance and moral standards (Felfe, Tartler & Liepmann, 2004). With regard to transformational leaders, they impact the results in being role models for their followers when it comes to their personal needs, instilment of pride, trust and respect, and their ability to share vision and relay a sense of mission (Bass, 1985). This type of leaders is well-aware of their influence over others and what they should make them do. In doing so, followers are imbued with faith and self-confidence when it comes to decision-making processes, behavior and their risk-readiness (Felfe et al., 2004). The followers follow their leader's footsteps when it comes to behavior, values and vision – as a consequence, they respect and admire their leaders (Bass & Avolio, 2004; Felfe et al., 2004). Leaders demonstrating idealized influence establish vision and they are known to be the topmost level of transformational leadership as their follower's respect, confidence and have trust in them (Bass & Avolio, 1990; Kirkbride, 2006).

Additionally, transformational leaders are often deemed to be role models as they fulfill the highest criteria of ethical and moral behavior and caring for their followers (Bass & Avolio, 2004; Chan & Chan, 2005). It is therefore crucial for the firms for their leaders to be role models in order to boost organizational achievement (Bass & Avolio, 1994). Such leaders consider both organizational achievement and employees' achievement and they focus on improving the qualities of service provided to the customer (Chan & Chan, 2005). Leaders advocating idealized influence steer clear of making use of their power in order to gain personal benefits but rather work interactively and productively

with followers in relationships that promote mutual respect (Bass, 1985). In other words, esteemed, dear and confident leaders are usually followed and identified with by their followers.

2.5.2 Inspirational Motivation

Inspirational motivation is a method used by transformational leaders to develop and communicate ideas to subordinates that the latter would desire to meet, to be encouraged towards, to show evident expectations of obligations to, and to share future ideas with (Bass & Avolio, 1990, 1994). This vision is not solely based on material but is also based on meaning and it challenges to work towards and to determine higher order needs among subordinates (Felfe et al., 2004).

According to Chan and Chan (2005), inspirational motivation is the leader's capability of encouraging and inspiring workers through the development of self-confidence, and by boosting motivation and determination in the group. Leaders who inspire establish an emotive appeal to wake the awareness and understanding of their shared aims among subordinates (Bass, 1985). Also, leaders who use inspirational motivation imbue optimism and power on their followers and encourage them to be convinced that their efforts will be successfully realized in the future organizational growth (Bass, 1985; Felfe et al., 2004). In other words, inspirational motivation has a key role in developing an organization and as such, it is important for leaders to recognize the firm's objectives and provide continuous motivation to followers so that they may stay on realizing the potential of novel ideas (Bass & Avolio, 2004).

More specifically, an inspirational and motivational leader convinces others that such leadership style is appropriate to be employed in the organization and for the employees in the organization (Kirkbride, 2006). Such type of leader inspires their subordinates to go through the mission and to combine meaning with challenge for the purpose of achieving greater degrees of performance, and for the satisfaction of followers' needs (Bass & Avolio, 1994). It is effective in communicating with organizational members and with supporting them throughout the different levels. Inspirational leaders can direct their employees to go beyond their capabilities to benefit them, and boost employee's hard work in order to positively contribute towards organizational aims (Kirkbride, 2006).

2.5.3 Intellectual Stimulation

Intellectual stimulation is described as the manner adopted by the transformational leader to boost the thinking of his subordinates towards creative behaviors in solving problems and in using their thinking prior to taking actions (Bass, 1985). This behavior type covers various involvement and participation variations (Felfe et al., 2004), where in the workplace, the employees are provided with work opportunities that would push them to their optimum best in accomplishing the organizational objectives in a creative way (Kirkbride, 2006). Leaders in this case encourage employees to be inventive by using methods in order for the followers to come up with new conceptualizations and to understand the problems differently while being cautious of failing in their tasks – in which case this would lead to further examination and further effort (Felfe et al., 2004;

Kirkbride, 2006). Followers are advised to create new solutions and to think that all problems have solutions (Bass & Avolio, 2004).

Hence, employees are primarily free to explore, test and resolve problems through higher level thinking to survive and thrive with the dynamic environment (Bass, 1985; Chan & Chan, 2005). It is noted that employees are frequently ready to share their ideas, ask questions and to support positive results when it comes to working in the organization (Kirkbride, 2006). According to Bass and Avolio (2004), and Felfe et al. (2004), both creativity and innovative solutions are called for in an environment that supports and encourages employees to attempt in embarking on tackling new problems and developing ideas.

2.5.4 Individualized Consideration

The leader generally allocates the appropriate projects in order to motivate the followers' learning experience, teach and view each of the followers individually (Bass & Avolio, 2004). To this end, Bass and Avolio (1994), and Chan and Chan (2005) explained that it is pertinent to accept individual differences in light of their achievement needs, growth and desires, as well as their different needs of autonomy, motivation, responsibility, achievement, where a two-way communication is established (Bass & Avolio, 1994; Felfe et al., 2004). This is expected to strengthen mutual trust and result in a positive effect on the satisfaction of the leader and on the productivity of the whole organization (Bass, 1985; Belhaj, 2012).

However, the development of novel learning opportunities supported by the workplace climate is among the many practices of an individualized considerate leader who accepts and promotes diversity, provides tailored opportunities for learning and development for each employee (Bass & Avolio, 2004). Generally speaking, the leader acknowledges the differences among the followers, supports mutual interaction, and caters and supports every individual needs (Bass & Avolio, 1994). This type of leaders always show care to the needs of their followers and they invest time to become familiar with their employees, delegate tasks to extend their skills and supervise them in order so they may be aware of the direction to take (Bass & Avolio, 2004).

Transformational leaders are all about sharing ideas and knowledge and convincing employees of how important and invaluable they are to the organization (Bass & Avolio, 1994). Individualized consideration is displayed by such leaders through their attention to their subordinates' needs for achievement and development where the former guides them to exceed while providing more opportunities in the form of responsibilities towards improving their capabilities and achieving greater levels of commitment in the organization (Avolio, 1999; Bass & Avolio, 1994; Kark & Shamir, 2002; Kark, Shamir & Chen, 2003; Wayne, Shore & Liden, 1997). Anyone in the organization can experience transformational leadership in the way leaders motivate and improve their performance for the achievement of overall performance (Bass & Avolio, 1994; Zhu, Chew & Spangler, 2005).

2.5.5 Transformational Leadership and Innovative Work Behavior

Through their idealized influence, transformational leaders have the capability of developing trust and esteem among their subordinates, and of establishing confidence in the reputation of the firm, forming appreciation and commitment, divide risks among subordinates and stress on the importance of team work (Bertocci, 2009; Yukl, 2010). The above features motivate hard work and innovation in followers (Bass & Riggio, 2012; Bass, 1985).

However, according to Sadler (2003), inspirational motivation leaders can stimulate the supporters to accomplish the required actions by facilitating a workplace that is rife with team work. Such leaders lay down the basis of visualization, showing advantage of optimistic commitment to the followers, promotion of interactions and values sharing, and inspiring an effective innovation and development environment (Daft, 1999; Saenz, 2011). Performance and innovation of the followers is enhanced through the exploration of the above transformational leadership's enhancements of their awareness of the importance of values linked to outcomes (Bass, 1985).

Transformational leaders employ intellectual stimulation to encourage their subordinates' imaginings and innovation, and with this, the latter can revise their suppositions and old methods. They are primarily stimulated to revise their thinking of old problems based on new innovative methods (Northouse, 2007; Western, 2008). Such followers have no fear of receiving objective criticisms if their views contradict those of their leaders (DuBrin, 2012). Stimulated people are appealed to re-think and know their

ideas and they have the potential to come up with new ideas that could improve the overall organizational innovation (Jung, Wu & Chow, 2008; Shalley & Gilson, 2004).

Moreover, through individualized consideration, transformational leaders are able to form relationships with their followers while keeping track of their requirements, abilities, and ambitions in such a way that this assists in their innovation thinking and creation (Bass & Riggio, 2006; Yukl, 2010). They assist their subordinates to reach a height of competence via feedback, encouragement and support (Northouse, 2007). Over and above this, transformational leaders are concerned about their followers' ambitions and achievements and assist them in achieving their goals (Saenz, 2011). This leadership style contributes to promoting the organizational members taking on more responsibilities. Leaders who are concerned with their followers' individual feelings and provide support and motivation will urge followers to provide innovative ideas (Al-Omari & Hung, 2012; Gumusluoglu & Ilsev, 2009; Khan et al., 2009).

With regard to this area of research, experimental studies dedicated to the specific relationship between transformational leadership and innovative work behavior (Janssen, 2002; Reuvers et al., 2008) are still few and far between, although literature has also shown that there have been several attempts to identify the process upon which transformational leaders could improve innovative work behavior (e.g. Bass & Avolio, 1990; Mumford et al., 2002; Sosik, Avolio & Kahai, 1997). Majority of reasons are recommended to support the notion that transformational leadership impacts innovative work behavior in a positive way. In this, transformational leadership exceeds transactional leadership as it engages subordinates' individual value systems and

encourages them to go beyond their regular interaction exchange when it comes to both performance and innovation (Bass & Avolio, 1990; Hater & Bass, 1988).

2.5.6 Previous Studies

However, several studies in literature have been focused on the relationship between transformational leadership and innovative work behavior. For example, Janssen's (2002) work involved data collection with the help of a questionnaire distributed to 170 employees working in an energy supply company in the Netherlands. He made use of hierarchical regression analysis to examine the relationship between the two variables (transformational leadership and innovation behavior) and found it to be positive and highly significant.

Some other studies that have tested the direct relationship and found a positive result include Sosik, Kahai and Avolio (1998). The study found that transformational leadership contributes to the creativity and innovation of subordinates in the context of a computer-mediated brainstorming experiment. In addition, Jung et al. (2003) put to evaluation the transformational leadership-organizational innovation relationship using 32 Taiwanese electronic firms. Their analysis showed a direct and positive relationship between the two, and they explained that a leader who changes and impacts the workplace environment and culture of the organization is capable of affecting the work attitudes and behavior of the members as well as their motivation. This in turn, impacts their collective organizational innovation.

Contrary results were also found, through the study conducted by Basuand and Green (1997). The sampling involved 225 leaders from the manufacturing sector, where the transformational leadership was negatively related to innovative behaviors of followers. Similarly, Jaskyte (2004) showed non-significant relationship between transformational leadership and organizational innovativeness, among 247 employees in Alabama. It was notable that the outcomes from the study just provided an indirect relationship between the two variables (transformational leadership and organizational innovativeness).

Moreover, in another similar study, Michaelis et al. (2010) showed that transformational leadership contributed to enhancing innovation behavior via the promotion towards change commitment. The data were collected from German companies, the sampling involved 270 employees and the results were positive relationship. Their model was extended to the government agencies with 230 employees in the Netherlands by Pieterse et al. (2010) with the same results (positive) through the study of transformational leadership-innovative behavior relationship.

In their study, Eisenbeib and Boerner (2010) found that a transformational leader plays a role as a mechanism that brings about innovation. The sampling involved 256 employees working in R&D companies. Moolenaar, Daly and Sleegers (2010) supported the importance of transformational leadership role in facilitating an innovative work environment. The study was conducted with 702 teachers in the Netherlands' education sector. In addition, this notion was supported by Zhang and Batrol (2010) also who revealed that empowering leadership has impacts on creativity in the Chinese organizations.

A review of literature shows that studies dedicated to transformational leadership and innovation relationship in the HE environment are still scarce. For instance, a study by Alzawahreh (2011) involving 200 academic staff in the higher education sector in Jordan showed that transformational leaders had a significant role in improving the academic staff's creativity. In Pakistani context, Imran and Haque, (2011) conducted a study in service sector where the sampling involved 320 managers, and the result was positive between transformational leadership and innovative work behaviour. Another study was conducted by Khan, Aslam and Riaz (2012). The sample of the study comprised 100 bank managers in Pakistani context, to evaluate the relationship between transformational leadership and innovative work behavior, and the results were positive.

In the context of Pakistan, Tipu, Ryan and Fantazy (2012) involved 523 organizational employees in Pakistani firms to demonstrate the role of transformational leadership in developing innovation (directly and indirectly) via organizational culture, and the results were positive. Also, in Germany, Eisenbeib and Boerner (2013) supported the ability of transformational leaders to encourage creativity and innovation, but simultaneously, it heightens the dependence of followers and mitigates their creative thinking. Such negative indirect impact attenuates the key role of transformational leadership in boosting creativity of followers. The data were gathered from 416 employees in the R&D departments in Germany. At the same time, the study conducted in Lesotho, by Khaola and Sephelane, (2013), with a sample of 100 participants from companies of insurance services, showed that transformational leadership is positively related with innovation behavior. Recently, Afsar et al. (2014) tracked influence of transformational

leadership on innovative work behavior with 639 employees in Chinese companies, and the results found positive relationship.

Through previous studies is noted a contradiction in the results between the transformational leadership and innovative work behavior as some of them were positive (Afsar et al., 2014; Khaola & Sephelane, 2013) and others were negative (Basuand & Green, 1997; Jaskyte, 2004). Majority of previous studies were carried out in Western countries, US, China, and most of them used organizational level in different sectors (Janssen, 2002; Michaelis et al., 2010; Tipu et al, 2012), but few studies were conducted within individual level in HE, especially in Iraq (Al-Husseini, 2014). Previous studies have used samples from professionals, managers, supervisors (Afsar et al., 2014; Khaola & Sephelane, 2013; Michaelis et al., 2010) but the current study used a sample of academic staff at universities.

However, it is notable that several researchers who dedicated their work to this topic focused on the leadership effects in enhancing innovation and not the manner in which transformational leadership impacts innovative work behavior, specifically among the higher education universities in Iraq. In other words, studies concerning the existence of the above relations are still few and far between (Mumford, Scott, Gaddis & Strange, 2002) in developing nations and there is a need to add to literature, particularly one that focuses on higher education institutions (Bodla & Nawaz, 2010). In the context of Iraq, there is still a scarcity of this type of research and thus, there is a need to confirm the relationship between transformational leadership and innovation work behavior in such a context (Al-Husseini, 2014).

In the present study, to resolve the contradiction problems in the previous studies results, the researcher makes use of the moderating impact of quality culture on the relationship between transformational leadership and innovative work behavior in the context of Iraqi higher education sector.

2.6 Quality Culture - Concept

Quality dedicated studies based on the viewpoint of culture entail more than the use of implementation and methods, where quality is referred to as the result of cultural components (the values, and practices in the organization) from which both leadership and the working trend of employees are of significance. Quality culture development is an important subject to explore in order to achieve shareholder satisfaction and trade competitiveness in a dynamic and uncertain business realm (Campos, Mendes, Silva & Valle, 2014).

This justifies the reason why quality direction has shifted to employee behavior, norms and beliefs to obtain meaningful findings (e.g., Campos et al., 2014; Wang, Chen & Chen, 2012). Generally, researchers agree that quality can be used as a benefit source in businesses within which innovation, development of knowledge, consumers' demand and technology all contribute to it (Grezel, Fesenmaier & O'Leary, 2006; Hutchins & Gould, 2004). In the latter parts of the 20th century, quality studies laid emphasis on the technical aspects and tools rather than on cultural approach, which has proved its failure in organizations that lack cultural support (Barrett & Waddell, 2001). With regard to this, the cultural viewpoint on quality arose from experiential outcomes that showed the failure of quality programs adopted without the reinforcement of an effective value

system (Barrett & Waddell, 2001), or the presence of contrasting impacts throughout different industries (Cameron & Sine, 1999), or issues of a different nature (Zu, Robbins & Fredendall, 2010).

In contrast, Kujala and Lillrank (2004) explained that if culture is taken into consideration, quality should take the form of organizational sub-system and in this regard, culture is distinct in light of its beliefs, practices and values (Dodwell & Simmons, 1994; Cameron & Sine, 1999). Values are continuous aims that assist in directing the lives of workers and are reflected through the culture that influences the behavior of individuals. Meanwhile, practices are methods and behaviors that can be observed (Asreen, Zain & Razalli, 2010), and beliefs are shared assumptions of the way individuals within the organization perceive their environment and how they work towards an action course in specific instances (Kujala & Lillrank, 2004).

Moreover, Quality management has recently entered the modern era of higher education sector (Ehlers, 2009). It is evident that there is a movement and activity by the scientists going on to reach an understanding of quality development in higher education. Such movement is based on the following - essential capabilities, new competencies and shared values (Wolff, 2004). The conceptualization of quality management and quality control are frequently viewed as technocratic methods that frequently face failure, particularly in HE (Ehlers, 2009).

Therefore, current studies have been concentrating on a unique method that is directed towards change, development and innovation as opposed to merely standard compliance. The classical understanding of old-style management was advocated by

Porter (1980) where the researcher believed that strategies can be determined beforehand and planned. The same was proposed by Mintzberg (1994) who confirmed that the organizational changes result from the abilities and competencies of employees and the culture existing within the workplace (Prahalad & Hamel, 1990). It is evident that majority of quality development attempts in the context of HE have been urged by external organizations or newly launched legislation (Wirth, 2006). Nevertheless, according to Newton (2000), the development of an education-centered, extensive concept for educational quality in institutions in an attempt to develop quality activities is still in the infancy stage.

However, quality culture refers to a design of organized sources and behaviors accepted by people as the method to resolve their problems (Mahmood, Mohammed, Misnan, Yusof & Bakri, 2006). It is obtainable as a combination of methods, rules, and principles over the background of skills, knowledge and attitudes of investors to an organization. Quality growth in HE provides a blueprint of the cultural patterns of the organization such as its beliefs, values and daily procedures (Ehlers, 2006). Quality culture rather than quality criteria is of significance in HE as it provides the platform in understanding quality based on an extensive point of view, with the inclusion of all the elements that influence quality, like attitudes and skills of instructors and the learner's capabilities and stimulus, the background of the organization, environments and values and the instructions in the form of legislation, rules, and regulations (Ehlers, 2009).

More notably, the top study that tackled this topic was conducted by Mintzberg (1994), who proposed that organizational changes arise from staff competencies and

organizational culture. For the understanding of the aspects and norms of quality culture, and the employees' /organization's capabilities and values, the topic should be wholly studied. Among the critical success factors in the education sector is the academic staff and this is crucial for a developing country that is attempting to enhance the quality of education (Arifin, Troena & Djumahir, 2014). Therefore, as mentioned above, quality culture is considered an important factor within HE in Iraq.

2.6.1 Definition of Quality Culture

It is clear from a close review of previous studies that several definitions have been proposed for quality culture, with each having its own distinct variance according to the study focus. For instance, Mabawonku (2003) referred to culture as decisive, dynamic objectives and mechanisms (i.e. rules, values, ethics, and knowledge systems) that are created for the achievement of many aims. The most current and extensive quality culture definition describes it as the pattern of arrangement (physical or behavioral) that has been acknowledged by the company, group or team as a method to use to resolve issues (Mahmood et al., 2006). Quality culture refers to the set of norms, values, concepts, beliefs and regulations that individuals and groups within an organization share and, are connected to the organizational quality (Detert, Schroeder & Mauriel, 2000). This is supported by Ahmed, Loh and Zairi (1999) who stated that culture can be measured through the established methods and implicit values, beliefs, norms and premises underlying and governing behavior. To this end, different countries, regions and organizations generally display varying feelings, requirements, creations and understandings (Alotaibi, Yusoff & Islam, 2013). In addition, Easton (2000) stated that

no consensus of quality culture definition has been reached while Douglas and Judge (2001) stated that quality culture can be generally and specifically examined.

Past literature on quality culture deemed it as awareness phases, criteria, value orientation and codes of conduct, thoughts modes and customers' behaviors with regards to quality. These aspects develop through long-term activities, product identification and behaviors of the companies (Alotaibi et al., 2013; Al-Khalifa & Aspinwall, 2001). Stated from a specific viewpoint, quality culture is the quality of the technical knowledge, value orientation, thinking mode and management phases of thoughts and codes of conduct that are linked to quality issues that staff are aware of and that develop through quality practice processes (Alotaibi et al, 2013).

Moreover, according to Kotter and Heskett (1992), culture is deemed to be the major element that supports successful development of commitment in any type of change, whereas Westbrook (1993) described it as the major element in a successful quality program. We can say that an organization with a quality culture is the one which has clear values and beliefs that encourages and maintains quality in the organization (Linkow, 1989). In fact, quality experts like Deming, Juran and Crosby urged for the need of an appropriate quality culture, with their studies containing the identification of several cultural components that need modification in order to sustain ongoing quality improvement philosophy (Al-Otaibi, 2013). They stressed on the importance of developing a quality culture via modifying the outlook and attitudes towards quality to bring about quality improvements (Sommerville & Sulaiman, 1997). Employee motivation for the development of quality culture is a premise that has been advocated

by different researchers throughout times (Al-Khalifa & Aspinwall, 2001; Kanji & Yui, 1997; Oakland & Porter, 1995).

Towards this end, a more complete model of quality culture that is based on the five main motivation indicators including involvement, education, performance, measurement and training, was presented by Kanji and Asher (1993). Similarly, Kanji and Yui (1997) proposed a quality culture model comprising of four major components of environment, strategy, system management and human resource. Such a model was included in the reformation of the pyramid brought forward by Kanji and Asher (1993).

However, quality culture is increasingly becoming one of the major critical factors that contribute to improvement of the organization's competitive edge. According to Ehler's (2009) study, the absence of an effective quality culture would just lead to an organization's failure to improve its results. Similarly, quality culture is linked to different elements including motivation, psychological empowerment, technology, organizational culture, service design, process management, business strategy and decision making within the organization (Ehlers, 2009; Rad, 2006). In addition, quality culture is invaluable for the successful implementation of quality program, while Fotopoulos and Psomas (2009) contended that quality culture primarily helps in solving problems and in improving employee's training, development, and they also revealed a link between quality culture and innovation. Meanwhile, Kanji and Yui (1997) note many critical factors are positively related to quality culture, for example, motivation, psychological empowerment and leadership. All these factors lead to high quality and innovation in the organization.

Added to the above studies, Al-Khalifa and Aspinwall (2008) defined the impact of factors including top measurement and feedback, tools and methods enhancement, continuous improvement, quality management, systems and processes, human resource management, resources education and training, and quality culture. The results indicated that the top critical factors of the study in such an industry comprise of leadership and quality culture.

However, the viewing of quality like the cultural phenomenon shows that quality is deemed to be a group of values, a fundamental orientation, and a philosophy rather than a group of tools or techniques (Campos et al., 2014). In 1992, George Bush of the National Institute of Standards and Technology explained this viewpoint when he revealed the development of the Baldrige Award, stated that quality is more than just a strategy; rather, it is also a new working and thinking style and a way of life as cited by (Al-Otaibi, 2013). Hence, quality's definition according to culture mainly steers clear of the important tools and processes, and stresses instead on the effect of the values, attitudes, and expectations in the organization that make up its quality principles (Al-Otaibi, 2013).

Finally, Garvin (1988) was a pioneering scholar who expounded that the era of quality culture has progressed across years, stressed on the need to change values, ideologies and cultures on the basis of the organizations' quality orientations. Proposed four major quality cultures, namely quality assurance culture, inspection culture, statistical control culture and strategic quality management culture. Hence, in the present study, quality culture is defined as the group of values, basic orientation and philosophy that

individual workers or groups of workers in the institutes that are connected to the importance of quality perceived by the institution.

2.6.2 Quality Culture as a Moderator between Extrinsic Motivation, Psychological Empowerment, Transformational Leadership and Innovative Work Behavior

Moderating variables are often called into examination in many managerial, psychological and disciplinary concepts, especially when they are related to the strength/nature of variables. Despite the significance of the effects, there is ambiguity in the testing and analysis method. In this background, a moderator refers to a variable that influences the relationship between two or more variables, with moderation being its impact on the relationship (Dawson, 2014). In Baron and Kenny's (1986) study, they described a moderating variable as one that explains contingencies when the relationship between two variables is weak or inconsistent.

Similar to literature in other fields, management literature is full of theories positing that the relationship between two variables depends upon a third one. For instance, Locke, Shaw, Saari and Latham (1981) state that the establishment of difficult work settings is likely to positively impact the employees' performance and innovation, particularly those who possess higher task ability level. Also, Van Kinippenberb, Dreu and Homan (2004) hypothesized that the effect of diversity on the group information depends on the effective and evaluative reactions of its members in terms of the social categorization processes.

The concept of quality culture comes from Trewin (2003) who defined it as the overall attitude of the organization wherein they mainly concentrate on the quality concept as a continuous process of enhancement – the entire organizational members are accountable for maintaining a positive work environment and ultimately this is expected to lead to organizational excellence. In addition, quality culture is primarily a learning culture, wherein the employees are involved in enhancing the culture on a continuous basis and in taking part in the activities of the organization (Trewin, 2003).

In relation to this, quality culture is deemed to form a part of organizational culture that brings about innovativeness among workers (Amabile et al., 1996; Anderson & West, 1998; Hemlin, Allwood & Martin, 2008; Pirola-Merlo, Bain & Mann, 2005; Woodman, Sawyer & Griffin, 1993). Past literature, like Agrell and Gustafson (1994), Anderson and West (1998), Hulsheger, Anderson and Salgado (2009) and Pirola-Merlo (2000), also supported the role of organizational support in achieving innovation. More specifically, quality culture has a vital role in stimulating creative behavior among employees to build obligations towards their institution. In relation to innovation, while innovation contributes value to the organization, quality culture accepts the norms relating to prevailing innovation in the organization. As a result, this culture stimulates new innovative solutions and improvements in the organization and provides direct feedback, and communication channels to facilitate tacit knowledge (Ehlers, 2009). In other words, when individuals are supported, they have a higher tendency to play with new ideas and methods in an attempt to accomplish aims or tasks or to resolve issues (Pirola-Merlo et al., 2005).

Organizational culture, according to Kausar (2014) is comprised of as system of concerns, shared values, norms and common beliefs known and shared throughout the organization. Literature dedicated to organizations indicates the influence of culture on the employees' belief and its indirect influence on the practices of the organization (Nahm, Vonderembse & Koufteros, 2004). While, quality culture is the set of beliefs and norms relating to quality and for the achievement of quality, the aims of the firm should be supported by a positive quality culture. In order to develop such a culture, clear values and beliefs are required to develop innovation within the firm (Linkow, 1989) and thus, organizations attempting to implement quality programs should concentrate on developing suitable quality culture (Dellana & Hauser, 1999). Despite its importance, quality culture concept has not been extensively studied (Mahmood et al., 2006). To the best of the researcher's knowledge, the concept has not been examined as a moderating construct in studies concerning innovative work behavior.

Moreover, organizations applying quality culture often possess a value system that encourages quality centered work environment where quality is both established and promoted (Geotsch & Davis, 2006). Regarding this, Cameron and Smart (2001) revealed that organizations that promote quality culture have quality displayed in their values, work orientation, expectations and ideology. Such organizations support leadership and supervision, motivate staff commitment to quality activities, employ teamwork as a style of management, enable employees to take part in decision making, boost employees' pride in their workmanship, eradicate fear and boost continuous improvements (Saha & Hardie, 2005). In this context, employees are often self-motivated and empowered to conduct quality work as they are justified and supported

by the culture, and in turn, they play a key role in their work environment (Ambroz & Ambroz, 2004). All these facts lead to enhancement in innovative work behavior.

Moreover, innovation is triggered by quality culture through the values and norms created among members concerning innovative value and embracing the innovation-related norms. Committed individuals are more inclined towards exerting extra effort on behalf of the organization as they personally value what it stands for (Boxx, Odom & Dunn, 1991; Erez, 1997). Such appreciation of value is important as values are wanted by people for the benefit of their welfare (Locke, 1991) and this is why they direct people's behavior (Erez, 1997). Also, quality culture stems from employees' interaction (Schein, 1990; Jassawalla & Sashittal, 2002), enabling them to understand the organization functioning (Deshpande & Webster, 1989), and in turn, it affects their behavior (Schwartz & Davis, 1981; Boxx et al., 1991).

Quality culture is primarily studied in light of its moderating role in relation with teamwork and employees' involvement with resolution of problems, empowerment of employees, employees' commitment to searching for continuous improvement opportunities, and reward system based on such efforts. All of the above are important indicators utilized to assess effective worker management and they assist in training, education initiatives, work learning, and establishing planned training courses in quality management (Zadeh & Saghaei, 2009).

Therefore, it is logical to consider quality culture as part of organizational culture as moderator because it is extensively acknowledged that organizational culture affects the perceptions, behavior and effectiveness of its members (Mintu-Wimsatt, 2002; Miron,

Erez & Navah, 2004; Reigle, 2001; Wilson, Meyer & Inkson, 2003), and culture acts as a social control mechanism as cited by Erkutlu, (2011). More than that, quality culture can be a moderator as suggested by Cui and Hu (2012). In addition, Ji Li (2001) suggests doing research to examine how the culture moderates the relationship between strategies and behavior. Prior literature has also suggested the moderating effects of contextual variables like quality culture, in relation to innovation behavior like in Bain, Mann and Merlo (2001) and Elenkov and Manev's (2005) studies.

2.6.3 Previous Studies

However, prior studies reviewed in literature review have been found to be dedicated to studying quality culture as an influential factor (independent, mediate, moderate and dependent variables) in different sectors. To begin with, Srismith (2005) tested the relationship between quality culture and integrated communications in the Thai healthcare. The study respondents comprised of non-medical service provider staff from the back office of the hospital. The analysis software was employed for analysis and the results showed a positive interaction between quality culture and communication attitudes and behavior.

With regard to the manufacturing sector, Elci, Tapc and Ertu (2007) conducted a study to evaluate the effects of quality culture and the ethical values observed in corporate environment on employees' work-related attitudes and job performance relationship. They gathered quality culture, corporate ethical values and work related attitudes (i.e. organizational data from Turkish manufacturing firms involving 253 employees), after which they analyzed the data. The analysis outcomes showed a significant relationship

between quality culture, corporate ethical values and work-related employee attitudes (organizational commitment, job satisfaction, turnover intentions and job performance).

Moreover, in Zadeh and Saghaei's (2009) study, the quality culture model is measured with the help of SEM in the context of the construction field. Their study sample comprised of 150 experts with at least 2 years' experience, out of which 110 experts provided complete usable answers. They found a significant relationship between the five variables (quality plans and measurement, top management commitment, people management, training and effective communication) and quality culture. In a similar study, Tapci, Ate and Okten (2009) tested and compared the effects of dimensions of psychological empowerment and quality culture on job satisfaction. Their study involved 333 employees working in the Turkish private sector company. The findings showed that three perceptions of psychological empowerment dimensions are positively and significantly related to quality culture, and that one of the dimensions is positively and significantly related to job satisfaction.

In another related study, Alotaibi, Yusoff and Islam (2013) and Alotaibi, (2014) tested the TQM-competitiveness relationship as mediated by quality culture in the construction industries context in Saudi Arabia, where the sampling involved 388 managers. The findings showed support for the quality culture mediating impact on the TQM practices-competitiveness relationship. More recently, Campos et al. (2014) carried out a survey to examine the relationship between leadership, information/communication and quality culture, and empowerment using the lodging and food and drink firms in Lagos. A total of 192 survey questionnaires, with a sample of 128 units, were distributed. The unit of

analysis used was comprised of managers and leadership and employee empowerment were found to be the success factors of quality culture, and as such, this supports the premise that every employee in the organization is accountable for its quality.

Finally, in Higher Education sector in Pakistan Kausar (2014) tested the relationship between quality culture and motivation, where the sampling involved 200 employees from three public and two private universities in Lahore, and the influence was found significant. Meanwhile, in the context of Saudi Arabia, Al-Otaibi (2015) examined the TQM practices-quality culture relationship among 388 samples through a questionnaire distributed to construction firms. The study results showed a positive relationship between the two variables. Lastly, based on a thorough review of literature, it is noticed that there is a lack of studies investigating the role of quality culture as a moderating variable between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior, specifically in HE in Iraq.

2.7 Underpinning Theory

The present research study relies on one underpinning theory that is described in the following sub-sections.

2.7.1 Self-Determination Theory (SDT)

Self-determination theory (SDT) has generated innumerable experimental studies in the past four decades, contributing to throughout various fields and cultural studies (e.g., Chen, 2014; Deci, Ryan, Gagne', Leone, Usunov & Kornazheva, 2001; Vellaerand,

2000). The theory is largely related to the following line of studies; health research as in Lee and Kim (2013), Ng, Ntoumanis, Thøgersen-Ntoumani, Deci, Ryan, Duda and Williams (2012), Williams, Grow, Freedman, Ryan and Deci (1996), education studies as in Hagger and Chatzisarantis (2015), Ratelle and Duchesne (2014), parenting studies as in Grolnick and Ryan (1989), Soenens Vansteenkiste and Van Petegem (2014) as well as research on sports as in Frederick-Recascino and Schuster-Smith (2003), Longsdale, Hodge and Rose (2009), and Power, Ullrich-French, Steele, Daratha and Binder (2011). Some of the recent studies examined motivation and its application in the innovative behavior field (e.g., Adams, 2014; Attiq, Wahid, Javaid, Kanwal & Shah, 2017; Devloo, Anseel, De Beuckelaer & Salanova 2015; Gagné, & Deci, 2005).

The SDT is primarily utilized to shed light on motivation and behavior based on individual differences in the motivational orientations, contextual influences and interpersonal perceptions contexts. And according to Hagger and Chatzisarantis (2008), the SDT is invaluable in explaining antecedents and processes of innovative behavior. The pioneering studies on the effects of rewards and intrinsic motivation on behavior has brought about the proposal of the cognitive evaluation theory, a theory considered as the pioneering sub-theory of self-determination theory. Based on the theory, an individual's behavior stemming from the want of money or fame will be maintained so long as the reward is continued (Deci & Ryan, 1987).

Moreover, the more crucial aspect of SDT is the notion that extrinsic motivation varies based on its autonomous aspect or lack thereof. Uninteresting activities (does not intrinsically stimulate) call for extrinsic motivation and hence, their first steps depend on

the perception of contingency between a specific behavior and the result of such behavior (implicit approval/tangible rewards). Therefore, on this basis, the SDT theory proposes the extrinsic motivation-innovative work behavior relationship, in a sense that if employees are provided with extrinsic motivation, their performance and innovation are expected to be enhanced (Ogutu, 2014).

With regard to the type of leadership to be adopted, transformational leadership encourages followers by boosting their organizational goals achievement. Based on Chang and Teng's (2017) study, leadership behavior has a major role in extrinsically motivating the creativity among employees. This type of leadership is often related with increased potential to be creative (Shin & Zhou, 2003; Wang et al., 2014). In relation to this, leaders who adopt SDT theory practically can facilitate work conditions that optimize the motivation of employees via autonomous motivation (performing their jobs because of their intrinsic consistency individual's values) and controlled motivation (performing their jobs because of the pressure from forces) (McDaniel, 2011). Thus, transformational leadership motivation to their followers enables them to enhance their innovative work behaviour.

According to Deci and Ryan (1985; 2000; 2011) and Ryan and Deci (2000), the self-determination theory is concerned with the development and working of personality in social situations. The theory posits the existence of a continuum comprising of motivational orientations of activities at one end of which lies extrinsic/controlled regulation (engagement via force or avoidance of punishments/achievement of reward) while at the other end lies intrinsic/autonomous motivation (engagement brought about

by pleasure, interest, enjoyment or by accepting the activity's intrinsic value).SDT proposes three fundamental psychological needs namely, autonomy, relatedness and competence. The satisfaction of these needs leads to improved autonomous motivation and boosted internalization of what were once extrinsic behaviors (Ryan & Deci, 2000). However, such satisfaction hinges on support from environmental factors as claimed in literature (e.g., Katz, Kaplan & Buzukashvili, 2011; Katz, Kaplan & Gueta, 2010; Reeve & Jang, 2006; Vensteenkiste, Simmons, Braet, Bachman & Deci, 2007).

In contrast to previous need-based theories that considered motivation determinants as individual personality or processes of development, SDT deems motivation as dependent on the situation and it stresses on the environmental role in motivation, composed of culture and climate (Ryan & Deci, 2000). In the past years, some authors who dedicated their work to the SDT theory suggested a deeper insight into the internal individual aspects and their effects on motivation and not just confine the examination to contextual factors. These may be pertinent in shedding light on the role of environmental support in motivation that facilitates both improved performance and innovation (Vallerand, 2000). However, only a few studies dedicated to examining the theory delved into the effect of motivation sources on innovative work behavior, assessing the personal and environmental characteristics interaction to expound on the advantages of higher degree of supportive behavior (Mouratidis, Vansteenkiste, Sideridis & Lens, 2011; Ryan & Grolnick, 1986). In other words, SDT theory lays emphasis on the importance of environmental support in the organization in enhancing the level of innovative work behavior among staff. The study model considers quality

culture as environmental support and tests its moderating effect between several factors and innovative work behavior.

Another take on the SDT came from Deci and Ryan (2000) who referred to it as a macro-theory postulating that psychologically individuals possess needs that have to be met in order for them to develop, function and live well. The primary need concerns autonomy based on which individuals attempt at initiating their actions (Deci & Ryan, 1991). In the context of higher education institutions, the need is met in the following scenarios: first, if academics' decisions are under their volition when it comes to engaging in activities (volition), and second, when academics are effective in generating changes in their environment (competency) (White, 1959). In other words, it is only when academics view themselves as capable of completing a class assignment that the need is satisfied. Lastly, the need is met if academics establish significant and satisfying relationships with others (relatedness) (Baumeister & Leary, 1995); for instance, when they perceive themselves to be close to their colleagues on an emotional level.

The needs are characterized by innateness, universality, and fundamentality in developing the full potential of an individual (Deci & Ryan, 2000). Meeting the basic psychological needs enables individuals' integration and actualization of selves and regulation of behaviors as well as emotions (Deci & Vansteenkiste, 2004; Ryan, 1998). Therefore, individuals will experience benefits to their well-being (physical and psychological), autonomous motivation and effective coping strategies when they perceive the satisfaction of their psychological needs (Ntouamanis, Edmunds & Duda, 2009; Deci & Ryan, 2000; Deci & Vansteenkiste, 2004; Ryan, 1998). On this basis, academics may exert more efforts towards enhancing their innovative work behavior.

The SDT is therefore considered as suitable to shed light on the linkage between psychological empowerment and innovative work behavior.

2.8 Research Gap and Justification for the Research

The above literature review indicates that studies on innovative work behavior are huge but there are still areas that need attention and deep explorations. Most of the past studies on innovative work behavior have mainly focused on its' impact on outcomes, such as firm performance and work role performance (Leong & Rasli, 2014; Kwon, Moon & Ko, 2013; Hogan & Coote, 2014). Thus, to reconfirm further the importance of innovative work behavior as a critical determinant of organizational innovation, it is essential to test its effect on a broader range of outcome variables. In the present study, extrinsic motivation, psychological empowerment, and transformational leadership are examined to see their effect on innovative work behavior.

Through a review of previous studies, the researcher noted that although there are many factors used to improve the innovative work behavior, the results were found contradictory, where part of them were positive and part negative one. The present study addressed the issue of the innovative work behavior to bridge the gap in the literature and in practice, where previous studies referring to the existence of the need to conduct a study on the topic of innovative work behavior in the higher education sector in Iraq failed to address the issue. In addition, the factors have been selected in the study according to the issues of theoretical gaps (inconsistent) in the relationship between extrinsic motivation and innovative work behavior, which are highlighted by Baer, Oldhama and Cummings (2003) and Zhou, Zhang and Sanchez (2011) with other

authors reporting positive impacts of extrinsic motivation on innovation work behavior (Eisenberger, Armeli & Pretz, 1998; Eisenberger & Rhoades, 2001; Eisenberger & Cameron, 1996; Eisenberger & Armeli, 1997). With specific authors indicating its negative effects (Amabile, Hennessey & Grossman, 1986; Cooper, Clasen, Silva-Jalonen & Butler, 1999; Kruglanski, Friedman & Zeevi, 1971).

However, in the research studies carried out by Jung, Chow and Wu (2003), and Sapie et al. (2015), psychological empowerment was found to negatively affect innovation work behavior, but contrary results found by Cekmeceioglu and Ozbag (2014); Erturk (2012), Knol and Linge (2009), Rahman et al. (2014), Spreitzer (1995) and Zhang and Bartol (2010) supported the positive results. Transformational leadership was found a negative relationship between transformational leadership and innovative work behavior (Basu & Green, 1997), others finding a positive relationship (Afsar et al, 2014; Boerner, Eisenbeiss & Griesser, 2007; Imran & Haque, 2011; Jung, Chow & Wu, 2003; Khaola & Sephelane 2013; Khan et al, 2012). In the other side, practical gaps (managerial issues) in the higher education sector in Iraq as mentioned in problem statement. Therefore, the study deals with quality culture as moderator for the purpose of addressing the inconsistencies in the results (according to the recommendations of researchers) as well as according to the SDT theory for the purpose of improving the innovative work behavior and quality in the higher education sector in Iraq.

With regard to factors that relate to innovative work behavior, the literature reviewed has indicated limited studies that have examined the influence of extrinsic motivation, psychological empowerment, and transformational leadership on innovative work

behavior, as recommended by scholars (Agarwal, 2014; Cekmecelioglu & Ozbag, 2014; Denti, 2013; Hussain et al., 2014; Mahmud, 2013; Rahman, et al., 2014). Most of the studies in the past have focused on factors such as organizational climate (Imran et al., 2010) social exchange relationships (Agarwal, 2014) and work environment (Sapie et al., 2015) when predicting employees' innovative work behavior. Studies that are focused on extrinsic motivation, psychological empowerment and transformational leadership are still limited and inconclusive. The studies were conducted on other settings, such as in the manufacturing, healthcare and service organizations (Afsar, et al, 2014; Imran, 2011; Reuvers, et al, 2008; Stoffers et al. 2015) rather than in the academic setting involving higher education institutions. In sum, this major aim of this study is to make some contribution to the existing body of knowledge on innovative work behavior by putting to investigation the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior among the university academic staff.

Reviewing the literature also has indicated that the moderating role of quality culture on the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior has received less attention from researchers. The studies that have been reviewed here either examined the direct relationship between these factors and innovative work behavior (Afsar, et al., 2014; Singh & Sarkar, 2012; Tsai et al., 2015), or the studies are still limited and lead to contradictory results (Flynn & Saladin, 2006; Naor, Goldstein, Linderman, & Schroeder, 2008). Therefore, this study intends to expand the knowledge on academics' innovative work behavior by putting to question the moderating role of quality culture on the

relationship between the factors, as have been mentioned above, and innovative work behavior.

Lastly, the literature, that is, the reviewed studies, also displayed that most of the studies on innovative work behavior have been Western-countries-centric, concentrated on countries, such as the US, European countries, and Australia (Afsar et al., 2014; Singh & Sarkar, 2012; Tsai et al., 2015). Only a few studies were conducted with innovative work behavior in Iraq (Marane, 2012). Conducting similar studies in other parts of the world is important due to the differences in national and organizational cultures, policies, work environment, and leadership styles that might lead to different conclusions. Therefore, this study is focusing on innovative work behavior issues among the academics in the Iraqi higher education context.

2.9 Summary

In the current chapter, the relevant literature was reviewed in terms of definitions and the evolution of innovative work behavior. Literature review is carried out to determine the significance of the study, the concepts and the relevant variables and the findings of past studies concerning them. The chapter also highlighted the relationship among relevant variables and innovative work behavior, and expounded on the underpinning theory. In addition, research gap and justification for the research have also been discussed.

CHAPTER THREE

Research Methodology

3.1 Introduction

This chapter in the thesis explains the research methodology employed in the present study through twelve main sections. The first section, 3.2 explains the theoretical framework. This is followed by the second section, 3.3 that explains hypotheses development, third section 3.4 that contains the explanation of the research design, fourth section 3.5 that explains the population of the study, fifth section 3.6 that discusses the operational definition, and sixth section 3.7 that describes the measurement techniques and the instruments. Section 3.8 deals with pre-test, section 3.9 presents the translation of questions, section 3.10 describes the pilot test, section 3.11 data collection, section 3.12 deals with data analysis, and finally the chapter ends with section 3.13 that presents the summary of the chapter.

3.2 Theoretical Framework

Through the literature review, the theoretical framework of this study focuses on extrinsic motivation, psychological empowerment, transformational leadership, and innovative work behavior as moderated by quality culture of academic staff in higher education in Iraq. Figure 3.1 given below illustrates the direct and indirect relationships between the variables related to this study.

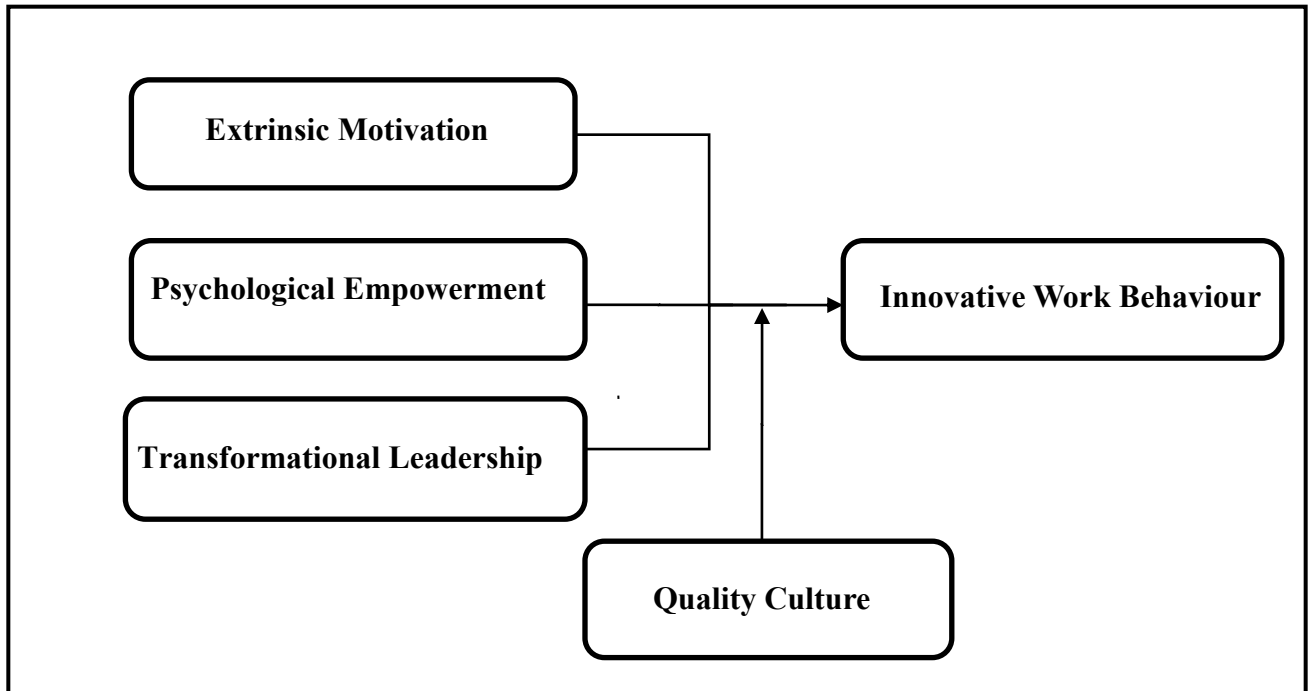


Figure 3.1: Conceptual Framework of the study

As the Figure 3.1 displayed above makes it clear, the conceptual framework illuminates the concept and objectives for this study that are based on the literature discussed in the previous chapter. This study proposed that extrinsic motivation, psychological empowerment and transformational leadership have direct relationship with innovative work behavior. In addition, this study also proposed that quality culture moderates between extrinsic motivation, psychological empowerment, and transformational leadership with innovative work behavior. It is very significant keeping in mind the feeling of extrinsic motivation, psychological empowerment, and transformational leadership realize the continuous flow of innovative work behavior after the influence of quality culture on this relationship.

3.3 Hypotheses Development

This section reviews the hypotheses development regarding the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior, in addition to the moderating effect of quality culture in these relationships. There are several hypotheses as given below:

3.3.1 The Relationship between Extrinsic Motivation and Innovation Work Behavior

Motivation is considered to be a major power customizing efforts of individuals towards generating or implementing innovative ideas. Extrinsic motivation system is considered as an effective means to support employee's innovation within the organization. Once the employees of organization understand that they will be rewarded for such activities, they are more likely to work for innovation (Milka et al., 2015). Furthermore, there are empirical studies that provide support for this position - several researches display positive effects of extrinsic motivation on innovative work behavior (Eisenberger, Armeli & Pretz, 1998; Eisenberger & Rhoades, 2001; Eisenberger & Cameron, 1996; Eisenberger & Armeli, 1997). Moreover, if the only focus of organization is placed on intrinsic motivation, this is not the correct strategy if they are looking for innovative work behavior; thus, extrinsic motivation cannot be ignored as an important factor to stimulate the innovation of staff (Fang, Gerhart, & Ledford, 2013). Therefore, the researcher proposed the following hypothesis:

H. 1: Extrinsic motivation has a positive relationship with innovative work behavior.

3.3.2 The Relationship between Psychological Empowerment and Innovative Work Behavior

Several researches have been conducted in different contexts of organizations to examine the effect of psychological empowerment on the innovative work behavior, and the results revealed positive and significant effects (e.g. Cekmecelioglu & Ozbag, 2014; Erturk, 2012; Masood & Afsar, 2017; Rahman et al., 2014; Spreitzer, 1995; Zhang & Bartol, 2010). Furthermore, Marane (2012) expounded on several forms of empowerment that play important functions and these, linked to some positive job outcomes, include innovation and proactive behavior (Anderson & Williams, 1996; Bandura, 1997; Deci, Connell & Ryan, 1989; Kirkman & Rosen, 1999; Spritzer, 1995; Spritzer, De Janasz & Quinn, 1999). In addition, according to the SDT theory, the relationship between psychological empowerment and innovative work behavior is positive (Gagne & Deci, 2005; Amabile & Pillemer, 2012). Therefore, the hypothesis is proposed as follows:

H. 2. Psychological empowerment has a positive relationship with innovative work.

3.3.3 The Relationship between Transformational Leadership and Innovative Work Behavior

A transformational leadership encourages subordinates to work on the vision of the institution in order to encourage innovation to achieve excellence (Chen et al., 2012; Si & Wei, 2012). These leaders have a shared vision and the ability to strengthen the appropriate environment for creativity and innovation in the organization (Saenz, 2011; Vaccaro et al., 2012). Many studies have shown that the relationship between

transformational leadership and innovative work behavior in different sectors is positive and significant (e.g., Al-Omari & Hung 2012; Eisenbeib & Boerner 2010; Sosik et al., 1998; Masood & Afsar, 2017; Wilson- Evered, Hartel & Neale, 2001). Therefore, the following hypothesis is proposed:

H. 3. Transformational leadership has a positive relationship with innovative work behavior.

3.3.4 The Relationship between Extrinsic Motivation, Psychological Empowerment and Transformational Leadership with Innovative Work Behavior Moderated by Quality Culture

In this context, quality culture is part of organization culture, which supports innovative behavior as evidenced in past literature including Amabile et al. (1996), Anderson and West (1998), Hemlin et al. (2008), Pirola-Merlo, Bain and Mann (2005) and Woodman et al. (1993). Majority of authors supported the innovation role in supporting and boosting the performance of the firm (e.g., Agrell & Gustafson, 1994; Anderson & West, 1998; Hulsheger et al., 2009; Pirola-Merlo, 2000). In other words, supporting individuals will encourage them to test new ideas/processes that is directed towards accomplishing goals or tasks completion (Pirola-Merlo et al., 2005). Still, the topic surrounding quality culture has not been comprehensively researched (Mahmood et al., 2006).

Therefore, according to this line of discussion, this study considers quality culture as part of organization culture, and specifically, this study focuses on its moderating effect. Because quality culture has a vital role in stimulating innovative behavior, it can build

obligation among the employees towards their institution. It also confirms that innovation is an important value for organization; Added to this, it embraces norms connected to the extant innovation within the firm as a result of which, the culture boosts new innovative solutions and enhancements within it. This also leads to the practice of direct feedback and communication network that leads to the development of tacit knowledge and independent work to search for innovation. Lastly, the use of rewards and incentives system will definitely encourage the staff to work hard and the result, of course, will be good quality and quantity of products (Hartmann, 2006). Therefore, the proposed hypothesis is as follows:

H.4. The relationship between extrinsic motivation and innovative work behavior is positively moderated by quality culture.

More than that, quality culture can be a moderator as suggested by Cui and Hu (2012), and Ji Li (2001) suggested doing research to examine how quality culture moderates the relationship between strategies and behavior. Based on a thorough review of literature, there is noticed a lack of studies investigating the role of quality culture as a moderating variable between psychological empowerment and innovative work behavior in HE in Iraq.

However, the SDT theory takes a closer examination of the individual that goes beyond the contextual influences and its effects on motivation. This may have an important role in explaining the environmental role in triggering motivational processes that lead to enhancement of performance and innovation (Vallerand, 2000). In this regard quality culture is the environment to which the employee is adapting on the job by imitating

behavior stemming from an action. In other words, the employee is learning by observing the behavior of others and attempting to apply this behavior practically at the workplace. Such ability may be reflected via self-efficacy in light of goals completion (Locke & Latham, 2002). It is hence plausible that innovative work behavior could positively impact the individual's situation, specifically in the context of higher education. Therefore, the psychological empowerment and quality culture may support the leaders to stimulate employees to discover the innovative solutions to the problems at workplace (Kitapci, Okten & Suleyman, 2009). Therefore, the proposed hypothesis is as follows:

H.5. The relationship between psychological empowerment and innovative work behavior is positively moderated by quality culture.

Nevertheless, culture is one of the most important aspects that affect peoples' lives, their behaviors and their thoughts (Hamdan, Belkhouche, & Smith 2008). Quality culture and transformational leadership have main effects on employees (Look & Crawford, 2004) and the operation of an organization (Kitchenham, Pfleeger, & Fenton 1995). In fact, it is formed by its leaders, and reflects on their behavior (Brown & Thornborrow, 1996). According to McClelland (1975), leadership which has awareness about the quality culture helps in the recognition of problems in a timely manner and creates access to the required resources seamlessly via the efforts supported by the organizational infrastructure and management (Kitapci, Okten & Suleyman, 2009).

Thus, features of establishments have affected the morals and honesty of employees (Tourigny Dougan, Washburn & Clements, 2003). These features also influence the

quality of the performance. As a result, they will develop quality culture (Ribie`re & Sitar, 2003). However, Kanapathy (2008), and Al-Khalifa and Aspinwall (2008) detect a positive relationship between leadership and quality culture. Therefore, leadership can be considered as an important factor in the formation of quality culture within the organization (Alotaibi, 2013). Thus, quality culture includes a set of rules, values and beliefs, which guide the organization members' functions. Therefore, the proposed hypothesis is as follows:

H.6. The relationship between transformational leadership and innovative work behavior is positively moderated by quality culture.

3.4 Research Design

Research design is a procedure plan to indicate how the research process will be undertaken, structured and arranged so that it could finally answer the research questions (Kumar, 2011). There are several steps involved in the research design for this study. It requires the researcher to determine research process from the type of the proposed investigation, data collection process, type of respondents, selection of respondents, data analysis and how the findings are presented.

With regard to the current study, quantitative research approach is employed, because this study incorporates different variables (i.e. extrinsic motivation, psychological empowerment, transformational leadership and quality culture, with innovative work behavior) – specifically, this study has a co-relational design in nature. In addition, a quantitative approach can measure the relationship between variables systematically and statistically (Cassell & Symon, 1994). Moreover, the researcher uses a cross sectional

study that is better suited to the study due to the cost constraints and the time element. The quantitative approach along with the survey method is fitting for the research due to the large population that needs to be evaluated after which the findings are generalized to the whole population. The survey instrument used by the researcher is E-mail administered questionnaire, which is the technique of data collection often employed in survey research (Couper, Traugott & Lamias, 2001). The email addresses of all the academic staff are available on the websites of the universities (MOHESR, 2016).

3.4.1 Purpose of the Research

The purpose of the research comprises a list of steps to be achieved by carrying out the research and how the results can be useful (Yin, 2003). Several scholars have highlighted three main research purposes, namely exploratory research, descriptive research and hypothesis testing research (Sekaran & Bougie, 2011). Specifically, an exploratory research is carried out when the issue under study has not been sufficiently and clearly explained. This type of research assists in determining what is going on, seeking new viewpoints, asking questions and tackling a set of phenomena in a new way. This is often used in qualitative studies. On the other hand, the descriptive research is carried out to explain accurately a phenomenon through narrative-type descriptions, classifications or measured relationships to paint an accurate picture of events and situations (Sekaran & Bougie, 2011).

However, the final type, namely the hypothesis testing research, enables the researcher to determine and infer causal relationships among the study variables (Sekaran &

Bougie, 2011). The research purpose may also stem from a combination of the above types for the purpose of answering research questions. Hence, the present research study is consistent with hypotheses testing research and descriptive research.

3.4.2 Study Approach

A quantitative approach is considered suitable in meeting the research objectives like the ones discussed in the present research. A quantitative research is one that is formal, objective, and organized is utilized to provide a definition and examination of the causal relationships and to determine interaction effects among the study variables (Burns & Grove, 2005).

Hence, the quantitative method of analysis can be invaluable to the researcher who is attempting to look for significant results from the data collected. Additionally, the method enables the summary of analysis results in the form of numeric statistical values with a high level of confidence (Zikmund, Badin, Carr & Griffin, 2010). On this basis, the researcher has sufficient justification to adopt the quantitative approach in this study. Therefore, a quantitative research design is deemed appropriate for this study.

3.4.3 Unit of Analysis

It was regarded by Sekaran and Bougie (2010) and Zikmund et al. (2010) that in order to determine the solution to the problem statement, it is important that the unit of analysis from which the response is planned to be obtained must be first identified. The unit of analysis is the level of aggregation of the data to be collected in the data analysis step. It may comprise an individual or an organization. The present study uses the individual

analysis unit, which is the university academic staff as this unit is consistent with the study's objectives.

3.5 Population and Sampling Procedures

3.5.1 Sampling Method

Under this section, the study population, sampling frame, size of the sample and the questionnaire distribution to the study sample are all presented.

3.5.2 The Target Population of the Study

This study is applied to the higher education setting, which involves the academic staff of the public universities. In general, the academic staffs of the public universities are taken from the public sector in Iraq. Additionally, the main respondents in this study are the public universities' academic staffs in Iraq. The university academic staff was selected due to the following reasons:

Academic staff is the main source of innovation in the higher education sector in Iraq (Mahmud, 2013). In addition, academic staffs at the university face real challenges and conflicts (killed-kidnapping) and non-security state (violent environment) (Mukhlif, 2004). Thus, they are suffering from many problems, for example, low motivation, brain drain, low employee morale and low satisfaction (Hussain et al., 2014; Mahmud, 2013). In addition, innovative work behaviour is necessary for academic staff for enhancing organization 's innovation, effectiveness, quality, benefit and performance, improving social capital and helping to retain and attract best academic staff at universities.

Therefore, this sample (university academic staff) presented the ideal population for the current study.

3.5.3 Sampling Frame

After the type of respondents was decided, the task of getting the number of public universities in Iraq was based on the statistics from the Ministry of Higher Education in Iraq (MOHESR, 2016). These statistics indicate that Iraq has thirty-five public universities distributed in all regions of the Republic of Iraq as shown in Table 3.1(MOHESR, 2016). To determine the number of academic staff in the public universities, a database was used from Ministry of Higher Education, as shown in Table 3.1.

Table 3.1

Distribution of Public Universities in Iraq

Region	Name of the University	Number of Universities
North	Kirkuk Univ., Mosul Univ., Tikrit Univ., Diyala Univ., Samarra Univ., Anbar Univ. Nineveh Univ, Tall Afar Univ, Fallujah Uni, Hamdania Univ, Northern Technical Univ.	11
Middle	Baghdad Univ., Islamia Univ., Mustansiriyah Univ., Nahrain Univ., Technology Univ., Babylon Univ., Qasim University, Jabir Ibn Hayyan Univ, Univ of Information and Communication Technology, Karkh University of Science, Ibn Sina University for Medical and Pharmaceutical Sciences.	11
South	Thiagaruni Univ., Wasit Univ., Misan Univ., Al-muthanna Univ., Kerbala Univ., Kufa Univ., Basrah Univ., Qadissuni Univ, University of Sumer, Basra University for Oil and Gas, Middle Euphrates Technical University, Southern Technical University, Central Technical University.	13
Total		35

Source: (MOHESR, 2016)

There are 35 public universities with a total of 33424 (thirty-three thousand four hundred and twenty-four) academic staff, as shown in Table 3.2.

Table 3.2
Distribution of Academic Staff in the Universities

No	University name	Academic staff	Establishment
1.	Kirkuk University	427	2003
2.	Mosul University	4281	1967
3.	Diyala University	936	1998
4.	University of Tikrit	1699	1987
5.	University of Samarra	250	2014
6.	Anbar University	1475	1987
7.	University of Nineveh	123	2014
8.	University of Tall Afar	134	2014
9.	University of Fallujah	213	2014
10.	University of Hamdania	145	2014
11.	Northern Technical University	213	2014
12.	Baghdad University	6642	1958
13.	Islamia University	527	1989
14.	Mustansiriyah University	3299	1963
15.	Nahrain University	924	1993
16.	University of Technology	1380	1975
17.	Babylon University	1651	1991
18.	Jabir Ibn Hayyan University	155	2014
19.	University of Information and Communication Technology	126	2014

Table 3.2: (Continued)			
20.	Karkh University of Science	123	2014
21.	Ibn Sina University for Medical and Pharmaceutical Sciences	96	2014
22.	Al Qasim University	242	2014
23.	Thiagaruni University	638	2002
24.	Wasit University	475	2003
25.	Misan University	316	2007
26.	Al-muthanna University	318	2007
27.	Kerbala University	758	2002
28.	Kufa University	1396	1987
29.	Basrah University	2784	1967
30.	University of Sumer	94	2014
31.	Basra University for Oil and Gas	87	2014
32.	Middle Euphrates Technical University	124	2014
33.	Southern Technical University	132	2014
34.	Central Technical University	353	2014
35.	Qadissuni University	888	1987
Total		33424	

Source: (MOHESR, 2016)

Next, the number of public universities and the number of academic staff for each university (population of the sample) was divided into three clusters (Faaeq, 2014) based on the geographic regions (South, Middle, and North) as shown in Table 3.3.

Table 3.3
Number of University Academic Staff in Each Region

Region	No. of Universities	No. of University's Academic Staff
North (Kirkuk Univ., Mosul Univ., Tikrit Univ., Diyala Univ., Samarra Univ., Anbar Univ. Nineveh Uni, Tall Afar Univ, Fallujah Uni, Hamdania Uni, Northern Technical Univ)	11	9896
Middle (Baghdad Univ., Islamia Univ., Mustansiriyah Univ., Nahrain Univ., Technology Univ., Babylon Univ., Qasim University, Jabir Ibn Hayyan Univ, Univ of Information and Communication Technology, Karkh University of Science, Ibn Sina University for Medical and Pharmaceutical Sciences.)	11	15165
South (Thiagaruni Univ., Wasit Univ., Misan Univ., Al-muthanna Univ., Kerbala Univ., Kufa Univ., Basrah Univ., Qadissuni Univ, University of Sumer, Basra University for Oil and Gas, Middle Euphrates Technical University, Southern Technical University, Central Technical University)	13	8363
Total	35	33424

The number of sample academic staff that entered into the sample scope for the present study as show in the Table 3.4. The number of universities in the Middle region is the highest and the number of academic staff there, 15165, is also the highest of all the universities, followed by the Northern region with 9896 staff members, and lastly, the Southern region with 8363 staff members.

Table 3.4

Proportions of the Sampling Universities and Probability Sampling of Universities

Area	Number of Public University	Probability Sampling of University	Number of Academic staff
North	11	1	9896
Middle	11	1	15165
South	13	1	8363
Total	35	3	33424

According to the Table 3.4 above, the research population under study is very large, which has encouraged the researcher to select a sample from the universities for the study. The probability sampling in the Middle region is one university out of eleven and one university out of eleven for the Northern region and one university out of thirteen from the Southern region. The results are: for the Middle region it is University of Baghdad; Mosul University is for the Northern region, while Basra University is for the Southern region. These universities have been selected for being the largest universities in terms of academic staff among the universities in the regions (Alzyoud, 2015) as shown in table 3.2. In addition, they are the oldest universities, and they have a good scientific reputation among Iraqi universities (MOHESR, 2016). The total academic staffs in all the three universities are 13707, according to the cited numbers (MOHESR, 2016), as illustrated in the subsequent table - 3.5.

Table: 3.5

Number of Academic Staff in Three Universities

No	University	Number Of Academic Staff	Area
1.	Baghdad University	6642	Baghdad
2.	Mosul University	4281	Mosul
3.	Basra University	2784	Basra
Total		13707	

Source: (MOHESR, 2016)

3.5.4 The Profile of The Targeted Universities

This section explains the background of the universities in Iraq selected for the present study, that is, University of Baghdad, Mosul University, and Basra University.

3.5.4.1 Baghdad University

Baghdad is the capital of Iraq and is the biggest city and also considered one of the major cities in the Middle East as well as an ancient city (Razak, 2008). Additionally, Baghdad is located in the center of Iraq (National Investment Commission, 2013). The area is approximately 1000 square kilometers (Razak, 2008). Baghdad University is also located in Baghdad (Baghdad University, 2016). Baghdad University is not only the largest scientific organization but also the first university that started teaching and training the technical and administrative high-level personnel to spread over to other Iraqi universities that were established later and the university also provided benefits to cadres of other governmental institutions.

The pioneering committee was set up in 1943 to examine the potential of establishing a university in Iraq and the first law passed the establishment of the University of Baghdad (Baghdad University, 2016) in September 1956. Since its inception, the university adhered to the requirements of national development plans through the admission of increasing number of students in different fields, development of new faculties, which currently consists of 24 colleges and 4 institutes of higher studies, namely Urban and Regional Planning, Laser and Plasma, Genetic Engineering, and Institute of Accounting and Financial Studies. These are supported by increasing graduate disciplines, followed by an increase in the number of students admitted (Baghdad University, 2016). Finally, the number of academic staff in Baghdad University was 6642 (MOHESR, 2016).

3.5.4.2 Mosul University

Nineveh province, with a rich history dating back to the fifth millennium BC and being a farming village, was inhabited by ancient humans. Nineveh province, located in northern Iraq and its center being Mosul, the second largest city in Iraq, at a distance of 402 km from Baghdad, has a population of about 3 million people. The city of Mosul is home to the University of Mosul and it was founded in April 1967. The number of colleges is 23, and the number of centers 6. The university involves a number of academic staffs, estimated to be 4281, involves professor 196, assistant professor 1014, lecturers 1261, and assistant lecturers 1810. The University provides valuable service to Iraq by supplying to other sectors graduate students and qualified workforce, as well as

the university contributes to the economic development and the development of the country through research and scientific studies (Mosul University, 2016).

3.5.4.3 Basra University

Basra is the third largest city in the Republic of Iraq and the center of the province of Basra, located in the far south of Iraq on the west bank of the Shatt al-Arab, a water crossing, which consists of the confluence of the Tigris and the Euphrates in Qurna, 110 kilometers north of the city of Faw. The population of the city of Basra amounted to be 1.2 million people in 2014 (Basra University, 2016).

However, Basra University was founded in 1964, as the final result and the inevitability of expansion that took place in the fields of higher education and scientific research in the country and to meet the need of the southern region and the Arabian Gulf energies and technical staff and management. The study began in that year in the four faculties (arts, law, engineering and science). The university completed its identity as completely independent from Baghdad University to become a scientific edifice. University of Basra has seen a significant expansion depending on the requirements and needs of the local community and even to become a regional center containing eighteen faculties of scientific, humanities and six scientific and research centers (Basra University, 2016). The total academic staff at Basra University in 2016 was 2784, according to the website of Basra University (2016).

3.5.5 Sample Size

Prior to collecting and assessing the sample types from the general population, it is required to determine the appropriate sample size and in this regard, when doing statistics to a sample, the researcher has to conduct an estimation of the population size values (Saunders, Lewis & Thornhill, 2009). According to Thornhill (2009), when calculating sample statistics, the population size has to be estimated and based on the study by Sekaran and Bougie (2011), the sample size has to be based on distinct elements including the type of sample needed, the scholar's time and budget, and the estimated precision and level of confidence. Thus, in this study, the population size is 13,707 academic staff working in three higher learning institutions. Through intricate calculation, the sample size was found to be 375 academic staff according to the table of sample size established by Sekaran (2006). Lastly, the number was selected according to the systematic random sampling technique because the researcher has a list of all academic staff of the three universities. Saunders, et al. (2009) ascertain that this sort of sampling is convenient to guide the research to a representative sample. Based on this recommendation, this study managed to employ 700 academic staff from the target population (Alzyoud, 2015; Faaeq, 2014).

Based on the above discussion, a sample of 700 staff members is targeted to be technically acceptable, completed, and returned (Faaeq, 2014). However, the recorded response rate for the universities' academic staff in past studies is between 40-60% (Al-Majali, 2011). Additionally, the results that are derived from a large sample could be generalized to the whole population (Hair, Black, Babin, Anderson & Tatham, 2006).

Based on this evidence, the researcher used seven hundred (700) as the number of the sample size.

In addition, the sample size is calculated with the help of the G*Power 3.1 software in that it specifically calculates the function of user-specified values for the detection of the population effect size (f^2), required significance level (α), the required statistical power ($1-\beta$) and the number of total predictors within the study model (Faul, Erdfelder, Lang & Buchner, 2007). Hence, for the determination of the present study's sample size, a priori power analysis was carried out with the use of G*Power 3.1 as suggested by Faul et al. (2007). This study's sample size was determined using four predictor variable equations. In addition, aligned with the recommendations provided by Cohen (1977), standards are employed to calculate the sample size used for the study, and they are: effect size ($f^2 = 0.15$), significance alpha level ($\alpha = 0.05$), desired statistical power ($1-\beta = 0.95$), and the total number of predictors (4).—The statistical test results show that for multiple regression based statistical analysis, 129 is considered as the appropriate sample size (see Figure 3.2). The results show that the statistical power for detecting the study's effective sizes was obtained at the recommended value of 0.95, which is consistent with the suggestion provided by Cohen (1977).

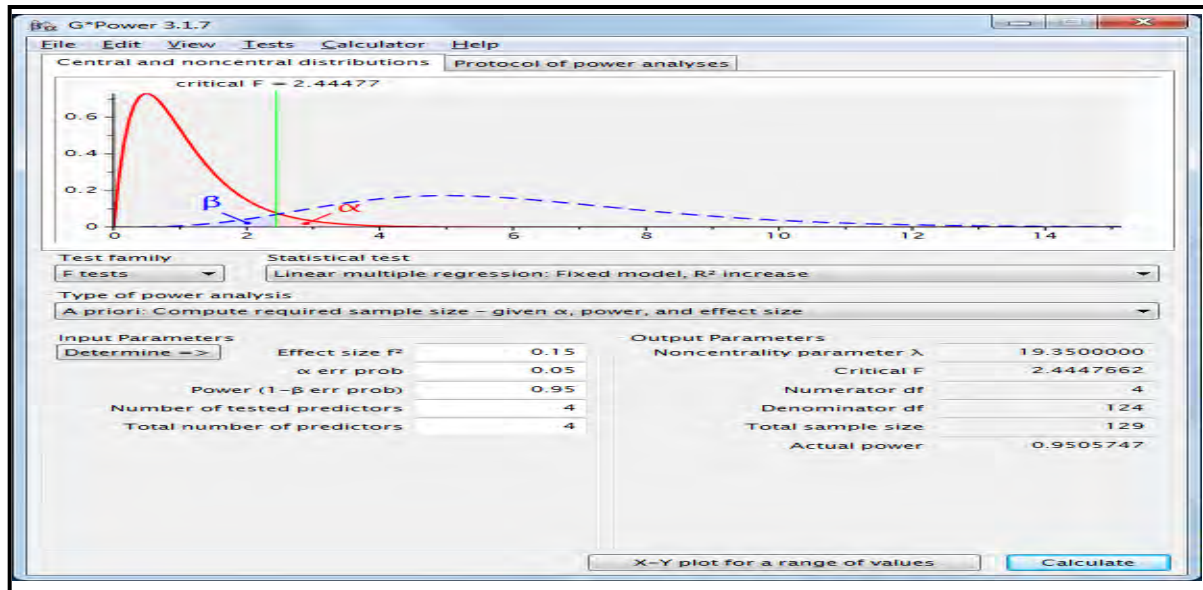


Figure 3.2: Statistical G* power

Following Roscoe's (1975) rule of thumb, the sample study was determined and deemed appropriate. According to him, in majority of studies, a sample between 30 and 500 is suitable. Supporting this rule of thumb, Hair, Black, Babin and Anderson (2010) revealed that in multivariate studies, the size of the sample should be several times, preferably 10 or more, higher than the research variables number. Accordingly, in this study, there are five variables and thus, the required sample should be 50 or over. Also, Babbie's (1973) study indicated that 30% of response rate is an acceptable rate in the context of social research survey, which is what this research is about.

3.5.6 Systematic Random Sampling

A random sample of 700 academic staff respondents was obtained systematically from three Iraqi universities. The use of systematic random sampling was geared towards minimizing the potential for human bias when selecting cases to be a part of the sample

and it was a good choice for its simplicity. In this regard, Gay and Diehl (1996) related that systematic random sampling entails six steps; first, the population is defined (13707), and second, the desired sample size is determined (700), This is followed by the third step which entails the determination of the population list – where in this study, the list was acquired from the universities. Fourth, the K is determined by dividing population by the desired sample size. The K in this study equals to 20 (13707/700). In the fifth step, the total respondents for every university (see Table 3.6) is determined and lastly, in the sixth step, the researcher picks a random number from the list of academic staff from every university as the starting number as illustrated by Alzyoud (2015). Number 8 is the first number on the list of academics at the University of Baghdad, twelve number is the first number on the list of academics at the University of Mosul and the sixteen number is the first number on the list of academics at Basra University. Then every 20th name is automatically in the sample. Before the distribution of the questionnaire, probability sampling was determined by following this formula:

Probability sampling of academic staff = $NP / T * NS$

“(NP = Total number of academic staff in each university; T = Total number of academic staff in all universities; NS = the number of sample to be distributed)”

(Adapted from Alzyoud, 2015)

Table 3.6

Distribution of Respondents for Each University

Region	University	% of Sampling	Total Number of Academic Staffs (N = 13707)	Total Respondents (S = 700)	Systematic Random
Middle	Baghdad University	49 %	6642	339	20th
North	Mosul University	32%	4281	219	20th
South	Basra University	19%	2784	142	20th
Total		100%	13707	700	

For example: $6642 / 13707 * 700 = 339$

3.6 Operational Definition

According to Zikmund, Babin, Carr, and Griffin (2013), operational definitions of operationalization is the process of recognizing the scales that correspond to the difference in a concept to be involved in the process of the study, which can also indicate the measurement of variables. The following sub-sections provide the operational definitions and measurements for the dependent variable and independent variables, which will be utilized in this study.

3.6.1 Innovative Work Behavior

Innovative work behavior is a practice which refers to the behavior of staff to the generation, promotion and application (within a role, group, or organization) of new ideas, products, processes, service, and procedures (De Spiegelaere et al., 2012).

3.6.2. Extrinsic Motivation

Extrinsic motivation is described as the behavior that is driven by external rewards, such as money, promotion, recognition, etc. (Ryan & Deci, 2000).

3.6.3 Psychological Empowerment

Psychological empowerment is defined as increased intrinsic task motivation, and the definition identifies four cognition elements as the basis for employee empowerment which are: meaning, competence, self-determination, and impact, reflecting an individual's orientation to his or her work (Spreitzer, 1995).

3.6.4 Transformational Leadership

Transformational leadership is defined as leadership that generates awareness and acceptance among subordinates, enables his followers to develop, encourages them to go beyond their needs to accomplish the organizational goals and motivates them through leader's behaviors, which include idealized influence, inspirational motivation, intellectual stimulation and individualized consideration (Avolio & Bass, 2004).

3.6.5 Quality Culture

Quality culture refers to shared set of norms, values, concepts, beliefs and other rules among individuals or groups working in the organization that relates to organizational quality (e.g., improvement orientation, teamwork orientation, mission and goals orientation, management style and personal influence/performance) (Detert, Schroeder & Mauriel, 2000).

3.7 Measurement

Measurements have an important role in any study, and without the appropriate measurements, the hypothesis to be derived from variables cannot be tested. In other words, measurement allows the individual to give a note of the behavior or event (Sekaran, 2006). Rating scales are used in this study to measure the strength of agreement to the variables under study. Five-point scale is used, ranging from “1” (strongly disagree) to “5” - strongly agree. The five-point scale was adopted because it is the most common scaled-response form used in recent researches, and has the ability to provide the most accurate measurement (Hair et al., 2010). The questionnaire was drawn to gather information on variables of the study, namely: extrinsic motivation, psychological empowerment, transformational leadership, quality culture and innovative work behavior. The measurements of variables are described in the next sub-sections.

3.7.1 Innovative Work Behavior

Innovative work behavior was measured by nine items based on Scott and Bruce's (1994) measure for individual innovative behavior in the workplace. Drawing on

Kanter's (1988) work the stages of innovation are generation, promotion, and implementation. Many previous studies used the measurement of one dimension to measure innovative work behavior (Agarwal, 2014; Scott & Bruce, 1994; Bunce & West, 1995; Spreitzer, 1995; Basu & Green, 1997; Scott & Bruce, 1998; Janssen, 2000; Kleysen & Street, 2001; Ghani et al., 2009). Therefore, this study also uses a one-dimension measure of innovative work behavior. The measurement by Scott and Bruce (1994) was later referred to by Janssen (2000) in which a nine items scale was built for innovative work behavior with a reported reliability alpha value of 0.92. This study thus adapted the work of Janssen (2000) in measuring the innovative work behaviour among academic staff in HE in Iraq. The items are used as measure of innovative work behavior as mentioned in appendix A.

3.7.2 Extrinsic Motivation

The previous studies measured extrinsic motivation by different items (Cho & Perry, 2012; Demir, 2011) according to their field of study. In this study, eight items are adapted from Miao, Evans and Shaoming (2007) drawing from Amabile et al. (1994), and the value for this scale was 0.74. This study deals with extrinsic motivation as uni-dimension build following Yousaf et al. (2015), and uses a scale ranging from “strongly disagree” (1) to “strongly agree” (5). The eight items developed for this study are as mentioned in appendix A.

3.7.3 Psychological Empowerment

Following Spreitzer's (1995) study, psychological empowerment was measured by 12 items. It included four dimensions, namely, meaning, competence, self-determination, and impact, with three items used to measure each dimension of psychological empowerment. The four dimensions are united to build an overall construct of psychological empowerment to produce the proactive essence of employee empowerment (Spreitzer et al., 1999) and provide a sufficient set of cognitions for understanding psychological empowerment construct (Koberg et al., 1999; Seibert, Wang & Courtright, 2011; Thomas & Velthouse, 1990). The absence of any single dimension reduces the overall degree of empowerment feeling (Spreitzer, 1995; Thomas & Velthouse, 1990).

Some evidence introduced the use of unitary psychological empowerment construct rather than sub-dimensions (Martin & Bush, 2006; Seibert et al., 2011) because overall fit statistics showed a goodness of fit value of psychological empowerment construct (Spreitzer, 1995). In accordance with prior researches, such as, Boonyarit, Chomphupart, and Arin (2010), Givens (2011), Harris, Wheeler and Kacmar (2009), Huang, Iun, Liu and Gong (2010), Jing-zhou, Xiao-xue and Xia-qing (2008), Kuo, Lin and Lai (2010), Martin and Bush (2006), and Seibert et al. (2011), a single construct is used to measure psychological empowerment in the current study.

Additionally, psychological empowerment measurement has been applied and explored to be valid in a variety of different levels and contexts, like the manufacturing industry (Spreitzer, 1996), hospitality industry (Corsun & Enz, 1999; Sparrowe, 1994), insurance

industry (Spreitzer, 1995), health care (Koberg et al., 1999; Kraimer, Seibert & Liden, 1999) and telecommunication industry (Gagne, Senecal, & Koestner 1997). Aside from the individual level, psychological empowerment is found to be valid in team level in many organizations (Kirkman et al., 2004; Seibert, Silver, & Randolph, 2004). Consequently, it is motivating to find that results about empowerment appear to generalize across many different work contexts. According to Cekmecelioglu and Ozbag (2014), the value of scale was 0.86. A five-point Likert scale provided responses ranging from “1” (strongly disagree) to “5” (strongly agree). The questions used are listed, as given in appendix A.

3.7.4 Transformational Leadership

A 20-item scale adopted from Multifactor Leadership Questionnaire Form 5X was used to measure transformational leadership and they include idealized behaviors, idealized attributes, inspirational motivation, intellectual stimulation and individualized consideration (Bass & Avolio, 1995). The scales were later converted by Afsar et al. (2014) into one higher-order factor that is aligned with the empirical findings of Avolio et al. (2004) and Bono and Judge (2003) the related theoretical developments of transformational leadership (Bass, 1999). The employees were requested to indicate the frequency of their leaders' display of behaviors on a 5-point Likert scale that ranged from 1 depicting strongly disagree to 5 depicting strongly agree (See Appendix A for items).

3.7.5 Quality Culture

Quality culture factor is adapted from Jallow (2003). In addition, quality culture questions are constructed by means of those established by prior studies (Manley, 1998; Detert, Schroeder & Cudeck, 2003; Alotaibi, 2013). However, quality culture measurement has been applied and discovered to be valid in a variety of different levels and contexts, like the construction industry (Alotaibi, 2013) and employees in private sector company (Kitapci et al., 2009). Many previous studies used quality culture as union dimension (Alotaibi, Yusoff & Islam, 2013; Al-Otaibi, 2015; Kausar, 2014; Alotaibi, 2013; Lam, Gary, Poon & Chin, 2006; Kitapci et al., 2009). A five-point Likert scale provided responses ranging from “1” (strongly disagree) to “5” (strongly agree). The questions used are as mentioned in appendix A.

3.8 Questionnaire Pre-Test

This section and the sub-sections that follow detail the presentation and discussion of the study’s pre-test and pilot study that involves instrument measurement. Specifically, a pre-test is used to assess the measurement instrument to determine potential issues that respondents may face when completing it. Pre-testing validates the measurement instrument’s contents (Tojib & Sugianto, 2006) in that content validity is established through it. Content validity is described as the suitable degree of all items used in the measurement instrument (Zikmund et al., 2010) and it is ensured by involving the assistance of 6 lecturers and high ranking professionals in HRM (professors and assistant professors) in Malaysia and Iraq. On the basis of the feedback they provided,

the items were enhanced in terms of sentence structure, word choice and item arrangement, among others.

The experts' comments and suggestions concerning the clarity, relevance and question consistencies were taken under consideration and the survey instrument was modified accordingly to ensure high rates of response. On the final translation copy of the questionnaire, a final pre-test was conducted.

3.9 Questionnaire Translation

The back translation method of translation is used to translate the questionnaire into Arabic language in order to reach accurate equivalence in both the language versions of the questionnaire (Brislin, 1970). In this study, two bilingual experts (English/Arabic) conducted the translation steps to guarantee that the Arabic version of the questionnaire was equivalent to the English one. After the original English version was translated into Arabic by an expert, the Arabic version was translated back to English by the other expert to minimize or eliminate differences in the two versions. (See appendix A, B and N).

3.10 Pilot Study

A pilot test determines the reliability of search tool to ensure the accuracy and consistency of the responses collected through the questionnaire (Hair et al., 2010). In addition, Zikmund (2003) described reliability as the degree to which the measurements are error-free. High reliability refers to lowest error contrast, indicating that if the scale pointed to a high value, there is high and good reliability (Sekaran, 2003). The pilot

study must be conducted before the actual distribution of questionnaires to respondents. The purpose of the pilot study lies in three tasks: to evaluate the reading and clarity of the questionnaire, to test the adequacy of the instrument to measure the concepts, and to disclose internal consistency and reliability of the questionnaire (Zikmund, 2003). This study uses the reliability of Cronbach Alpha analysis.

However, a sample size for a pilot study is traditionally smaller, consisting of 15 to 30 elements, though it can increase substantially depending on peculiarities (Malhotra & Galletta, 1999). Fifty questionnaires were distributed among academic staff in Baghdad University. However, 33 questionnaires were completed and returned, but only 31 were retained as usable after two of them were removed as a result of various errors, indicating a response rate of 62%. The pilot study was conducted in the month of February, 2016 and the process lasted for four weeks. However, different tests of reliability were conducted; the common method used by researchers is the internal consistency reliability test (Litwin, 1995). It is the extent to which items of a particular construct converge together and are independently capable of measuring the same construct; and at the same time the items are correlated with each other.

The study conducted Cronbach's alpha coefficient test to examine the internal consistency reliability as proposed by Sekaran and Bougie (2010). Table 3.7 lists the results obtained and it is evident from the values that the entire measures achieved high reliability coefficient that differ from 0.732 to 0.918. Based on research experts, like Hair et al. (2006), Nunnally (1967) and Sekaran and Bougie (2010), reliability coefficient value of 0.60 is average, and 0.70 and over is high.

Table 3.7

Summary of Pilot Test Reliability Results

Construct	No Of Items	Cronbach's Alpha
Extrinsic Motivation	8	0.731
Psychological Empowerment	12	0.906
Transformational Leadership	20	0.918
Quality Culture	28	0.883
Innovative Work Behavior	9	0.897
Total	77	

3.11 Data Collection

A questionnaire was used to collect data from respondents in Iraqi HE from three universities, namely Baghdad University, Mosul University and Basra University. According to the recommendations by Al-Hassani, (2014), it is discussed that e-surveys may lead to a better response rate and the distribution of questionnaire by e-surveys method to collect data supplies an opportunity to overcome the disadvantages of manual data collection methods and to enhance the sample's response rate (Saunders, Lewis & Thornhill, 2012). This study uses the E-mail to distribute the questionnaire as the main technique for data collection, following Bammens et al (2015); and Aquino, Freeman, Reed, Lim and Felps (2009). However, this study anticipated a number of problems and hindrances prior to data collection. For example, unavailability of internet, non-response, lack of experience in dealing with online survey, etc.

Therefore, though the researcher had sent the questionnaire via E-mail, the researcher did not get enough responses even in one month; thus, the researcher was forced to seek help from research assistants for questionnaire distribution and data collection in three universities where three lecturers, who are from Baghdad University, Mosul University and Basra University, had agreed to carry out this task. Therefore, the researcher sent the questionnaires to these research assistants via email and a list of the academic staff's names. In addition, the researcher transferred an amount of money for the research assistants to facilitate their mission. The researcher was in contact with them to track the data collection process and urged them to fulfill the work as soon as possible. The researcher conducted several contacts with a number of respondents who were selected randomly from the sampling to make sure that the questionnaire has reached them correctly, in addition to a number of respondents, contact with the researcher to clarify and answer some questions. After three months the researcher received (379) responses by E-mail to pursue the data analysis.

The survey was conducted during the period from March, 2016 to July, 2016. The data were collected from all three public universities' academic staff during the same period of time. However, the questionnaire forms were attached with cover letter, terms and definitions of the research. A questionnaire has several advantages in this study in terms of the following; (a) the technique is relatively inexpensive as compared to interviews; it saves time, human and financial resources; (b) it offers greater anonymity, and, (c) it increases the likelihood to obtain accurate information (Kumar, 2011).

3.12 Data Analysis

Bambale, (2013) described PLS-SEM technique, a technique chosen to be used in this study for data analysis, as a second-generation structural equation modeling. It is described by Hair et al. (2010) as a combination of statistical modeling examining the relationships of several latent constructs. As mentioned, this study makes use of PLS-SEM as the major analysis method owing to the following reasons: PLS-SEM is suitable to be employed in real-world applications, particularly when the model is riddled with complexity (Fornell & Bookstein, 1982). Specifically, the soft modeling assumptions of PLS method (its flexibility in developing and validating complex models) enables its estimation of large complex models (Akter, Ambra & Ray, 2011). Another advantage lies in its provision of more meaningful and valid outcomes as its counterparts (e.g., the SPSS) often lead to unclear outcomes and call for several individual analyses (Bollen, 1989).

More importantly, in the present study, the relationships among five models (EM, PE, TL, QC and IWB) within the structural model are examined and due to this complexity, the use of PLS-SEM method is suitable for prediction. There is also the need to analyze moderating effects. PLS-SEM is similarly employed for the analysis of causal relationships between the latent variables. Such relationships shed light on the variables' changes (exogenous constructs) that influence other variables (endogenous constructs). In this background, SEM has become as one of the popular conditions considered in the choice of research methodologies, especially in studies that address issues related to social and behavioral sciences. SEM comprises of two major functions, namely the

measurement (the things that need measurement, their measurement, and the way the conditions of reliability and validity criteria are met), and causal relationships among variables along with their explanations as the variable is characterized with complexity and lack of observability (Hair et al., 2010).

3.13 Summary

This chapter describes the research methodology of the study. This research is classified as an empirical study, where data collection is conducted through the E-mail questionnaire method. The respondents involved comprise of HE academic staff in Iraq, particularly from three universities (Baghdad University, Mosul University and Basra University). The sampling of academic staff is done systematically and randomly from the population. The questionnaire instrument and content are validated by a panel of experts. Added to this, the present study uses PLS-SEM technique to analyze data. Subsequently, chapter four focuses on the findings of the study.

CHAPTER FOUR

Results

4.1 Introduction

In this chapter, the results of the analyzed data through PLS path modeling are presented. First, the chapter is based on the pilot study results that confirm the measures reliability and validity, then, the chapter presents the initial data screening and analysis. Second, the descriptive statistics results for the latent variables are presented, after which the major results of the study are presented in two parts; in the first part, the measurement model is assessed to confirm the individual item reliability, internal consistency reliability, convergent validity and discriminate validity. The structural model's results are illustrated in the second part and these include the significance of the path coefficients, the R-squared level values, effect size, and predictive relevance of the model. Finally, the PLS-SEM analysis examined the moderating effects of quality culture on the structural model are discussed and demonstrated.

4.2 Analysis of Survey Response

4.2.1 Response Rate

The study respondents totaled 379 academic staffs that were selected from three public universities in Iraqi higher education to whom the questionnaires were distributed to and retrieved from. The universities included Baghdad University, Mosul University, and Basra University. Out of the 379 questionnaires only 315 were deemed ready for

analysis (see the Table 4.1) – where 64 responses were dropped because of two reasons; first, because of incomplete cases, where several data per case were missing (41 cases), and second, univariate and multivariate outliers caused some questionnaires to be dropped (23 cases). According to Hair, Anderson, Tatham and William (1998), it is important to exclude these cases from analysis as they are not representative of the sample.

Table 4.1

Questionnaire Distribution and Decisions

Item	Frequency	Percentage %
Distributed questionnaires	700	100%
Returned questionnaires	379	54%
Rejected questionnaires	64	9%
Usable questionnaires	315	45%

Therefore, 315 respondents made up the study sample constituting a rate of response of 45% and covering a good range of Iraqi higher education academic staff in three universities. This is a sufficient rate based on the argument brought forward by Sekaran (2003), stated that a 30% rate of response is an acceptable one in survey studies. This rate of response is also consistent with adequate rate suggested by other studies (Bartlett, Kotrlik & Higgins, 2001; Hair et al., 2010) who illustrated that a sample size has to be between 5 and 10 times the number of study variables. In this study, the number of study variables is 5 and thus, a sample of 50 is sufficient for analysis. Moreover, the analysis tool used in this study is PLS, which requires only 30 responses as the least required responses (Chin, 1998). In addition, Hair et al. (2014) stated that researchers

may use other programs like the G*Power to conduct power analyses that is distinct to their model structure. Therefore, in this study, based on the G*Power program, 129 respondents are sufficient and thus, a total of 315 responses is greatly adequate for the purpose of analysis (See Appendix - C).

4.2.2 Test of Non-Respondent Bias

According to studies in literature, non-respondents are distinct from their responding counterparts in terms of their attitudes, behaviors, personalities, motivations, and as such, any or all of the aforementioned may influence the study results (Malhotra, Hall, Shaw & Oppenheim, 2006). Thus, the researcher tested for non-response and response bias with the help of the t-test that compares the similarities between mean, standard deviation and standard error mean. Added to this, the researcher also made use of Levene's test of early and late responses on the study variables (extrinsic motivation, psychological empowerment, transformational leadership, quality culture and innovative work behavior) among Iraqi higher education academic staff.

Empirical studies in literature that were conducted by Churchill and Brown (2004) and Malhotra et al. (2006) contended that late respondents may be employed rather than non-respondents due to the fact that the first group may have failed to respond without the follow-ups. They added that non-respondents have similar characteristics with late respondents. In the present study, according to Goail, (2014), the sample was divided into two based on the retrieval of questionnaires - early respondents and late respondents, with the first group being the respondents who returned the questionnaires

within three months after its distribution (203 respondents), and the second group being the respondents that returned them the last month after the distribution (112 respondents). As mentioned, descriptive and Levene's test were carried out to confirm equality of variance on the study's main variables.

However, table 4.2 displays the results of the independent-samples t-test and it shows that the equal variance significance values for every variable exceeded 0.05 significance level of Levene's test (Pallant, 2010; Field, 2009). This indicates that the equal variance assumptions between early and late respondents were not breached, and it can be concluded that non-response bias issue was non-existent in this study. In addition, according to the recommendation forwarded by Lindner and Wingenbach (2002), because this study achieved a rate of response of 45%, it can be concluded that the issue of non-response bias does not seem to be a significant one. Detailed information of the non-respondent bias test in terms of the descriptive statistics and Levene's test are attached in Appendix D.

Table 4.2

Test of Non-Respondent Bias

Levene's test							
Variables	Group	N	Mean	Std. Deviation	Std. Error Mean	F	Sig.
Extrinsic Motivation	Early	203	3.785	.805	.056	30.402	.850
	Late	112	3.763	1.262	.119		
Psychological Empowerment	Early	203	3.884	.621	.043	2.040	.145
	Late	112	3.975	.792	.074		
Transformational Leadership	Early	203	3.543	1.050	.073	.110	.741
	Late	112	3.607	1.013	.095		
Quality Culture	Early	203	3.526	.729	.123	1.285	.237
	Late	112	3.207	.659	.147		
Innovative Work Behavior	Early	203	3.911	.595	.041	.055	.816
	Late	112	3.841	.670	.063		
Total		315					

4.2.3 Common Method Variance Test

Common method variance (CMV), often referred to as mono-method bias, is the variance that is related to the method of measurement as opposed to the construct under investigation (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). Generally, researchers are in consensus that common method variance is of importance to scholars that employ self-report surveys owing to the issues involved (Podsakoff et al., 2003; Spector, 2006).

For instance, Conway and Lance (2010) related that common method bias exaggerates relationships between variables when measured through self-reports. Along a similar line, Organ and Ryan (1995) conducted a meta-analysis review of 55 studies concerning attitudinal and dispositional predictors of organizational citizenship behavior and found that the use of self-report surveys are related with high correlations because of common method variance.

In the present study, several procedural remedies were used to temper the CMV effects as suggested by Podsakoff et al. (2003), Podsakoff, MacKenzie and Podsakoff (2012), Podsakoff and Organ (1986) and Viswanathan and Kayande (2012). In the first step, the evaluation apprehension is minimized by informing the participants of the absence of right or wrong answer to the items in the questionnaire and that their answers will be kept confidential during the process of study. The second step entailed the enhancement of scale items to minimize method bias, where unclear concepts were avoided in the questionnaire and where additional explanation were provided for complex concepts that could not be avoided. The scale items were further improved by writing the survey in simple, specific and concise statements.

Aside from the discussed procedural processes, the researcher also used Harman's single factor test proposed by Podsakoff and Organ (1986) to investigate the common method variance. This entailed the exposure of the study variables to exploratory factor analysis following which the results of the un-rotated factor solution were examined to calculate the number of factors required to be included in the variables variance (Podsakoff & Organ, 1986). In particular, Harman's (1967) single factor test has its

basis on the primary assumption that a significant amount of CMV may result in a single-factor or one general factor that would explain covariance of predictor and criterion variables (Podsakoff & Organ, 1986).

Therefore, following the recommendation of Podsakoff and Organ (1986), the researcher exposed the entire items to principal components factor analysis and found five factors to explain the variance, with single factor constituting 32% of the total variance (<50%) (Kumar, 2012). Added to this, the results showed that no single factor explained for the majority of covariance in the predictor and criterion variables (Podsakoff et al., 2012), indicating that common method bias was non-existent and thus, the possibility of inflation of relationships between the variables was not an issue. (See Appendix L).

4.2.4 Demographic Profile of the Respondents

This section provides a description of the respondents' demographic profile with the inclusion of gender, age, work experience, academic qualification and position title as presented in Table 4.3.

Table 4.3

Demographic Characteristics of the Respondents

Description	Frequency	Percentage
Gender		
Male	175	55.6
Female	140	44.4
Age		
20-29 years	24	7.6
30-39 years	136	43.2
40-49 years	108	34.3
50-59 years	27	8.6
More than 60 years	20	6.3
Work Experience		
1-5 years	31	9.8
6- 10 years	102	32.4
11- 15 years	92	29.2
16-20 years	47	14.9
More than 20 years	43	13.7
Academic Qualification		
Master	176	55.9
PhD.	139	44.1
Position Title		
Assistant lecturer	122	38.7
Lecturer	98	31.1
Assistant professor	63	20
Professor	32	10.2
Total	315	

The above table shows that majority of the respondents in the study sample (175 corresponding to 55.6%) were males while the others (140 corresponding to 44.4%) were female respondents. As for their ages, majority of the participants (136

corresponding to 43.2%) fell in the age group of 30-39 years of age, followed by the group of 40-49 years of age (108 respondents corresponding to 34.3%), the group of 20-29 years of age (24 respondents corresponding to 7.6%), and the group of 50-59 years of age (27 respondents corresponding to 8.6%). The least number of respondents fell into the group of over 60 years of age (20 respondents corresponding to 6.3%).

Moving on to their work experience, 102 respondents constituting 32.4% of the sample had 6-10 years of experience, followed by 92 respondents constituting 29.2% of the sample with 11-15 years of experience, and 47 respondents constituting 14.9% of the sample with 16-20 years of experience. Moreover, 43 respondents constituting 13.7% of the sample had over 20 years of experience, and lastly, 31 respondents constituting 9.8% of the sample had 1 to 5 years of work experience.

According to the results in Table 4.3, 176 of the respondents (55.9%) held master degrees and 139 (44.1%) held PhD degrees. Of the respondents 122 (38.7%) were assistant lecturers, 98 (31.1%) were lecturers, 63 (20.0%) were assistant professors, and lastly 32 (10.2%) were professors (for details see Appendix E).

4.3 Data Screening and Preliminary Analysis

Data screening is deemed required prior to the application of the required data analysis method, as data distribution directly affects the choice of data analysis methods and tests (Byrne, 2010). And despite the fact that PLS is used in this study to evaluate the quality of the model (measurement and structural model) and to examine the hypotheses, where the method is not concerned with data distribution, the researcher still felt it imperative

to employ data screening to determine the nature of data distribution. This procedure entails the treatment of missing data, outliers, normality, linearity, and multicollinearity tests.

4.3.1 Treatment of Missing Data

Missing data is considered to be a significant issue in applied quantitative studies as it has the potential to negatively affect the outcome (Cavana, Delahaye & Sekaran, 2001). Additionally, missing data is important as missing value may lead to the ineffective running of PLS-SEM. Consequently, in this study 16 questionnaires were found to contain small number of missing values. In total, there were 26 missing values, ranging from one to five in each questionnaire. The missing values were treated using SPSS by replacing them with mean substitution (Hair et al., 2006). Hence, the 26 missing values were replaced with the mean of nearby values, which led to improved correlations. (See Appendix F).

4.3.2 Assessment of Outliers

Outliers refer to observations that are characterized as having distant numerical values in comparison to the other data set (Byrne, 2010). Several methods have been proposed for the detection of outliers including classifying data points on the basis of observed Mahalanobis distance from the research expected values (Hair et al., 2006). This treatment is argued to serve as an effective means of outliers' detection by setting some of the predetermined threshold that will help in defining whether or not a point could be deemed as an outlier (Hair et al., 2006).

This study employed the chi-square statistics table as the threshold value for the empirical optimal values. The value was established at 121.1 and related to the 77 measurement items at the 0.001 level of significance. According to Hair et al. (2010), a new variable may be created in the SPSS excel and referred to as response in order to represent all variables from the beginning to the end. The Mahalanobis is achieved by conducting a simple linear regression analysis by selecting a newly created response number as the dependent variable, and separating all the measurement items from the demographic variables and referring as the independent variables. Therefore, a new output known as MAH_1 was used to compare between the chi-square as depicted in the Appendix (G). On the basis of the MAH_1 output, a total of 23 cases were highlighted as outliers as the output was greater compared to the threshold value (121.1) and were thus dropped from the dataset. Sequential to the outlier's treatment, the final study analysis was carried out on the remaining 315 data samples. (See Appendix G).

4.3.3 Normality Test

In literature, authors have generally assumed that PLS-SEM furnishes accurate estimations of the model even in cases characterized as extremely non-normal (Cassel, Hackl & Westlund, 1999; Reinartz, Haenlein & Henseler, 2009; Wetzels, Schroder & Oppen, 2009) but this assumption may not be true. In a recent study by Hair, Sarstedt, Ringle and Mena (2012), researchers have to perform data normality test. Also, highly skewed or kurtosis data can influence the estimates of the bootstrapped standard error by inflating them (Chernick, 2008). This in turn could lead to the underestimation of the

statistical significance of the path coefficients as argued by Dijkstra (1983) and Ringle, Sarstedt and Straub (2012).

Therefore, in this study, a graphic method is employed to confirm data normality as recommended by Tabachnick and Fidell (2007). Moreover, in a significant number of samples of 200 or over, the distribution of data shape should be viewed graphically as opposed to testing its skewness and kurtosis statistics values (Field, 2009). This is because a significant number of samples lessens standard errors, and inflate the skewness and kurtosis statistics values and thus, a graphic method of normality test seems more logical compared to the use of statistical methods (Field, 2009).

In this background, this study followed Field's (2009) recommendation and employed a histogram and normal probability plots to confirm the non-violation of normality assumptions. The data collected for the present study follows the normal pattern as presented in Figure 4.1, where the bars on the histogram followed a near normal curve. Figure 4.1 confirms the non-violation of the normality assumptions in the present study.

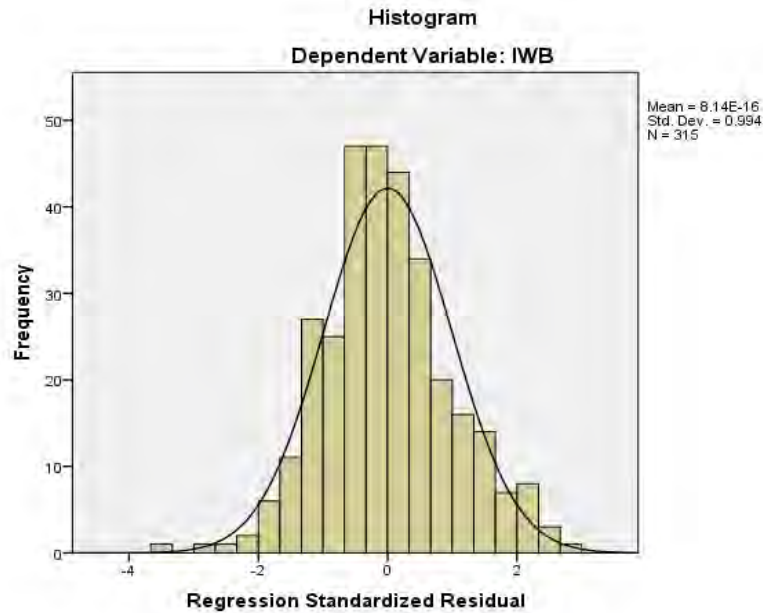


Figure 4.1: Histogram and Normal Probability Plots

4.3.4 Test of Linearity

The relationship of the dependent variable was examined by using a linearity test to predict the direction of hypothesis, where a positive value depicts positive relationship. In this regard, Hair et al. (2006) recommends the use of partial regression plot for each variable in cases, with more than a single independent variable suitably representing the equation. Thus, P-P regression plot of standardized residual plot was formed and investigated for every independent variable relationship with the dependent variable, and a normal distribution was found (see Appendix H for a graphical representation of the linearity test).

4.3.5 Multicollinearity Test

Multicollinearity is described as a case wherein one or more exogenous latent constructs become significantly correlated and the presence of multicollinearity among exogenous latent construct may cause distortion of the regression coefficients and their statistical significance tests as evidenced by Chatterjee and Yilmaz (1992) and Hair, Black, Babin, Anderson and Tatham (2006). More importantly, multicollinearity contributes to the standard errors of the coefficients and ultimately the non-significance of the coefficients (Tabachnick & Fidell, 2007). For multicollienarity detection, this study employed two methods recommended by Chatterjee and Yilmaz (1992) and Peng and Lai (2012). The first method entails the examination of the correlation matrix of the exogenous latent constructs, where correlation coefficient of 0.90 and over confirms the presence of multicollinearity (Hair et al., 2010). The correlation matrix of the exogenous latent constructs is presented in Table 4.4.

Table 4.4

Correlation Matrix of the Exogenous Latent Constructs

NO	Latent Construct	1	2	3
1	Extrinsic motivation (EM)	1.000		
2	Psychological empowerment (PE)	.22**	1.000	
3	Transformational leadership (TL)	.15**	.17**	1.000

Note: ** Correlation is significant at the 0.01 level (1-tailed).

Table 4.4 shows the correlations between exogenous latent constructs that are less than the suggested threshold value of 0.90 or higher indicating that such constructs are independent and not highly correlated.

The second method entails the use of variance inflated factor (VIF), tolerance value and condition index for the detection of multicollinearity. In this case, multicollinearity is said to be an issue if the VIF value exceeds 5, if tolerance value is lower than 0.20 and if the condition index exceeds 30. The VIF values, tolerance values and condition indices for the exogenous latent constructs are displayed in Table 4.5.

Table 4.5

Tolerance and Variance Inflation Factors (VIF)

Latent Construct	Collinearity Statistics		
	Tolerance	VIF	Condition Index
EM	0.918	1.09	1.000
PE	0.871	1.148	7.906
TL	0.957	1.045	9.320

It is clear from the above table, that the issue of multicollinearity is non-existent among exogenous latent constructs as the entire values of VIF are less than 5, tolerance values are more than 0.20 (Hair et al., 2011), and the condition indices are all below 30 (Tabachnick & Fidell, 2007). Therefore, multicollinearity is not an issue in this study. More details in (Appendix I).

4.3.6 Descriptive Analysis

Following the above tests, a descriptive analysis was carried out to provide a description of the extrinsic motivation, psychological empowerment, transformational leadership, quality culture and innovative work behavior of the academic staff in the Iraqi higher education institutions. Table 4.6 shows the mean, standard deviation, maximum and minimum of the constructs. For clarification and easy interpretation of the five point Likert scale employed, this study utilized three equal-sized categories in the following manner - scores from 1-2.5 were deemed as low, from 2.5-3.5 were deemed as medium, and lastly, from 3.5-5 were deemed as high (Shdaifat, 2014).

From Table 4.6, it is evident that the minimum value of the constructs is 1.00, while the maximum value is 5.00 – these correspond to the minimum and maximum levels in the Likert scale. In addition, Table 4.6 shows that the overall mean for the latent variables ranged between 3.413 and 3.917. In particular, the mean and standard deviation for the extrinsic motivation were 3.778 and 0.990, respectively. This suggests that respondents tended to have high level of extrinsic motivation. Table 4.6 also indicates that the mean for the psychological empowerment was 3.917, with a standard deviation of 0.688, suggesting that the respondents displayed high level of psychological empowerment. Further, the results show a high score for the transformational leadership (Mean = 3.566, Standard deviation = 1.037). The results show a moderate score for quality culture with mean and standard deviation of 3.413 and 1.058, respectively. The innovative work behavior also shows a high score for innovative work behavior (Mean = 3.887; standard deviation = 0.623).

Table 4.6
Descriptive Statistics of the Constructs (n=315)

Construct	Mean	Std. Deviation	Minimum	Maximum
Extrinsic Motivation	3.778	0.990	1	5
Psychological Empowerment	3.917	0.688	1	5
Transformational leadership	3.566	1.037	1	5
Quality Culture	3.413	1.058	1	5
Innovative Work Behavior	3.887	0.623	1	5

Level Low 1 -2.5 Medium 2.5 -3.5 High 3.5- 5

4.4 Assessment of PLS-SEM Path Model Results

The researcher conducted data analysis with the help of software package Smart PLS, Version 2.0 M3 (Ringle, Wende & Will, 2005), a software designed in the field of marketing and management science (Henseler, Ringle & Sinkovics, 2009). Normally, the analysis and interpretation of a PLS model are done in two stages according to prior studies (e.g., Hair et al., 2011; Valerie, 2012). The first stage entails the measurement model's testing in light of its validity and reliability, where the multi-item constructs are measured for individual item reliability, internal consistency reliability, convergent validity, and discriminate validity. In the second stage, the analysis of the proposed structural model's R^2 square, effect size f^2 and predictive relevance is carried out, after

which bootstrapping method is employed to test the study hypotheses. Figure 4.2 displays the two stages of analysis.

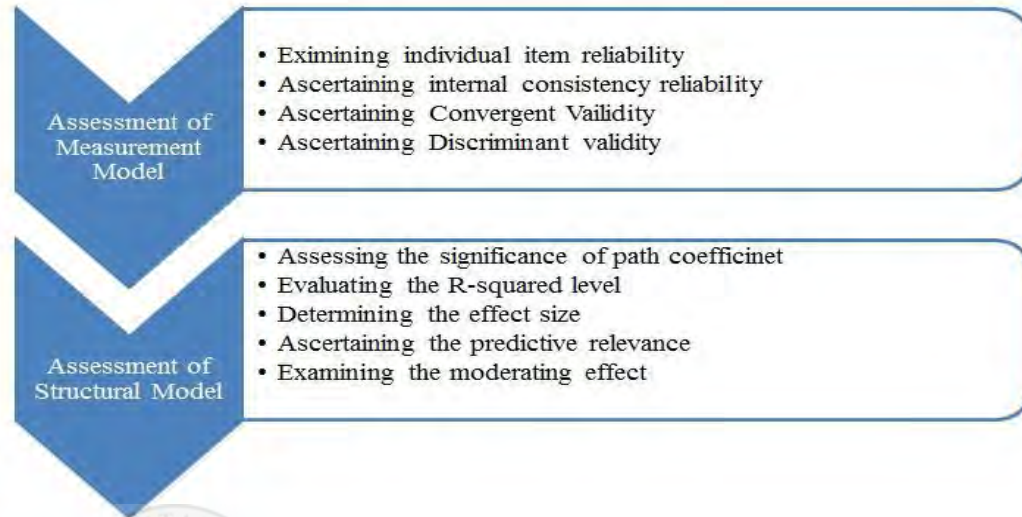


Figure 4.2: PLS Path Modeling Assessment (Two Step Process)

(Source: Henseler *et al.*, 2009)

The initial study model comprised 77 reflective measurement items in the form of manifest variables or indicators stemming from five latent variables including three independent, one dependent and one moderating variable. Between them, 6 relationships are constituted on the basis of the proposed hypotheses built on SDT theory, as depicted in Figure 4.3 in the section on measurement model.

4.4.1 Measurement Model

The main evaluation criteria used for evaluating measurement models are validity and reliability, where the former tests the consistency of the measuring instrument whatever concept is being measured, and the latter tests how well an instrument is developed to measure what it is intended to measure (Sekaran & Bougie, 2010). The assessment of

reflective measurement items was carried out by following the established guidelines recommended by Hair et al. (2011) and Gotz, Liehr-Gobbers and Krafft (2010). The tests were conducted in the following order - determining individual item reliability, internal consistency reliability, convergent validity and discriminant validity. Following these instructions each of these steps were performed and the details are provided below:

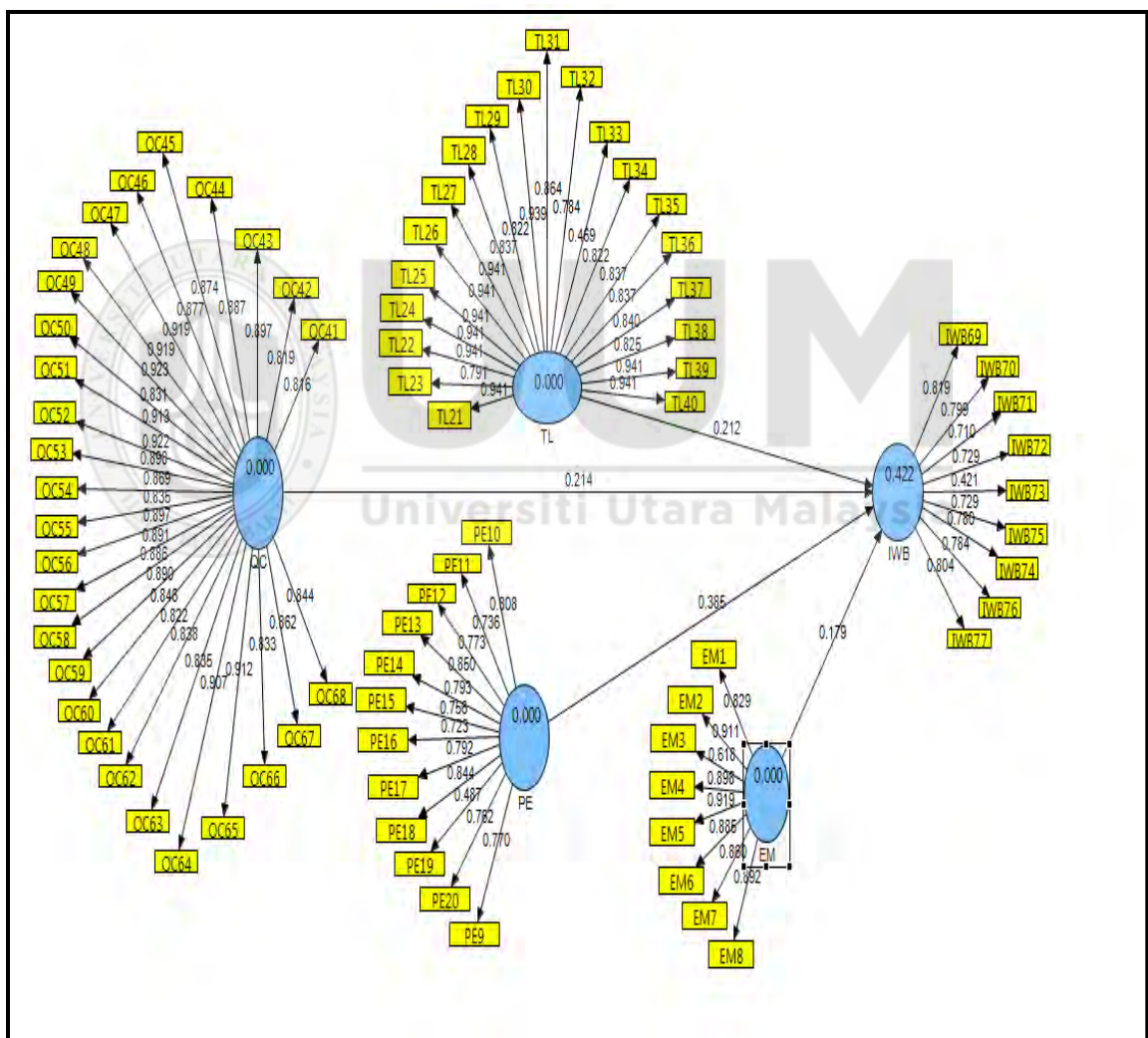


Figure 4.3: Assessment of Measurement Model

4.4.1.1 Individual Item Reliability

Individual item reliability was assessed by examining the outer loadings of each construct's measure (Duarte & Raposo, 2010; Hair et al., 2014; Hair et al., 2012). Following in this regard, Hair et al. (2011) stated that indicator loadings/factor loadings have to exceed 0.70. On the basis of the above discussion, this study made use of a cut-off value of 0.70 for factor loadings. According to this use, it was discovered that out of 77 items, 4 loadings were dropped owing to their low values and they are IWB73 (0.415), TL33 (0.469), EM3 (0.618), and PE19 (0.487).

In addition, figure 4.3 displays clear and more detailed information in (Appendix- J) Loadings and Cross Loadings (Before Deletion) (Original Model). Following the deletion of the above items, the entire items measuring a specific construct were confirmed to load highly on their specific construct compared to others (construct validity). Thus, in the whole model, only 73 items were retained as they had loadings between 0.715 and 0.944 (see Table 4.7).

4.4.1.2 Internal Consistency Reliability

Internal consistency reliability is the level to which all the items on a particular scale/sub-scale measure gauge the same concept (Bijttebier et al., 2000; Sun et al., 2007). The top used internal consistency reliability measures used are Cronbach's alpha coefficient and composite reliability, especially in research dedicated to organizations (Mc Crae, Kurtz, Yamagata & Terrancciano, 2011; Peterson & Kim, 2013) and in this

study, the researcher selected the composite reliability to confirm the internal consistency reliability of the measured employed.

The choice to use composite reliability coefficient lies in two major reasons; first, composite reliability coefficient offers a reliability estimate that is not as biased as Cronbach's Alpha coefficient as the latter presupposes that all items have equal contribution to the construct, regardless of the actual individual loading contribution (Barclay, Higgins & Thompson, 1995; Goz, Liehr-Gobbers & Krafft, 2010).

The second reason lies in the fact that Cronbach's Alpha tends to over or under-estimate the scale reliability, while composite reliability considers the indicators' different loadings that can be interpreted similar to Cronbach's Alpha (in that regardless of the employed reliability coefficient, an internal consistency reliability value that exceeds 0.70 is deemed to be satisfactory for the model. On the other hand, a value that is lower than 0.60 shows lack of reliability). The internal consistency reliability interpretation through the use of composite reliability coefficient has its basis on rule of thumb established by Bagozzi and Yi (1988) and Hair et al. (2011). The authors recommended a composite reliability coefficient of 0.70 or over.

Additionally, all the items loadings have to exceed 0.70 as indicated by Hair et al. (2011) and Valerie (2012) as such values (composite reliability coefficient) reflect the level to which the indicators of the constructs describe the latent variable. In this study, the entire values of composite reliability ranged from 0.912 to 0.946 as presented in

Table 4.7. This shows that the measures have adequate internal consistency reliability as explained in the previous studies by scholars (Bagozzi & Yi, 1988; Hair et al., 2011).

Table 4.7

Loadings, Composite Reliability and Average Variance Extracted

Model Construct	Measurement Item	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Extrinsic Motivation (EM)	EM1	0.825	0.912	0.785
	EM2	0.915		
	EM4	0.900		
	EM5	0.921		
	EM6	0.884		
	EM7	0.861		
	EM8	0.893		
	PE10	0.809	0.946	0.616
Psychological Empowerment (PE)	PE11	0.735		
	PE12	0.776		
	PE13	0.854		
	PE14	0.797		
	PE15	0.756		
	PE16	0.718		
	PE17	0.798		
	PE18	0.846		
	PE20	0.756		

Table 4.7(Continued)

	PE9	0.774		
Transformational Leadership (TL)	TL21	0.944	0.925	0.780
	TL22	0.944		
	TL23	0.787		
	TL24	0.944		
	TL25	0.944		
	TL26	0.944		
	TL27	0.944		
	TL28	0.837		
	TL29	0.821		
	TL30	0.940		
	TL31	0.858		
	TL32	0.780		
	TL34	0.821		
	TL35	0.837		
	TL36	0.837		
	TL37	0.841		
	TL38	0.824		
	TL39	0.944		
	TL40	0.944		
Quality Culture (QC)	QC41	0.862	0.929	0.765
	QC42	0.816		
	QC43	0.819		
	QC44	0.897		

Table 4.7(Continued)

	QC45	0.887		
	QC46	0.874		
	QC47	0.877		
	QC48	0.919		
	QC49	0.919		
	QC50	0.923		
	QC51	0.831		
	QC52	0.913		
	QC53	0.922		
	QC54	0.898		
	QC55	0.869		
	QC56	0.836		
	QC57	0.897		
	QC58	0.891		
	QC59	0.886		
	QC60	0.890		
	QC61	0.846		
	QC62	0.823		
	QC63	0.838		
	QC64	0.835		
	QC65	0.907		
	QC66	0.912		
	QC67	0.833		
	QC68	0.844		
Innovative Work Behavior (IWB)	IWB69	0.823	0.922	0.595

Table 4.7(Continued)

IWB70	0.807
IWB71	0.715
IWB72	0.718
IWB74	0.780
IWB75	0.726
IWB76	0.788
IWB77	0.807

4.4.1.3 Convergent Validity

Convergent validity is described as the consistency of the items measuring the same construct (Ramayah et al., 2011). It is based on the correlation of the responses acquired through various measurement methods of a particular construct (Peter, 1981). Researchers use Average Variance Extracted (AVE) method for the assessment of convergence validity of each of the latent constructs (Hair et al., 2010).

Finally, the Average Variance Extracted (AVE) gauges the variance contained in the indicators relative to the measurement error and its value. According to Hair et al. (2011) and Valerie (2012), it has to be higher than 0.50 to confirm the construct's use. The AVEs in the present study fell in the range of 0.595 to 0.780 as presented in Table 4.7, indicating that they fulfill the recommended range. Hence, the latent variables met the threshold value and the standard recommendation for convergent validity.

4.4.1.4 Discriminant Validity

The discriminant validity of the measure is described as the level to which the items consider constructs in a different way, or it is the level to which they measure specific constructs. In relation to this, Hair et al. (2011) described discriminant validity as the representation of each latent construct has value of AVE. This was achieved by comparing the correlations among the latent constructs with square roots of average variance extracted, and the other method by comparison indicator loadings exceeding the entire cross loadings. In the present study, the measures discriminant validity was determined through the use of Fornell and Larcker's (1981) above criterion. The diagonal elements (average variance square root obtained from the latent constructs) within the correlation matrix are higher compared to the off-diagonal elements in rows as well as columns, which confirms discriminant validity (see Table 4.8).

Table 4.8

Latent Variable Correlations and Square-roots of Average Variance Extracted

Variable	1	2	3	4	5
EM	0.886				
IWB	0.364	0.772			
PE	0.258	0.538	0.785		
QC	0.225	0.387	0.329	0.874	
TL	0.166	0.329	0.168	0.068	0.882

Note: Entries shown in bold face represent the square root of the average variance extracted.

As mentioned, discriminant validity may also be confirmed by conducting a comparison of the indicator loadings and the cross-loadings (Chin, 1998). Sufficient discriminant validity necessitates that the entire indicator loadings exceed their cross-loadings (Chin, 1998). In Table 4.9, a comparison between the indicator loadings with reflective indicators are presented – it appears that all indicator loadings exceed their cross loadings, confirming that the discriminant validity is sufficient for the next analysis.

Table 4.9

Loadings and Cross Loadings (After Deletion)

Items	EM	IWB	PE	QC	TL
EM1	0.825	0.249	0.191	0.157	0.170
EM2	0.915	0.346	0.240	0.228	0.142
EM4	0.900	0.334	0.307	0.219	0.167
EM5	0.921	0.353	0.260	0.206	0.143
EM6	0.884	0.271	0.195	0.172	0.106
EM7	0.861	0.303	0.187	0.205	0.123
EM8	0.893	0.373	0.205	0.194	0.175
IWB69	0.324	0.823	0.454	0.361	0.311
IWB70	0.281	0.807	0.523	0.297	0.308
IWB71	0.351	0.715	0.421	0.264	0.202
IWB72	0.200	0.718	0.393	0.225	0.173
IWB74	0.212	0.780	0.380	0.257	0.265
IWB75	0.266	0.726	0.329	0.345	0.200
IWB76	0.327	0.788	0.387	0.313	0.276
IWB77	0.267	0.807	0.407	0.315	0.268
PE10	0.297	0.487	0.809	0.377	0.218

Table 4.9: (Continued)

PE11	0.193	0.346	0.735	0.185	0.142
PE12	0.187	0.336	0.776	0.159	0.092
PE13	0.209	0.466	0.854	0.240	0.147
PE14	0.248	0.515	0.797	0.350	0.119
PE15	0.118	0.329	0.756	0.262	0.084
PE16	0.110	0.402	0.718	0.148	0.080
PE17	0.211	0.380	0.798	0.235	0.127
PE18	0.200	0.518	0.846	0.371	0.146
PE20	0.133	0.362	0.756	0.130	0.090
PE9	0.273	0.402	0.774	0.275	0.176
QC41	0.228	0.390	0.352	0.816	0.082
QC42	0.256	0.401	0.358	0.819	0.085
QC43	0.240	0.400	0.320	0.897	0.087
QC44	0.259	0.377	0.346	0.887	0.080
QC45	0.206	0.356	0.251	0.874	0.042
QC46	0.173	0.291	0.253	0.877	0.039
QC47	0.210	0.388	0.315	0.919	0.077
QC48	0.196	0.354	0.308	0.919	0.056
QC49	0.200	0.362	0.311	0.923	0.040
QC50	0.144	0.261	0.204	0.831	0.055
QC51	0.183	0.339	0.304	0.913	0.074
QC52	0.236	0.409	0.360	0.922	0.080
QC53	0.199	0.325	0.318	0.898	0.090
QC54	0.153	0.306	0.248	0.869	0.036
QC55	0.130	0.233	0.214	0.836	0.049

Table 4.9: (Continued)

QC56	0.183	0.314	0.285	0.897	0.059
QC57	0.176	0.308	0.258	0.891	0.054
QC58	0.210	0.314	0.290	0.886	0.049
QC59	0.223	0.349	0.310	0.890	0.008
QC60	0.193	0.324	0.321	0.846	0.028
QC61	0.158	0.276	0.197	0.823	-0.004
QC62	0.123	0.240	0.181	0.838	-0.023
QC63	0.185	0.320	0.246	0.835	0.095
QC64	0.217	0.334	0.291	0.906	0.027
QC65	0.228	0.394	0.346	0.912	0.056
QC66	0.137	0.307	0.220	0.833	0.087
QC67	0.170	0.335	0.239	0.862	0.116
QC68	0.164	0.311	0.252	0.844	0.094
TL21	0.113	0.304	0.136	0.056	0.944
TL22	0.113	0.304	0.136	0.056	0.944
TL23	0.219	0.282	0.193	0.071	0.787
TL24	0.113	0.304	0.136	0.056	0.944
TL25	0.113	0.304	0.136	0.056	0.944
TL26	0.113	0.304	0.136	0.056	0.944
TL27	0.113	0.304	0.136	0.056	0.944
TL28	0.174	0.279	0.168	0.077	0.837
TL29	0.172	0.267	0.118	0.049	0.821
TL30	0.125	0.312	0.146	0.062	0.940
TL31	0.148	0.301	0.199	0.051	0.858
TL32	0.213	0.274	0.187	0.068	0.780

Table 4.9: (Continued)

TL34	0.172	0.267	0.118	0.049	0.821
TL35	0.174	0.279	0.168	0.077	0.837
TL36	0.174	0.279	0.168	0.077	0.837
TL37	0.175	0.278	0.163	0.078	0.841
TL38	0.171	0.267	0.110	0.046	0.824
TL39	0.113	0.304	0.136	0.056	0.944
TL40	0.113	0.304	0.136	0.056	0.944

4.4.2 Structural Model

Following the measurement model's analysis, the next step involves the use of PLS analysis to examine the structural model through the inner model analysis. For this, the researcher followed the requirements laid down by prior studies (Chin, 2010; Hair et al., 2013; Hair et al., 2011; Valerie, 2012), where the R^2 values, effect size (f^2) and predictive relevance of the model are all considered. This study tested the proposed hypotheses by examining the level and significance of the path coefficients and bootstrapping. In addition, it provides the statistics pertaining to moderating variable of quality culture.

4.4.2.1 Assessment of Variance Explained in the Endogenous Latent Variables

When evaluating the structural model, the top evaluation criteria in PLS-SEM are the R^2 measures and the level and significance of path coefficients (Hair et al., 2011). Because PLS-SEM prediction-oriented system primarily aims to explain the variance in the

endogenous latent variables, it is important that the key target constructs R^2 obtains a high value.

In this regard, a considered high R^2 level depends on the specific research discipline, where in consumer behavior an R^2 of 0.20 is considered high, while in success driver studies, an R^2 of 0.75 is considered high. On the other hand, Chin (1998) suggested that the R^2 values of 0.67, 0.33 and 0.19 are deemed as substantial, moderate and weak respectively in PLS-SEM studies.

Following the above considerations, the structural model quality can be examined through the R^2 value indicating the variance in the endogenous variable that is explained by their exogenous counterparts. In this study, Figure 4.4 and table 4.10 show that the value of R^2 is 0.522, and this reveals the extrinsic motivation, psychological empowerment, transformational leadership and quality culture are explaining the endogenous variable variance.

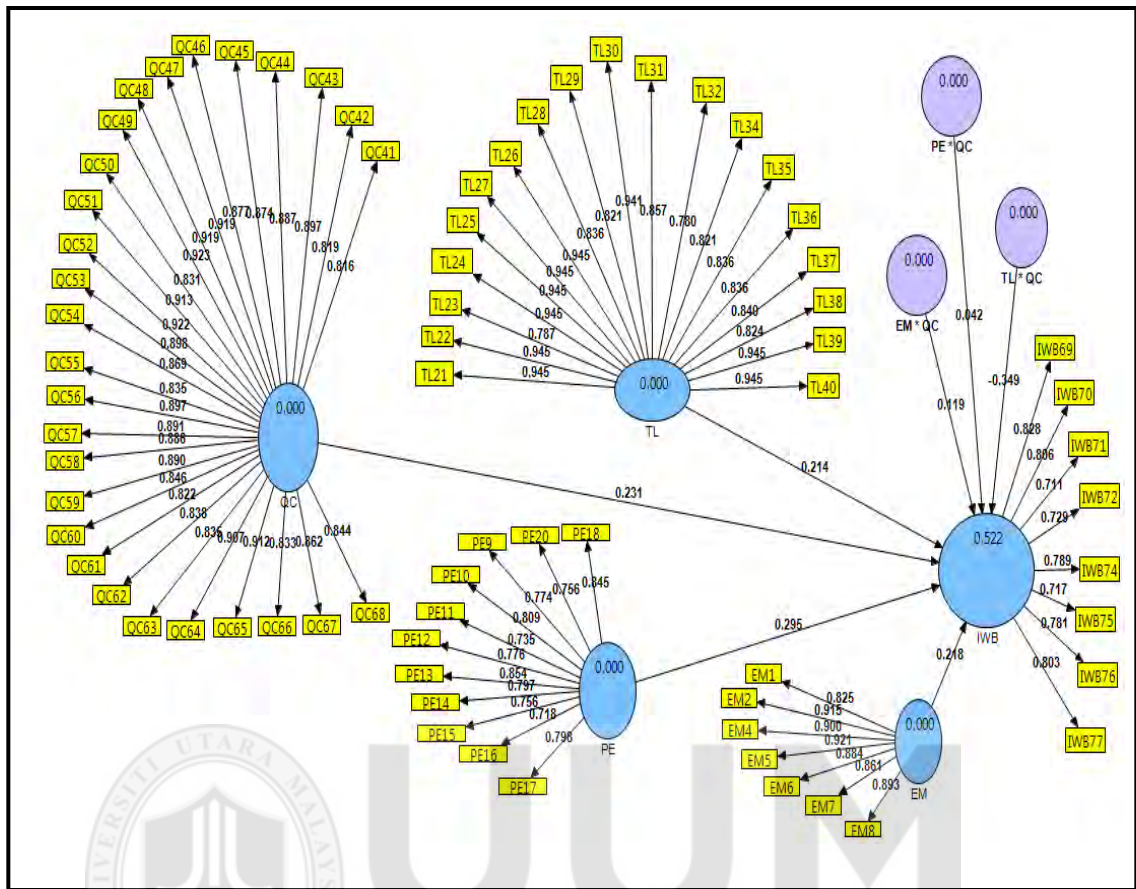


Figure 4.4: Items Loadings, Path Coefficient and R² Values

Table 4.10 reported that the research model explained 52.2% of the total variance in the innovative work behavior. Following Chin (1998), it could be concluded that the level of variance explained by the proposed model is moderate. Accordingly, the obtained R-squared value is acceptable.

Table 4.10

Variance Explained in the Endogenous Latent Variable

Latent Variable	Variance Explained (R²)
Innovative Work Behavior	52.2%

4.4.2.2 Effect Size (f^2)

It is also good to determine the effect sizes of specific latent variables. Chin (2010) suggested the determination of effect sizes of specific latent variables' influence on the dependent variables through the use of f^2 analysis that complements R^2 and thus, in this study f^2 effect size was calculated as it is not readily available in PLS. More specifically, effect size was manually calculated by applying the following formula;

$f^2 = (R^2 \text{ included} - R^2 \text{ excluded}) / (1 - R^2 \text{ included})$ represented as follows:

$$\text{Effect size : } f^2 = \frac{R_{incl}^2 - R_{excl}^2}{1 - R_{incl}^2}$$

The f^2 values of 0.02, 0.15 and 0.35, respectively, were used to interpret small, medium and large effect sizes of the predictive variables, as recommended by Cohen (1988). Based on the proposed model of the study, the effect sizes of specific latent variables and the moderator's role can be evaluated by the same formula proposed by Cohen (1988). Various researchers have made use of such assessment in the PLS analysis (Landau & Bock, 2013; Lew & Sinkovics, 2013).

Table 4.11

Effect Sizes of Latent Variables

Endogenous Variable	Exogenous Variables	R ² Included	R ² Excluded	1-R ² Included	R ² Included-R ² Excluded	f ² Value	Effect Size Rating
Innovation Work Behavior	Extrinsic Motivation	0.522	0.480	0.478	0.042	0.08	small
	Psychological Empowerment	0.522	0.461	0.478	0.061	0.12	small
	Transformational Leadership	0.522	0.392	0.478	0.130	0.27	medium
	Quality Culture	0.522	0.391	0.478	0.131	0.27	medium

In this study, the results of the effect size are presented in Table 4.11, where extrinsic motivation had small effect sizes ($f^2=0.08$) but small effect size of psychological empowerment were ($f^2= 0.12$) Finally, there were medium effects of transformational leadership and quality culture on innovative work behavior with f^2 value of (0.27, and 0.27 respectively).

4.4.2.3 Predictive Relevance of the Model

The structural model may also be assessed through the use of blindfolding procedure to produce cross-validated communality and cross-validated redundancy. Hair et al. (2011) recommended cross-validated redundancy by PLS-SEM. Estimates of the structural as well as the measurement model were assessed for data prediction and this method matches the PLS-SEM method. In relation to this, if the cross validated redundancy

measure value of the endogenous construct (Q^2) for a distinct endogenous latent variable exceeds zero (0), then the explanatory latent construct is deemed to display predictive relevance.

More specifically, the Q^2 represents a criterion of the way the model predicts the data of omitted cases, referred to as predictive relevance (Hair et al., 2013). In this background, Valerie (2012) proposed that the Stone-Geisser's test is calculated by the formula:

$Q^2 = 1 - SSE/SSO$. Meanwhile, Hair et al. (2011) suggested that the number of data cases should not be a multiple integer number of the omission distance “d”, because if it is, then this could produce inaccurate results. They added that a “d” value between 5 and 10 should be selected. Accordingly, this study selected 6 as the “d” value to calculate the cross-validated redundancy measures for every dependent variable. The model is said to have predictive quality if the cross-redundancy value is greater than zero (0), otherwise, it is inconclusive (Hair et al., 2011). The obtained cross-validated redundancy value of the models is 0.296, supporting the model's sufficient prediction quality (see Table 4.12). For more details, see Appendix K.

Table 4.12

Prediction Relevance of the Model

Total	SSO	SSE	1-SSE/SSO
IWB with moderator	2520	1774.107	0.296
IWB direct	2520	1955.893	0.224

Additionally, the present study also assessed the predictive relevance measure (Q2) for assessing the direct relationship between the variables and innovative work behavior in the presence of quality culture using cross-validated redundancy. Interestingly, the Q2 values obtained for the model were 0.224 (Refer Appendix K), hence it confirms that this model of direct relationship also demonstrated predictive relevance.

4.4.2.4 Hypotheses Testing

Finally, the hypothesized relationships were tested with the help of PLS algorithm and bootstrapping algorithm in Smart PLS 2.0 3M. The importance of path coefficients in PLS analysis is indicated by the fact that if they are non-significant or they go against the hypothesized direction, the hypothesis is rejected. Contrastingly, the significant paths indicating the hypothesized direction and supporting the proposed causal relationship confirms the hypothesis (Hair et al., 2014). Every path coefficient's significance, akin to indicators' weights and loadings, can be evaluated through bootstrapping method (Hair et al., 2012). In this study, the item loadings, path coefficient and R² values are presented in Figure 4.5.

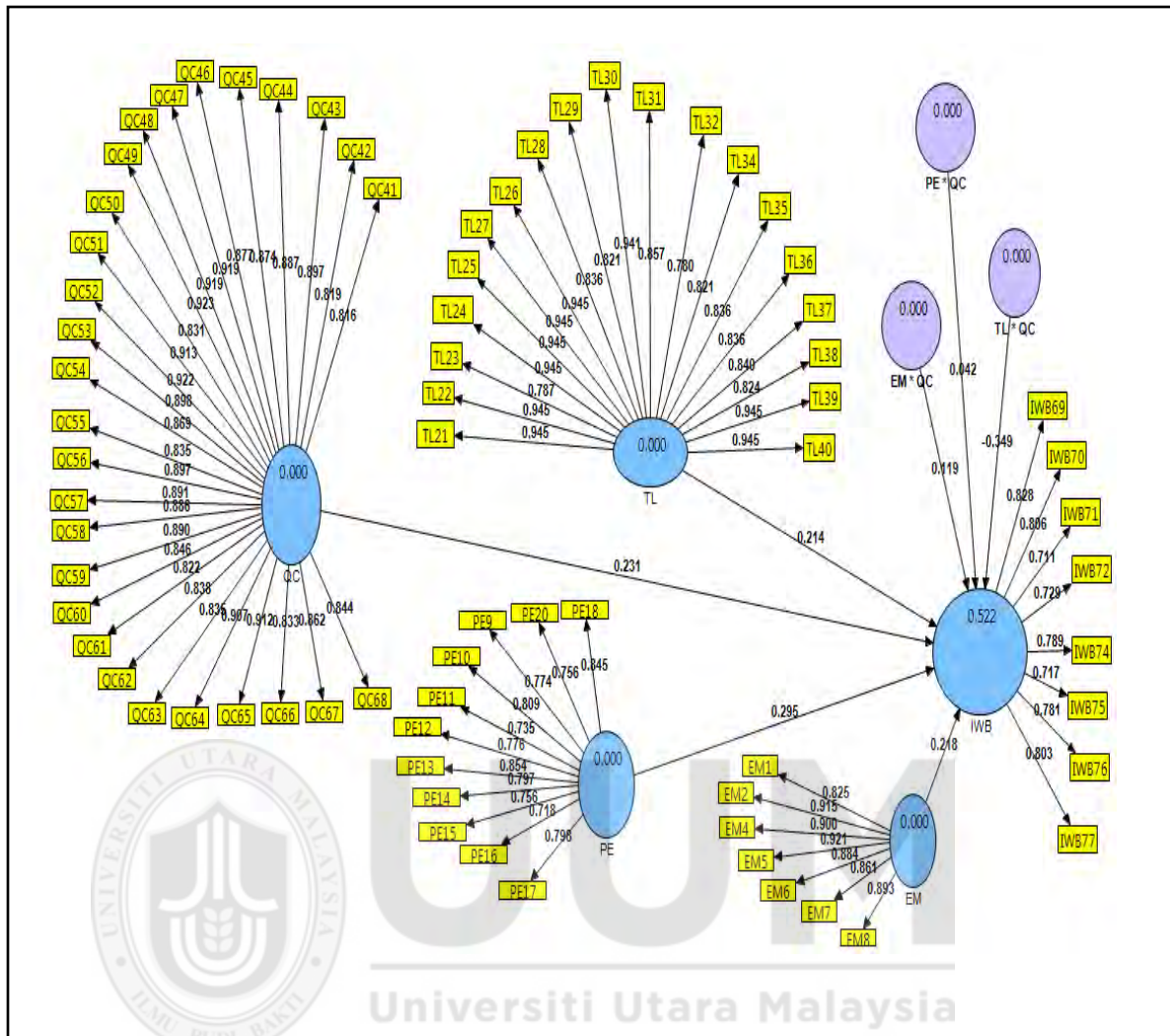


Figure 4.5: Path Coefficient and R² Values Full Model

The path coefficients were assessed using the bootstrapping method that required a sample of 5000, with 315 cases equal to the number of observations noted in the initial sample (Hair et al., 2011). Added to this, the critical t-values in one-tailed test have to conform to the value of 1.65 at a significant level of 10%, 1.96 at a significant level of 5%, and 2.58 at a significant level of 1%. Therefore, 5000 re-sampling was set with a replacement number from the bootstrapped cases that equalize the original number of 315 to produce standard errors and t-statistics values. Figures 4.5 and Figure 4.6 and Table 4.13 present the path coefficient and bootstrapping results.

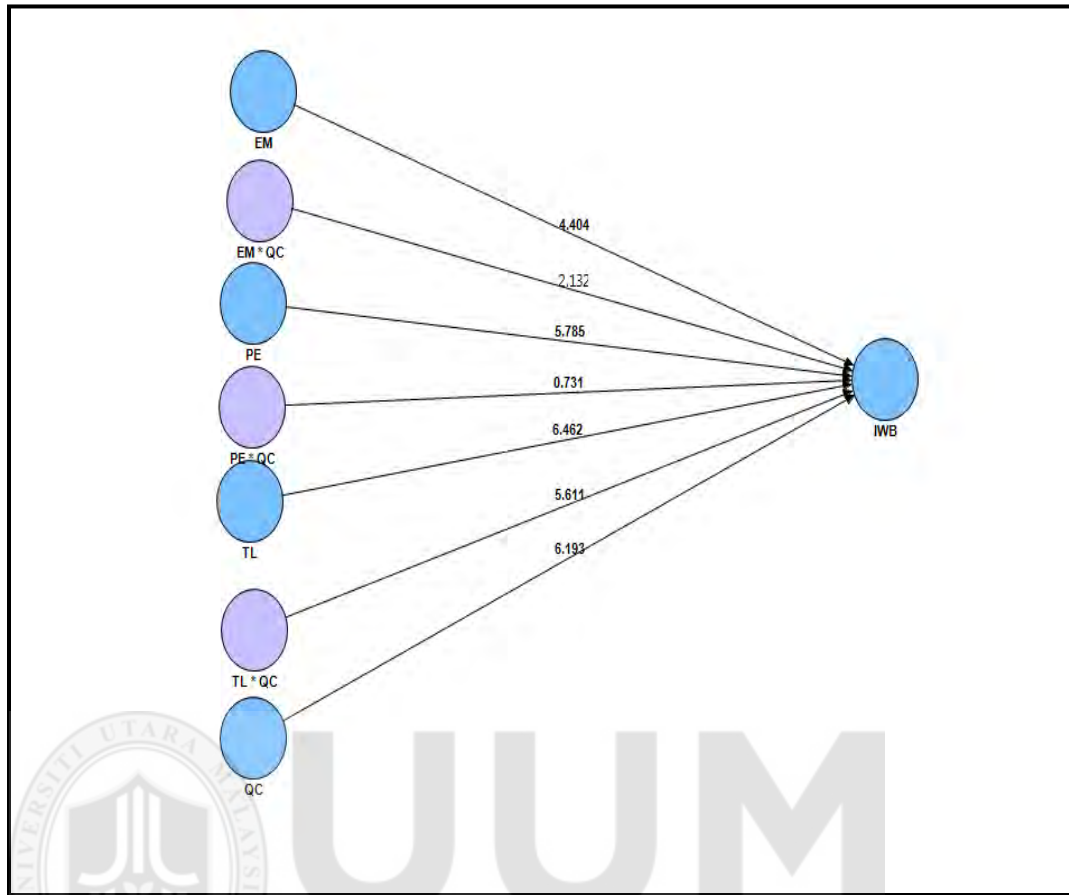


Figure 4.6: PLS Bootstrapping (t-values) for the Study Model

The following hypothesized relationships were tested and the results showed:

H1: Extrinsic motivation has a positive relationship with innovative work behavior was highly significant at ($\beta = 0.218$, $t = 4.404$) and thus, the first hypothesis is supported.

H2: Psychological empowerment has a positive relationship with innovative work was highly significant at ($\beta = 0.295$, $t = 5.785$) and thus, the second hypothesis is supported.

H3: Transformational leadership has a positive relationship with innovative work behavior was significant at ($\beta = 0.214$, $t = 6.462$) and thus, the third hypothesis is supported.

H4: The relationship between extrinsic motivation and innovative work behavior is positively moderated by quality culture was significant at ($\beta = 0.119$, $t = 2.132$) and thus, the fourth hypothesis is supported.

H5: The relationship between psychological empowerment and innovative work behavior is positively moderated by quality culture was insignificant at ($\beta = 0.042$, $t = 0.731$) and thus, the fifth hypothesis is rejected.

H6: The relationship between transformational leadership and innovative work behavior is positively moderated by quality culture was negative effect (significant) at ($\beta = -0.349$, $t = 5.611$) and thus, the sixth hypothesis is rejected.

Table 4.13

Result of Hypotheses Testing

No	Hypothesis Relationship	Path Coefficient	Standard Error	T. Value	P. Value	Supported
H1.	Extrinsic motivation → IWB	0.218	0.049	4.404	0.000	Yes
H2.	Psychological empowerment → IWB	0.295	0.053	5.785	0.000	Yes
H3.	Transformational leadership → IWB	0.214	0.05	6.462	0.000	Yes
H4.	Extrinsic motivation*QC → IWB	0.119	0.058	2.132	0.038	Yes
H5.	Psychological empowerment*QC → IWB	0.042	0.056	0.731	0.461	No
H6.	Transformational leadership*QC → IWB	-0.349	0.067	5.611	0.000	No

t-values > 1.65* ($p < 0.10$); t-values > 1.96** ($p < 0.05$); t-values > 2.58*** ($p < 0.01$)

4.4.3 Additional Analysis

4.4.3.1 Analysis of the Effect of Quality Culture as a Moderator

This study used the product indicator approach through Partial Least Squares Structural Equation modeling to detect and estimate the moderating effect of quality culture, in

light of its strength, on the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior (c.f., Helm, Eggert & Garnefeld, 2010; Henseler & Chin, 2010; Marcolin & Newsted, 2003). This study made use of product indicator approach because of the continuous nature of the proposed moderating variable (Rigdon, Schumacker & Wothke, 1998).

This approach required following the guidelines provided by Cohen (1988) to ascertain the moderating effects. Table 4.13 provides the results of the estimates following the application of the product indicator approach for investigating the moderating role of quality culture over the variable groups (exogenous and endogenous variables).

The fourth hypothesis of the study proposes that quality culture moderates the relationship between extrinsic motivation and innovative work behavior. The interaction terms representing extrinsic motivation x quality culture ($\beta = 0.119$, $t = 2.132$ $p < 0.03$) were found to be significant (see Table 4.13 and Figure 4.7). The results therefore supported the fourth hypothesis. The guidelines provided by Aiken, West and Reno (1991) were followed, where the information from path coefficients was utilized to plot the moderating effect of quality culture on the relationship between extrinsic motivation and innovative work behavior. The relationship between extrinsic motivation and innovative work behavior is affected after the introduction of the moderating role of quality culture (see Figure 4.7).

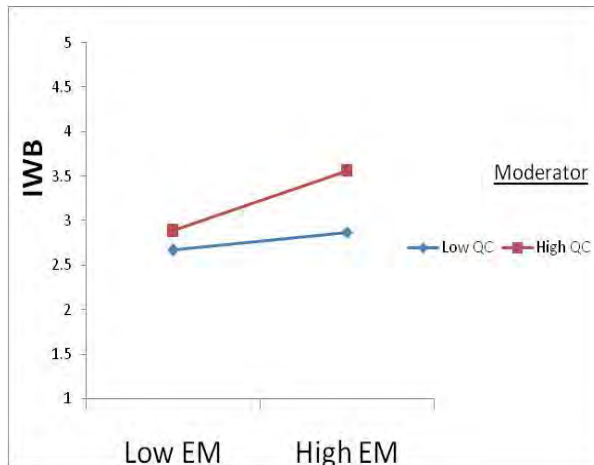


Figure 4.7: Interaction Effect of Extrinsic Motivation and Quality Culture on Innovative Work Behaviour

The fifth hypothesis of the study proposed that quality culture positive moderates the relationship between psychological empowerment and innovative work behavior. On the basis of the results obtained from the bootstrapping method, quality culture had no moderating effect on the relationship between psychological empowerment and innovative work behavior ($\beta = 0.042$, $t = 0.731$, $p < 0.461$), indicating no support for the hypothesis 5. In other words, hypothesis 5 is rejected (see Table 4.13).

Moreover, this study also proposed the positive moderating role of quality culture on the transformational leadership and innovative work behavior relationship. Based on the results obtained, the hypothesis had statistical significance but the effect had a negative sign ($\beta = -0.349$, $t = 5.611$, $p < 0.0000$), indicating that hypothesis 6 is rejected as illustrated in Figure 4.8.

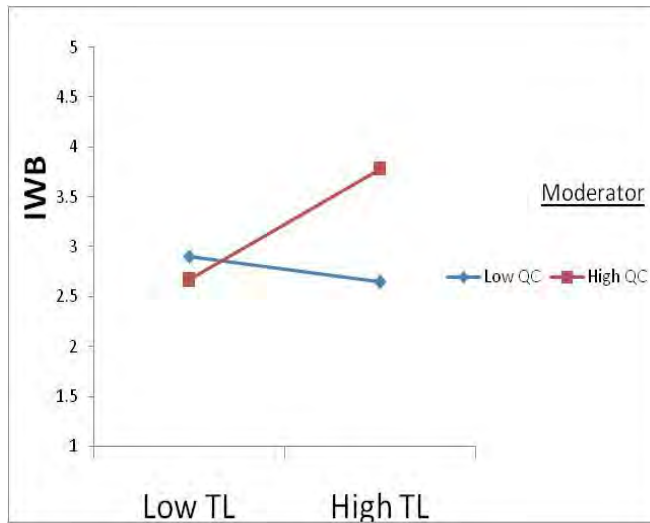


Figure 4.8: Interaction Effect of Transformational Leadership and Quality Culture on Innovative Work Behaviour

4.4.3.2 Determining the Strength of the Moderating Effects

The strength of the moderating effects of quality culture on extrinsic motivation, psychological empowerment, transformational leadership, and innovative work behavior entailed the calculation of the effect sizes with the help of Cohen's (1988) guidelines. In this regard, the moderating effects strength could be evaluated by comparing the R-squared value (coefficient of determination) of the main model to the R-squared values of the full model that incorporates exogenous as well as moderating variables (Henseler & Fassott, 2010; Wilden, Gudergan, Nielsen & Lings, 2013), where the underlined formula can be used to determine the strength of the moderating effects as suggested by Cohen (1988); and Henseler and Fassott (2010).

$$\text{Effect size: } (f^2) = \frac{R^2_{\text{model with moderator}} - R^2_{\text{model without moderator}}}{1 - R^2_{\text{model with moderator}}}$$

The criteria of the strength levels are provided as follows: values of 0.02, 0.15 and 0.35 are deemed to be weak, moderate and strong moderating effects respectively (Cohen, 1988; Henseler & Fassott, 2010). However, a low effect size does not always mean that the underlying moderating effect has no significance because, according to Chin et al. (2003), even a minimal interaction effect could mean something in extreme conditions of moderation, if the beta changes outcomes are meaningful, in which case, it is important to consider such conditions. According to the guidelines established by Cohen (1988), and Henseler and Fassott (2010) the moderating effect strength of quality culture was evaluated. The results in Table 4.14 show that the effect size for innovative work behavior is 0.27, indicating medium moderating effect (Henseler, Wilson, Gotz & Hautvast, 2007).

Table 4.14
Strength of the Moderating Effects Based on Cohen's (1988) and Henseler and Fassott's (2010) Guidelines

Endogenous Latent Variable	R-Squared		f-Squared	Effect-Size
	Included	Excluded		
IWB	0.522	0.391	0.27	medium

Having presented all the necessary results including moderation effects related to the present study, a summary of the tested hypotheses is presented in Table 4.15.

Table 4.15

Summary of Tested Hypotheses

Hypothesis	Relationship	Decision
H1	Extrinsic motivation has a positive relationship with innovative work behavior.	Supported
H2	Psychological empowerment has a positive relationship with innovative work behavior.	Supported
H3	Transformational leadership has a positive relationship with innovative work behavior.	Supported
H4	The relationship between extrinsic motivation and innovative work behavior is positively moderated by quality culture.	Supported
H5	The relationship between psychological empowerment and innovative work behavior is positively moderated by quality culture.	Not Supported
H6	The relationship between transformational leadership and innovative work behavior is positively moderated by quality culture.	Not Supported

4.5 Summary of Findings

The chapter presented the study findings in terms of response rate and characteristics, and the methods used in refining the measurements, as well as the analysis employed to confirm instrument validity and reliability. The chapter also presented the results of PLS analysis garnered from the measurement model and structural model evaluation, and from the testing of hypotheses. The results indicated that four out of six hypotheses were confirmed and supported, while two hypotheses were rejected due to insignificant results. In chapter five, the findings of the present study are further discussed. Following this, the chapter presents the implications, limitations, future research suggestions and conclusions.



CHAPTER FIVE

Discussion, Implications and Conclusion

5.1 Introduction

The previous chapter contained the presentation of the study findings while the present one provides a discussion of the same findings but in relation to the research questions' contexts, the proposed hypotheses and the literature review. For easy understanding, this chapter is divided into five main parts, with the first part containing the summary of the results. Based on the result's pattern, the second part contains the findings explained in light of the hypotheses and literature review and the third one lists the findings' implications - theoretical and practical. This is followed by the fourth part that contains the study limitations and recommends to directions for future studies and finally, the fifth part that contains the study conclusion.

5.2 Summary of Findings

This present study's primary aim was to examine the moderating impact of quality culture on the relationship between extrinsic motivation, psychological empowerment, transformational leadership and innovative work behavior among the academic staff working in Iraqi higher education. On the whole, the study is successful in providing an insight into the major determinants of innovative work behavior by determining the answers to the following research questions:

1. Is there any relationship between extrinsic motivation and innovative work behavior?
2. Is there any relationship between psychological empowerment and innovative work behavior?
3. Is there any relationship between transformational leadership and innovative work behavior?
4. Does quality culture moderate the relationship between extrinsic motivation and innovative work behavior?
5. Does quality culture moderate the relationship between psychological empowerment and innovative work behavior?
6. Does quality culture moderate the relationship between transformational leadership and innovative work behavior?

With respect to the direct relationship between exogenous latent variables - extrinsic motivation, psychological empowerment and transformational leadership - with endogenous latent variable, i.e., innovative work behavior, the study findings supported 3 hypotheses direct relationship. More specifically, the PLS path model indicated that there is a significant and positive relationship between these factors (exogenous variables) with innovative work behavior.

Additionally, quality culture had a moderating relationship between the exogenous and endogenous latent variables empirically supporting the hypotheses proposing such relationships. In particular, quality culture had a positive moderating relationship

between extrinsic motivation and innovative work behavior. Quality culture also had a negative moderating effect on the relationship between transformational leadership and innovative work behavior. However, quality culture had no moderating relationship between psychological empowerment and innovative work behavior.

5.3 Discussion of Results

In the present section, the results relating to the direct relationships between exogenous variables (extrinsic motivation, psychological empowerment and transformational leadership) with endogenous variable, that is, innovative work behavior are detailed. In addition, quality culture's moderating indirect relationship between exogenous variables and innovative work behavior as the endogenous variable, are presented and discussed.

5.3.1 Direct Effects of Extrinsic Motivation on Innovative Work Behavior

Extrinsic motivation is deemed to be one of the factors that positively influence the individual's attitude and behavior as indicated by Zhou et al.'s (2011) study. Extrinsic motivation is described as the behavior that is driven by external rewards, such as money, promotion, recognition, etc. (Ryan & Deci, 2000). Innovative work behavior is a practice which refers to the behavior of staff to the generation, promotion and application (within a role, group, or organization) of new ideas, products, processes, service, and procedures (De Spiegelaere et al., 2012).

Extrinsic motivation system is considered as an effective means to support academic staff's innovation within the university. Once the academic members of university

understand that they will be rewarded for such activities, they are more likely to work for innovation. When the academic staff receives extrinsic motivation (rewards, high salary, bonus, and promotion) by the administration of the university, they will feel appreciated by the university and they feel proud in the work place. This feeling makes them motivated to exert more efforts in order to gain more money and recognition, and this is reflected on their behavior at the work and thus they present innovation works and find innovative ways to solve job problems (Milka et al., 2015).

According to the results of this study, the academic staff that was recipients of extrinsic motivation from the management of the universities has a greater tendency towards exercising innovative behavior in the workplace. This finding is aligned with those reported by prior studies (e.g., Eisenberger, Armeli & Pretz, 1998; Eisenberger & Rhoades, 2001; Eisenberger & Cameron, 1996; Eisenberger & Armeli, 1997) and through the SDT theory assumptions. The initial research concerning the effects of extrinsic motivation in the form of rewards on behavior resulted in developing cognitive evaluation theory – the pioneering sub-theory of Self-Determination Theory. The theory posits that an individual expecting external contingencies for the performance of a behavior will maintain such behavior when the reward is ongoing (Deci & Ryan, 1987).

These interactions encapsulate material advantages in the form of salaries, bonuses, and allowance, as well as psychological advantages in the form of status, loyalty and approval (Yukl, 1994). Hence, academic staffs who perceive extrinsic motivation in a beneficial and positive manner will be obliged to return their feeling of indebtedness to

the university in the form of positive behavior, such as employing more innovativeness at work.

The finding may also be attributed to the potential of extrinsic motivation to boost the academics' innovative activities at the workplace. In other words, providing increasing extrinsic motivation to the academic staff, may lead to individual behavior improvement through directing their behavior towards innovation (Cho & Perry, 2012). According to Amabile (1988), the innovative behavior from employees has to be acknowledged and rewarded. In this regard, monetary resources can be used to reinforce achievement of innovative ideas and rewards can be provided to attempts to the innovativeness and if monetary rewards cannot be an option, then a learning unit could be established to examine other means of rewards in exchange for innovative behaviors (e.g., supporting sabbatical leaves, re-appropriation of workloads and giving release time) as recommended by Hebenstreit (2012).

The results of the present study revealed a significant positive effect of extrinsic motivation on innovative work behavior ($\beta = 0.218$, $t = 4.404$, $p < 0.01$) at the significance level of 0.01. This result supports the first proposed hypothesis (H_1) indicating that extrinsic motivation of academic staff in the Iraqi HE may lead to improvement in innovative work behavior activities in expectation of rewards (e.g., allowance, bonus and promotion) to cover some extra expenses as well as to their sense that they are appreciated at the university. In other words, extrinsic motivation has a key role in the workplace to create innovation and plays an important part in people's life.

5.3.2 Direct Effects of Psychological Empowerment on Innovative Work Behavior

Psychological empowerment is defined as increased intrinsic task motivation, and the definition identifies four cognition elements as the basis for employee empowerment, which are: meaning, competence, self-determination, and impact, reflecting an individual's orientation to his or her work (Spreitzer, 1995). The second objective of the study concerning the effect of psychological empowerment on innovative work behavior was achieved through noting the path coefficients and using the bootstrapping in Smart PLS 2.0. Table 4.13 lists the results of H2, which are significant in terms of the relationship between psychological empowerment and innovative work behavior of the Iraqi academic staff in the higher education. In particular, psychological empowerment had a significant positive effect on the innovative work behavior ($\beta = 0.295$, $t = 5.785$, $p < 0.01$) at the level of significance of 0.01. The finding is aligned with those reported in literature, like Cekmececioglu and Ozbag (2014), Knol and Linge (2009), Spreitzer (1995), Rahman et al. (2014) and Zhang and Bartol (2010).

Moreover, SDT theory proposes that individuals' perception of the satisfaction of their psychological requirements manifests in benefits including physical and psychological well-being, autonomous motivation and effective strategies of coping as explained by Deci and Ryan (2000), Deci and Vansteenskiste (2004), Ntoumanis, Edmunds and Duda (2009) and Ryan (1998). This could lead to additional efforts by academics to improve the innovative work behavior. In relation to this study, enhancing the cognitive status of the academic staff makes them feel having power and control in the work place, therefore this feeling makes them exert additional efforts to improve the innovative work behavior and accepting the risk. Thus, the cognitive state has a crucial role in

motivating the academic staff in adopting such positive behavior. This positive behavior may be displayed in the form of innovative work behavior.

In addition, cognition based on psychological empowerment is clarified when the organizational goals and mission are consistent with the system's value, and when the academic staff is convinced that their work is valued and therefore, they focus on their work and work outcomes (Thomas & Velthouse, 1990; Spreitzer, 1995). Moreover, the perseverance of the academic staff is reflected in expending efforts in determining the issues from different aspects and in searching for solutions using different alternatives by relating sources of information (Zhang & Bartol, 2010). This may be related to the generation of new ideas, and eventually, to innovative work behavior.

More specifically, psychological empowerment produces competence cognition that reflects work self-efficacy and in relation to this, the higher the job-related competence, the greater the extension of roles, and the more the production of new ideas, innovation and learning regarding the current tools that can improve jobs and performance (Moregeson, Klinger & Hemingway, 2005). Added to that, self-determination cognition arises in decision making, particularly when relating to procedural time and effort aspects as well as work methodologies. Lastly, impact cognition refers to the level of the academic staff's conviction that they affect the workplace's strategic output and management (Spreitzer, 1995). The entire factors affect the behavior of the academic staff in that it makes them more innovative.

The results support the hypothesized relationship in H2. Iraq is a country characterized by its collectivism, hierarchy levels and uncertainty avoidance (Marane, 2012), but a

shift is taking place in a way that relationships between superiors and subordinates are now becoming participatory, transparent and empowering. Hence, Iraqi academic staff in HE needs to employ psychological empowerment via the participation of the staff in the established university goals as this would add to the self-confidence and their trust in the university and ultimately, raising the spirit of innovation among academic staff in higher education in Iraq.

5.3.3 Direct Effects of Transformational Leadership on Innovative Work Behavior

Transformational leadership is defined as leadership that generates awareness and acceptance among subordinates, enables their followers to develop, encourages them to go beyond their needs to accomplish the organizational goals and motivates them through leader's behaviors (Avolio & Bass, 2004). The research findings concerning transformational leadership and innovative work behavior showed that the former drives the innovative work behavior of academic staff, a finding that is consistent with those of past findings reported by Afsar et al. (2014), Boerner, Eisenbeiss and Griesser (2007), Imran and Haque, (2011), Jung et al. (2003), Khaola and Sephelane, (2013), Khan et al. (2012), Lee, Jung, Chang and Jung (2006), Reuvers et al. (2008) and Shin and Zhou (2003).

This finding is related to the relationship between transformational leadership and innovative work behavior that was developed for H3. The results showed that transformational leadership had a significant impact on innovative work behaviors ($\beta = 0.214$, $t = 6.462$, $p < 0.01$) at the level of significance of 0.01. In this type of leadership, the leaders develop trust and respect among the members of the

organization; they share the risks with them, instill commitment within them, and show confidence in the vision of the organization. As a result, the members are encouraged to work harder and display innovative ideas and activities (Betroci, 2009; Bass & Riggio, 2012).

Additionally, Leaders practicing SDT theory facilitate work conditions that are directed towards bringing about optimized employee motivation via autonomous motivation, where employees do their jobs because it intrinsically aligns with their values, and controlled motivation where employees do their jobs because forces urge them to do so (McDaniel, 2011). According to Burns (1978) transformational leadership provides an extensive organizational process combining different economic, political and interpersonal resources to achieve general institutional values and aims. He also advocated that transformational leaders boost their subordinates' awareness by elevating their ideals and values, as well as their achievement potential (Belhaj, 2012). This leads to a doubling of efforts by employees, which in turn leads to increased achievement and innovative behavior.

However, Alzawahreh (2011) went a step further and revealed that idealized influence, a characteristic of transformational leadership, is crucial in the educational surrounding for inculcating admiration, displaying a sense of purpose, boosting teaching staff improvement, and facilitating a change in culture wherein innovation is valued. An innovative academic staff becomes better through developing courses, research projects and training programs, new technology adoption, and their leaders trust them and take pride in their work. The idealized influence of the leader allows change in cultural values and this eventually results in higher innovative work behavior as expounded in

several studies (e.g., Jung et al., 2003; Sookaneknun & Ussahawanitchakit, 2012; Vaccaro et al., 2012).

Moving on to inspirational motivation, it refers to the leader's encouragement of communication processes, organizational learning and shaping of visions that allow staff to use innovation techniques and activities (Bass & Riggio, 2006; Dubrin, 2007). In other words, transformational leadership assists Iraqi HE to handle turbulent phases of the change process in order to meet long-term goals. They possess the required skills to value their academic staff and assist them in realizing the importance of their work. They also intellectually stimulate them to improve the production of ideas and to adopt exploratory thinking (Bass & Riggio, 2006). Members who are encouraged by leaders to resolve old problems in new ways and who are aware of the importance of the members' ideas and appreciate them are more likely to think of innovative ideas for product and process development and innovation (Khan et al., 2009; Zhang & Batrol, 2010).

Lastly, Saenz (2011) in his study stated that individualized consideration of leaders ensures that followers' needs are met and their voices heard. They are supported, advised, coached, encouraged and assisted in increasing the recognition of their own self-competence via feedback. In the study's context (Betroci, 2009; Bass & Riggio, 2012; Northouse, 2007), considering the feedback and ideas of the academic staff will allow the transformational leader to extend the knowledge source and promote collective problem-solving activities. Staff members will work extra hard and they will forward new innovative ideas when they are convinced that their leaders are paying them constant attention and support.

In the context of Iraq's higher education, this study suggests that transformational leadership helps increase morale and provides the academic staff with appropriate teaching and instruction, as a result of which, new learning avenues are created for them along with value diversity, allowing them to think of innovative ideas. The leaders show support through an interactive approach and act as mentors, motivators, guides and assistants to the staff members as the latter establishes new courses or engage in academic research. Hence, Iraqi HE leaders should consider their academic staff as this would lead to increased trust and cooperation among them, boos their teaching professionalism, and mitigates their isolation. The findings indicate consistency with those of reported by prior literature, implying that leaders that use consultation, delegation and supporting behavior are successful in promoting production and application of ideas among employees (De Jong & Hartog, 2007; Pieterse et al., 2010; Zhang & Batrol, 2010). Overall, the study findings indicate that Iraqi HE academic staff is well aware of their leaders' transformational leadership practice that builds their respect, trust and faith in their leaders.

5.3.4 Moderating Effects of Quality Culture on the Relationship between Extrinsic Motivation and Innovation Work Behavior

Quality culture comprises a set of norms, values, concepts, beliefs and rules that are commonly shared among individuals and groups within the organization, which are connected to quality philosophy. These include improvement orientation, teamwork orientation, mission and goals orientation, management style and personal influence/performance (Detert, Schroeder & Mauriel, 2000). This study examined

quality culture's moderating role in the relationship between extrinsic motivation and innovative work behavior and the findings showed that quality culture does significantly moderate the mentioned relationship among Iraqi higher education staff supporting the proposed H4. The moderating effect was found at the level of significance of 0.01 with ($\beta = 0.119$, $t = 2.132$, $p < 0.01$). Quality culture is deemed to be a part of the organizational culture that advocates innovation behavior (Amabile et al., 1996). In this respect, academic staff members who perceive support have a greater tendency to experiment with new ideas and methods to achieve their goals, to complete their tasks, and to resolve issues on the job with innovation (Pirola-Merlo et al., 2005).

Quality culture refers to a pattern of beliefs and norms in terms of quality, and for their achievement the university goals have to have positive quality culture. Specifically, a quality culture requires values and beliefs, and this would facilitate innovative behavior and achievement of goals (Linkow, 1989). Thus, it is logical to state that universities that want to manage quality programs need to concentrate on developing a suitable quality culture within them.

Added to the above, extrinsic motivation and quality culture support the stimulation of the academic staff by the top management in the recovery of innovative solutions to work issues. This study's finding are aligned with the assumptions of the SDT theory positing that environment of support helpsto enhancethe situation of individuals in terms of motivation, which leads to improvementin innovative behavior,

However, according to Locke and Latham, (2002), quality culture is the environment to which the employee is learning on the job by imitating behavior stemming from an action. Such ability can be reflected via self-efficacy in light of goals completion. Nevertheless, quality culture is primarily a learning culture, wherein the employees are involved in enhancing the quality on a continuous basis and in taking part in the activities of the organization (Trewin, 2003). Additionally, individuals who feel that they are supported have a greater tendency to think of new ideas and techniques to achieve goals, to complete tasks and to resolve issues at work (Pirola-Merlo et al., 2005). Therefore, the relationship between extrinsic motivation and innovative work behavior may be affected by contextual factors and these may affect the result of a positively relationship. So the quality culture plays an important role in providing support through continuous improvement, goals and mission, teamwork, and management style, which help improve the relationship between the two variables. It is, hence, plausible that innovative work behavior could positively impact the individual's situation, specifically in the context of higher education.

Based on the findings, the Iraqi HE academic staff feel that quality culture moderates the relationship between their extrinsic motivation and innovative work behavior because when they are recipients of extrinsic motivation (high salary, reward, and bonus), it boosts their motivation, and at the same time, upon receiving support from quality culture through continuous improvement, teams work and top management is achieved. Thus, it will enhance the innovative work behavior, especially when the norms and values of academic staff correspond to the goals and mission of the

organization, they exert additional efforts to resolve quality issues through appropriate solutions and eventually, this enhances their innovative work behavior.

5.3.5 Moderating Effects of Quality Culture on the Relationship between Psychological Empowerment and Innovative Work Behavior

This study examined the moderating role of quality culture in the relationship between psychological empowerment and innovative work behavior and illustrated no moderating effect among Iraqi HE academic staff. This indicates that hypothesis H5 is rejected at the level of significance of 0.01 ($\beta = 0.042$, $t = 0.731$, $p < 0.01$). This rejection may be attributed to the fact that psychological empowerment represents the individual's intrinsic motivation and this is not influenced by quality culture as the academic staff is already receiving appropriate support and encouragement from psychological empowerment to direct their behaviors towards innovation. Hence, quality culture no longer moderates the psychological empowerment-innovative work behavior relationship, maybe due to academic environment, dominant culture and procedures in the university. This contrasts with the claim of the SDT theory that the cognitive state of individuals is influenced by the environmental and contextual factors of the organization and that it seeks to improve innovative behavior. In addition, SDT theory has called for a deeper look into internal individual influences on motivation, as they may be relevant for understanding the role of environmental support in motivational processes that lead to enhancement of behaviour (Vallerand, 2000).

5.3.6 Moderating Effect of Quality Culture on the Relationship between Transformational Leadership and Innovative Work Behavior

This study examined the moderating role of quality culture in the relationship between transformational leadership and innovative work behavior. The tests found that quality culture negatively moderated the relationship between the two in the context of Iraqi higher education staff. Thus, the hypothesis H6 at the 0.01 level of significance is not supported ($\beta = -0.349$, $t = 5.611$, $p < 0.01$). This may be explained by the fact that the academic staff is suffering from pressure at work, as well as the transformational leadership asks for additional efforts in order to improve innovative work behavior. In this case, when the interaction of quality culture within them takes place, the academic staff feels that it is heavy with instructions and additional orders, which reflect negatively on their innovative work behavior.

The study finding revealed that H6, which proposed the moderating role of quality culture between transformational leadership and innovative work behavior, is rejected. It may be due to differences in attitudes between transformational leadership and academic staff to approach the problems within the university. According to the SDT theory regarding quality culture, therefore, leaders who adopt SDT theory in their practical work facilitate a workplace that optimizes the motivation of employees in order to exert additional effort to enhance their innovative work behaviour (McDaniel, 2011). This suggests that organizations should enhance their innovativeness by assisting the development of quality culture through the dissemination of norms and beliefs that could enhance it as well as innovative work behavior.

5.4 Research Implications

The findings of the present study hold significant implications for theory, practice and methodology. The implications are presented individually in the next sub-sections.

5.4.1 Theoretical Implications

As it has been discussed in the significance of the study in chapter one, the contributions of this study are many. Some of these contributions are discussed as follows:

First, from the theoretical perspective, this study demonstrated the importance of extrinsic motivation, psychological empowerment, and transformational leadership in the public sector, particularly in the HE sector. More specifically, it contributed to the extrinsic motivation literature by re-examining the unresolved issue concerning the relationship between extrinsic motivation and innovative work behaviour. In other words, the disagreement in the literature regarding the extrinsic motivation and innovative work behaviour implication called for further investigation and discussion. As stated earlier, the direct relationship between extrinsic motivation and innovative work behaviour examined in the previous literature revealed inconclusive results (Baer, et al, 2003; Zhou, et al, 2011). As previously argued, the reported failure of some extrinsic motivation initiatives in the literature was attributed to the lack of supportive culture. In general, the findings of this study confirmed and supported the existence of a positive impact of extrinsic motivation on the innovative work behaviour.

Second, this study showed the importance of psychological empowerment for the innovative work behaviour. In addition, this study contributed to the management literature by re-examining the impact of psychological empowerment on the innovative work behaviour. A review of the literature concerning this relationship revealed that the results were inconsistent. Notwithstanding the extensive research work in the literature that examined the psychological empowerment for the innovative work behaviour relationship, there has been scholarly disagreement. Due to the inconclusive results, many academics and practitioners question the appropriateness of psychological empowerment for innovative work behaviour (Sapie, et al, 2015; Rahman et al. 2014). To explain these results, Bain et al. (2001) and Elenkov and Manev (2005) suggested that other factors might be incorporated when further examination is to be carried out. The results of this study, however, confirmed the positive significant effect of psychological empowerment on the overall innovative work behaviour.

The third implication is the provision of information concerning the association between transformational leadership and innovative work behavior in a new context (Iraqi HE sector). Transformational leadership has been evidenced to have significant effects through various initiatives that trigger the awareness of followers of other contributions brought forwards by group members (Betroci, 2009; Bass & Riggio, 2012). This type of leaders is capable of enhancing the confidence, effectiveness and motivation of their followers by meeting their personal needs and aims (Northouse, 2007; DuBrin, 2012). The study findings support the effects of transformational leadership on innovative work behavior and its assistance in providing a deeper insight into the interconnections between transformational leadership and innovative work behavior. The importance of

such finding lies in the knowledge of the impacts of transformational leadership on the production of capabilities that are largely ignored in traditional leadership style. In the traditional leadership style, a top-down culture is adopted, which prevents innovative work behavior development. Therefore, this study contributes to theory by confirming and supporting the positive effect of transformational leadership on innovative work behavior.

Fourth, this study provided a significant insight into the role played by quality culture in organizational processes. The results of this study revealed that the supportive quality culture is necessary for innovative behavior. Several studies indicated the need to support innovation and motivate it within firms (e.g., Agrell & Gustafson, 1994; Anderson & West, 1998; Husheger et al., 2009; Pirola-Merlo, 2000). In other words, quality-culture supported individuals perceive that they are free to test new ideas and methods to achieve goals and complete tasks (Pirola-Merlo et al., 2005). However, the lack of such quality culture may lead to waste of the organizational resources through failure strategy adoption. However, this study contributed to knowledge by focusing on the higher education in Iraq to support the wider applicability of the factors (which are mentioned above) as supported by previous studies (e.g., Afsar et al., 2014; Cekmecelioglu & Ozbag, 2014; Kausar, 2014; Lin & Wong, 2014; Nezhad et al., 2015; Pieterse et al., 2010).

Fifth, although limited studies have been dedicated to extrinsic motivation, psychological empowerment, transformational leadership and quality culture (as moderator) relationships with innovative work behavior, the findings of this study have

showed the validity of these factors and supported the SDT theory through the positive relationship between extrinsic motivation, psychological empowerment and transformational leadership with innovative work behavior. In addition, quality culture has been proved as moderator between extrinsic motivation variable and dependent variable, which is supported by SDT theory. To the best knowledge of the researcher, this is the first study to empirically test quality culture as a moderator in the relationship between the factors and thus, the findings provide new empirical evidence to literature. More specifically, even though past studies have shown the importance of quality culture in improving competitive advantage, job satisfaction, performance and organizational effectiveness (Alotaibi, 2014; Kitapçı, et al, 2009; Laksmi, 2014; Raja & Wei, 2014), the current study found that it also increases innovation and critical thinking of the employees (Silva et al., 2014).

Finally, this study confirmed both direct and indirect relationship of extrinsic motivation and innovative work behavior moderated by quality culture, while negative relationship between transformational leadership and innovative work behavior with quality culture as moderator. The study also confirmed that no moderating effect of quality culture exists between psychological empowerment and innovative work behavior among the academic staff. This study provides clear evidence that the moderating role of quality culture is empirically testable. Hence, it is important for the management of the Iraqi HE to consider the role of quality culture to improve innovative work behavior of the academic staff.

5.4.2 Practical Implications

The findings of the present study also have several implications for practice in terms of university management. It illustrated the significant factors that positively enhance the innovative work behavior of academic staff and these include extrinsic motivation, psychological empowerment, transformational leadership and quality culture. These findings are expected to help management of universities to provide motivation and support for academic staff regarding teaching and learning in order to maintain a highly innovative academic staff, and this is possible through rewards, high salary and promotions.

Additionally, the management of universities should focus on providing psychological empowerment in order to facilitate innovative work behavior among the members of the staff. In turn, the academic staff should expose themselves to such empowerment to maximize their innovative work behavior in R&D. However, it is significant for the top management to ensure that the mission and goals of universities are not ignored, and they are in line with the lecturers' own value system so that they will be encouraged to enhance their innovative work behavior.

In this regard, lecturers are convinced that they have the ability to perform their activities with the required knowledge and skills, and when empowered to display innovative behavior. As such, it is pertinent to provide continuous training to lecturers to meet their knowledge and skills needs in universities and to prepare themselves for their work role, particularly lecturers in R&D.

The management should also provide a sense of autonomy to the members by providing them the opportunity to determine their work schedule. They should be free, to an extent, to decide on the subject or field to teach. This would give the staff the chance to determine their working time and subject based on their preferences. In addition, the lecturers believe that they can influence the strategic output, management and operation in the workplace; the lecturers feel they are more empowered in mobilizing support for innovative work behavior. In the same line of explanation, the management has to encourage members of the academic staff to collaborate in solving problems and to conduct tasks/projects in teams to ensure that the institution's goals and visions are achieved.

This study's results also demonstrated the significance of transformational leadership in Iraqi public universities to encourage and maintain innovative work behavior among academic staff. In this regard, it is imperative for universities to encourage the adoption of a transformational leadership style to direct efforts towards the development of the teaching staff. This focus will in turn give a clear direction and purpose to them within an environment that is rife with mutual trust and respect. In this regard, human resources should be considered as the top assets for leaders and they should be inspired to engage in innovation and to search for training programs, attend courses, conduct research projects and adopt new technologies. In this study, in the Iraqi public HE, the results showed that transformational leadership is the top predictor of innovative work behavior of academic staff. Therefore, academic staff should be supported through encouragement, consideration and coaching.

Moreover, the management could also support the staff through the provision of teaching and learning facilities, and through the opportunities provided to the staff to attend training, conferences and seminars for their professional development and enhancement of work performance and innovation. It is recommended that university's management facilitates a positive work environment that supports and encourages staff contribution for discovering of the new ideas, and provides them with autonomy and flexibility to plan and conduct their work as this could enhance their innovation.

Furthermore, with regard to quality culture as moderator, the findings obtained showed its significant influence on the extrinsic motivation and innovative work behavior among academic staff. In other words, high quality culture holding academic staff is likely to display new innovative ideas. It is thus imperative to facilitate a quality culture in the academic workplace to ensure that good managers are in place, to encourage involvement in university activities, and ultimately, to delegate tasks and empower academics to improve innovative work behavior. The findings also confirmed that for new ideas to be created staff should be able to use innovative ideas through the access of strategic information, and in this regard a work environment conducive to empowerment of staff and their access to opportunity of learning and development and resources should be created (Ghani et al., 2009).

In short, the recommendations provided above are indicative of several action types that the management of universities can employ to enhance the innovative work behavior among academic staff. It is expected that the study results will boost new thinking among university management that could lead to innovation development. Based on the

results, there is a dire need for extrinsic motivation, psychological empowerment, transformational leadership and quality culture in order to improve the innovative work behavior of academic staff. There is also a need to minimize work pressure- the work hours exceed over 20 hours a week although the instructions determined that the work hours must be less than 15 hours in a week. Thus, the management should take this point into consideration.

5.4.3 Methodological Contribution

The third perspective that the present study contributes to is the methodological perspective. In this respect, the study measured the independent variables, the dependent variables and the outcomes, and the moderating variable in the context of Iraqi HE. Although, with all the variables evidenced in literature to have a good reliability and validity in the Western context and other countries, this study validates the measurements in the context of Iraqi HE. The study made use of PLS-SEM that allowed concurrent assessment of the measurement model and the conceptual model adequacy for the assessment of innovative work behavior.

The following are the methodological implications drawn from the present study. First, the present study employed PLS path modeling to assess every latent variable's psychometric properties. Specifically, this study assessed psychometric properties by examining convergent and discriminant validity. Moreover, individual item reliability, average variance extracted and composite reliability were assessed for this reason. Accordingly, AVE for every variable was investigated to ensure convergent validity.

Additionally, to determine discriminant validity the correlations among the latent variables were compared with the square root of AVE. Parallel to this, the present study also assessed cross loadings to further confirm discriminant validity of the proposed framework. Therefore, to contribute methodologically, the present study employed one of the robust approaches (i.e., PLS Path modeling) for assessing the psychometric properties of each of the latent variables of the study.

5.5 Limitations and Direction for Future Research

Similar to other studies, this study has its limitations, and such limitations that may influence the findings generalizations and interpretations. These limitations are discussed in this sub-section.

The main aim of this study is to shed light on the influence of extrinsic motivation, psychological empowerment, transformational leadership and quality culture (moderator) on innovative work behavior among public universities' academic staff in Iraq, with the exclusion of private universities. Therefore, the findings only succeeded in obtaining the perceptions of public universities' academic staff concerning the factors influencing their innovative work behavior. Future researches in this regard can extend this study and examine the same factors on other types of higher education institutions as this may provide in-depth insight into the issues concerning innovative work behavior in those contexts. Private universities and colleges may hold different perceptions of extrinsic motivation, psychological empowerment, transformational and quality culture

(moderate) with innovative work behavior findings and as such, the findings that will be obtained may be different.

Apart from the tested variables, other situational factors were not included in this study and these include organizational culture, innovation culture, contextual factors and personality trait. Since the present study adopted quality culture, the researcher recommends the examination of other moderator variables, e.g. organizational culture, in the future. This may lead to further explanations of the variables' impact upon and prediction of innovative work behaviour. Organizational culture factor, however, always surfaces as one of the main strategy implementation key success factor. Also regard innovation culture may be effect as moderater between the factors of this study and innovative work behavior. Because innovation culture provides a suitable climate for innovation in the organization. The contextual factors can be modreater in the relationship between the factors and innovative work behavior, it is work as assisstant factor which support to the relationship between the variables in predicat of innovative work behavior. In addition, future study can investigate the possible use of personality trait as a mediating variable between extrinsic motivation, psychological empowerment and transformational leadership with innovative work behaviour. This is because these factors effect to the personality trauts of employees. Therefore, management can use this factors with personality traits that can lead to innovative work behaviour.

This study employed a cross-sectional method as the researcher thought it impractical to carry out a longitudinal study. A cross-sectional study is simple, inexpensive and enables data collection in a short span of time. Despite its advantages, the method

provides limited information concerning the changes in the innovation behavior level when different types of extrinsic motivation, psychological empowerment and transformational leadership are imposed. Future research may examine the issues of innovative work behavior through the use of longitudinal type of study.

There are other determinants that were not covered by this study. For example, the sample of the study is limited to a certain number of respondents in the future, it needs to include more respondents and more than three universities, including private universities, and a comparison between the results of private universities and public universities. In addition, this study used e-mail to collect data, in the future it is possible to collect data manually to avoid distribution problems by e-mail.

In the present study, the research model explained 42% of the total variance in the innovative work behavior when four sets of exogenous latent variables (i.e. extrinsic motivation, psychological empowerment, transformational leadership and quality culture) were tested directly. Additionally, when tested in full the construct of variables in the presence of quality culture as a moderating variable, it explained 52% percent of the variance. This suggests that other factors may notably elaborate and explore variance towards innovative work behavior. Therefore, future researches may possibly consider other factors that could improve innovative work behavior. Particularly, future research may examine how these factors (as mentioned above) could further foster innovative work behavior in the presence of other organizational factors among various service-based industries, such as health care, insurance, and hotel industries.

In sum, despite the mentioned limitations related to the approach employed, considering the nature of the study, the results still provide useful findings that could be valuable for both researchers and academic circles.

5.6 Conclusions

This thesis primarily aims to examine the extrinsic motivation, psychological empowerment and transformational leadership on innovative work behavior, with quality culture as the moderator among academic staff in Iraqi HE. This study uses quantitative approach, a cross sectional study and the survey method to collect data, and analyze it with the help of PLS technique for data analysis. The primary concern was directed towards the effect of these factors as mentioned above on innovative work behavior. Based on the data analysis, this study's results confirm that these factors (independent variables) have positive and direct effect on the innovative work behavior.

Despite the study's limitations, the answers to the research questions have been successfully provided through this study. While several studies have examined extrinsic motivation, psychological empowerment, transformational leadership and innovative work behaviour relationship, the current study addresses the theoretical gap by incorporating quality culture as a significant moderating variable. The findings have referred that extrinsic motivation is positively related to innovative work behavior with quality culture as a moderator. However, quality culture does not affect as a moderator the relationship between psychological empowerment and innovative work behavior. There is a negative relationship between transformational leadership and innovative

work behavior with quality culture as a moderator. The study has found through the practical analysis that quality culture is a quasi moderator among the factors mentioned above and innovative work behaviour.

The present study has also concluded that quality culture theoretically moderates the relationship between the exogenous and endogenous variables. This study's theoretical framework has added more knowledge to the theory adopted by this study, which is SDT theory, by examining the extrinsic motivation, psychological empowerment and transformational leadership with innovative work behavior and the influence of quality culture as moderating on the relationships between independent variables and dependent variable.

Furthermore, due to this study's limitations, the researcher suggests several new lines for future research. This study is practically applied in the public universities only; future studies can include private universities. And also, the research has used cross-sectional method; however, future studies may include a longitudinal study. In conclusion, this study has successfully attained research objectives and has provided valuable contribution to the body of knowledge in the respective fields.

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Dear Participant,

I am conducting a pilot and field study for the purpose of scientific research. Once completed, I will be awarded a PhD in Business Administration from the Universiti Utara Malaysia. The title of my study is “The Factors Influencing Innovative Work Behavior in Higher Education in Iraq: Moderating by Quality Culture”.

I would appreciate your time to answer the enclosed questionnaires. Your answers are very important and significant to the accuracy of the information pertaining to my study. The information gathered will be treated confidentially and only be used the purpose of this study. Thank you in advance for your cooperation.

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SECTION ONE (Background Information)

DIRECTION: This part contains statements concerning general information about the participants. Please read the following statements and checks (✓) the category that best describes your situation.

1. Gender:

Male () Female ()

2. Age:

20- 29 years () 30 – 39 years () 40- 49 years () 50 -59 years () More than 60 years ()

3. Work Experience:

1-5 years () 6-10 years () 11-15 years () 16-20 years () More than 20 years ()

4. Academic Qualification:

Master () PhD ()

5. Position Title:

Assistant Lecturer () Lecturer () Assistant Professor () Professor ()

SECTION TWO

DIRECTION: Please read each of the following items and indicate your level of agreement to each of the statement. Please indicate your choice by (✓) the number in the range given.

No	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
A	Extrinsic Motivation					

1.	I am strongly motivated by the money I earn through work.	1	2	3	4	5
2.	I am keenly aware of the promotion goals I have for myself.	1	2	3	4	5
3.	I usually think about salary or promotions.	1	2	3	4	5
4.	I am keenly aware of the income goals I have for myself.	1	2	3	4	5
5.	I am strongly motivated by the recognition I can earn from other people.	1	2	3	4	5
6.	I want other people to find out how good I am really at my work.	1	2	3	4	5
7.	To me, success means doing better than other people.	1	2	3	4	5
8.	I am concerned about how other people are going to react to my work performance.	1	2	3	4	5
B	Psychological Empowerment					
9.	The work I do is very essential to me.	1	2	3	4	5
10.	I am confident about my ability to do my work.	1	2	3	4	5
11.	I have significant autonomy in determining how I do my work.	1	2	3	4	5
12.	My impact on what happens in my department is large.	1	2	3	4	5
13.	My job activities are personally meaningful to me.	1	2	3	4	5
14.	I have mastered the skills necessary for my job.	1	2	3	4	5
15.	I can decide on my own how to go about doing my work.	1	2	3	4	5
16.	I have a great deal of control over what happens in my department.	1	2	3	4	5
17.	The work I do is significant to me in the university.	1	2	3	4	5
18.	I am self-assured about my capabilities to perform my work.	1	2	3	4	5
19.	I have considerable opportunity for independence and freedom in how I do my job.	1	2	3	4	5

20.	I have a significant influence over what happens in my department.	1	2	3	4	5
C	Transformational Leadership					
21.	My leader re-examines critical assumptions to question whether they are appropriate.	1	2	3	4	5
22.	My leader talks about his/her most important values and beliefs.	1	2	3	4	5
23.	My leader seeks differing perspectives when solving problems.	1	2	3	4	5
24.	My leader talks optimistically about the future.	1	2	3	4	5
25.	my leader instills pride in me for being associated with him/her.	1	2	3	4	5
26.	My leader talks enthusiastically about what needs to be accomplished.	1	2	3	4	5
27.	My leader specifies the importance of having a strong sense of purpose.	1	2	3	4	5
28.	My leader spends time teaching and coaching subordinates.	1	2	3	4	5
29.	My leader goes beyond self-interest for the good of the group.	1	2	3	4	5
30.	My leader treats me as an individual rather than just as a member of a work group.	1	2	3	4	5
31.	My leader acts in ways that build my respect.	1	2	3	4	5
32.	My leader considers the moral and ethical consequences of decisions.	1	2	3	4	5
33.	My leader displays a sense of power and confidence.	1	2	3	4	5
34.	My leader articulates compelling visions of the future.	1	2	3	4	5
35.	My leader considers me as having different needs, abilities, and aspirations from others.	1	2	3	4	5

36.	My leader gets me to look at problems from many different angles.	1	2	3	4	5
37.	My leader helps me to develop my strength.	1	2	3	4	5
38.	My leader suggests new ways of looking at how to complete assignments.	1	2	3	4	5
39.	My leader emphasizes the importance of having a collective sense of mission.	1	2	3	4	5
40.	My leader expresses confidence that goals will be achieved.	1	2	3	4	5
D	Quality Culture					
41.	I believe that when I have a lot of experience in doing something, I need to spend time collecting a lot of information to figure out how doing it better.	1	2	3	4	5
42.	Trying to improve the way the work gets done is part of my job.	1	2	3	4	5
43.	An important part of my job is to study the way I work.	1	2	3	4	5
44.	The regular meetings to analyze the way work gets done makes an important contribution to improve the quality and innovation of my work.	1	2	3	4	5
45.	The idea of continually studying the way I work so that I can improve literally applies to my job.	1	2	3	4	5
46.	If something seems to be working well and if I am trying to improve it, this it, this thing may become better.	1	2	3	4	5
47.	I believe that the people in different departments help each other.	1	2	3	4	5
48.	The people I work with are suggesting changes and improvements to each other.	1	2	3	4	5
49.	I believe that, there is a lot of cooperation between work groups in my university.	1	2	3	4	5
50.	I think most work groups in my university work together to solve problems.	1	2	3	4	5

51.	I believe that work groups in my university always communicate with each other easily.	1	2	3	4	5
52.	I know how my work contributes to the university's mission.	1	2	3	4	5
53.	I believe that my university's mission is understood by everyone who works here.	1	2	3	4	5
54.	I think that the university goals have much to do with my work.	1	2	3	4	5
55.	I think that the people who work here know exactly how their work contributes to the goals of the university.	1	2	3	4	5
56.	I believe that everyone who works here understands exactly what specific goals are.	1	2	3	4	5
57.	I believe what I hear from our management.	1	2	3	4	5
58.	In our university, the leader can make changes in the way things are done, the leader talks first with the people who will be affected.	1	2	3	4	5
59.	If I have an idea for improving the way of work, the leadership in the university will usually listen to it.	1	2	3	4	5
60.	The people who run this university are willing to spend money to improve the quality of the services.	1	2	3	4	5
61.	In my work position, I get all the facts before I make decisions.	1	2	3	4	5
62.	Senior managers in this university are completely committed to the idea that if I study the way I do my work, I can make things better around here.	1	2	3	4	5
63.	My performance is judged more by how much work I do than by how well I do it.	1	2	3	4	5
64.	In this university, I am satisfied as long as my work just meets the required criteria.	1	2	3	4	5
65.	In my work situation, I have control over how things are done.	1	2	3	4	5
66.	In this university I put more energy into catching mistakes than into figuring out how to do things right the first time.	1	2	3	4	5

67.	I have much influence on how things are done in my work group	1	2	3	4	5
68.	I think that the way things are organized makes it easy for me to do.	1	2	3	4	5
E	Innovative Work Behaviour					
69.	I try to create new ideas for difficult issues.	1	2	3	4	5
70.	I have confidence in searching out new working methods, techniques, or instruments.	1	2	3	4	5
71.	I feel that I am good at generating original solutions for problems.	1	2	3	4	5
72.	I have mobilizing support for innovative ideas.	1	2	3	4	5
73.	I try to acquire approval for innovative ideas.	1	2	3	4	5
74.	I make the university's academic staff enthusiastic for innovative ideas.	1	2	3	4	5
75.	I have confidence in my ability to transform innovative ideas into useful applications.	1	2	3	4	5
76.	I have confidence in my ability to introduce innovative ideas into the work environment in a systematic way.	1	2	3	4	5
77.	I have confidence in evaluating the utility of innovative ideas.	1	2	3	4	5

Thank you

Appendix - A 2
Questionnaire Arabic Version





SCHOOL OF BUSINESS MANAGEMENT
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عزيزي لأمشارك.....

فلأيدك بآني قوم حالي لإجراء دراسة في دراي في غرض البحت لعل ميل حصول على درجة البكالوريوس
في إدارة الأعمال من جامعتك أرا لأمال يزية. وعنوان الدراسة هو "العوامل المؤثرة على سلوك
العمل ابداع في الهيئات على العمل على عراقي". شكالك في ضاء وقتك المثلين
في إجابة اسئلة المفقة.

إن إحتلتك ذات أهمل في رقي م لي عمل قبديق عالم عمل وم التمت علق قب هذه الدراسة وست عمل الم عمل ومات
التي يتل حصول في ها من خ هذه الدراسة بقسرية تامة وسيت م استخ دامها غراض الدراسة
فقط.

شاكرا ومقدرا لكم سمحت عافاكم في التويق.

لباحث:

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لقدمه

يتضمن هذاالجزء بيان استيعال قبل عمل وماتالعامه لالخص قبلالمش ارلحين نرجو انكم مقراءه قلبيل اتالي تليه
وضع مة لحي افئ للتي تنص ورموفقكم لحي الالوج الالناماسب.

1-الاجنس

ذكر () لحي ()

2-لالعمر

20- 29 () 30- 39 () 40- 49 () 50- 59 () 60 () سن فالفبر ()

3- عسولين لخدمه

5 - 10 () 6 - 10 () 11- 15 () 16 - 20 () 20 () سن فالفبر ()

4 - لمؤهل لعلمي

ماجستير () لكتوراه ()

5- اللقب لعلمي

استاذ () مساعداستاذ () مدرس () مساعدمدرس ()

(اللقسم

يرجى قراءه لالالاللقبة وحي بس توى الالمفولة أوعدم الالمفولة على الالالالالالال من خ لوضع اشار على الرقم
الناماسب.

مفتاح الرموز:

= 1 افقشده = 2 افق = 3 محايده = 4 افق = 5 أفلقشده

رقم	ليند	افلق بشدة	وفلق	محيّد	افلق	وافلق بشدة
A	لدفع لخواجة					
1.	ان يتمشج عقوق قبل مال الذي يكن انطسبه من لال عمل	1	2	3	4	5
2.	ان ا مدركت ماما هداقل تيس بعد نيل حصول لحيثوقية	1	2	3	4	5
3.	ان ا طام افلق لال رتب لظلق يات.	1	2	3	4	5
4.	ان ا مدركت ماما هداقل تي اعمل لحيثوقية ها .	1	2	3	4	5
5.	ان يتمشج عقوق قبل يال الذي يكن انطسبه من الناس ا ين.	1	2	3	4	5
6.	ان اريد من ا ين ان يلقف والي في ليني ان لم ينج جيفي علفي.	1	2	3	4	5
7.	بالسب ليلن جاجعني ان اعمل شرك للفضل من الناس ا ين.	1	2	3	4	5
8.	ان رفع ل ا ين على اطي في ال عمل موامرم ملي.	1	2	3	4	5
B	لتويض لفس ي					
9.	العمل الذي ا قوجه موزروري ج دبلان سب لني	1	2	3	4	5
10.	لدي الق قبل لفس علفي كفاءه.	1	2	3	4	5
11.	لبي ا لالة افلق حدي دال لني ا قتي ان ج زب ها علفي.	1	2	3	4	5
12.	لدي تنفي رلفي ر حول ملي ح دتفي قس مي.	1	2	3	4	5
13.	اقوجا نشطة ذات قومة غلي قتل اعني ذ مهام علفي.	1	2	3	4	5
14.	لديال بخرة والمهارات الضرورية مهام علفي.	1	2	3	4	5
15.	استطيع ان ق ر زفس ي لني في لني ان جاز علي دون تدخل ا ين.	1	2	3	4	5
16.	لدي قدرة لني رف لني تنفي لني لقرار انك تيت خفي قس مي.	1	2	3	4	5
17.	العمل الذي ا قوجه ذو قومة ومن ا عمال ه ام قبي لاجامعة.	1	2	3	4	5
18.	لدي الق قوراتي لني مواجده للصعب انك تيت واجني بلق اعني اميب مهام وظيقتي.	1	2	3	4	5
19.	لدي ا ية ولا ح ولا لك افلي في لني ا اداء علفي دون تدخل ا ين.	1	2	3	4	5
20.	لدي تنفي رهام لني التطورات التي ح دتفي قس مي ا رتي.	1	2	3	4	5
C	قلي ادق لني					
21.	المهيري ققي تر لني ات الساس قبال لتخالف قرار لك الكد من صخ ها.	1	2	3	4	5
22.	المهيري لني لم يلم والحق دات ال لني في لني لوكه.	1	2	3	4	5
23.	المهيري شج لني حل المش تب طرق بلكر قتش لني ه من فظور انخنتية.	1	2	3	4	5
24.	المهيري ح دتفي لني عن المستقبل.	1	2	3	4	5
25.	المهيري ر لني لني ح ماس تزام واللق لوف خر عن د العمل معه.	1	2	3	4	5

26	1	2	3	4	5	المهيري حديث ح ماس عن لاج التتبيي جب ل ج ازاها.
27	1	2	3	4	5	المهيري ركز في اهيمة وجودش عورق وبيت ج اهل هدفالذي نعمل من اجله.
28	1	2	3	4	5	المهيري يقضي اوقاته في تعليم وتدريب بال موظفين.
29	1	2	3	4	5	المهيري فضل صلح ال مموعة في الصلح الفريية.
30	1	2	3	4	5	المهيري علني لئاس ان لشر من اي عضوي مموعة عمل بلل جامة.
31	1	2	3	4	5	المهيري حمل بطرق جعة محل اضراما ين واع جلم.
32	1	2	3	4	5	المهيري اخفيعن اعتبارا مور ية وال موعة نحد اتخا لقرار.
33	1	2	3	4	5	المهيري معة عبقرة قرة نكية عليية .
34	1	2	3	4	5	المهيري ين روى قنعة ووض ح قلم سقبل.
35	1	2	3	4	5	المهيري اخفيعن اعتبار لتي اجات ق درات تطلعات كل موظف س كل م صلف عن ا ين.
36	1	2	3	4	5	المهيري صحن يبلن طرفي المش ت من زوايم اختفة ل م س اعة في حلها.
37	1	2	3	4	5	المهيري س لحدن في فيت طوير وتني قوراتي.
38	1	2	3	4	5	المهيري ش جع في اقتراح طرق جي دة لفي فان ج ازال م هام.
39	1	2	3	4	5	المهيري ركز شدة في اهيمة وجودش عور ج م اع ي ك جاه رسال فال جامة.
40	1	2	3	4	5	المهيري صر عن اللق بان ا دافال مرس وم س وفت خق.
D						ثقافة ل جودة
41	1	2	3	4	5	ان المتقيد له عن د م ل كل لضر فال طول قبع عمل شيء ما , خت اج لا ع قضا عوق تقيت حصيل اللخير من ال عل و م ات فم طوق قولي اب هذا ل عمل في ح و افضل.
42	1	2	3	4	5	ان م ح اوليت حرين طوق فان ج ازال عمل هي جزء من علوي.
43	1	2	3	4	5	جزء مهم من علوي موداسة ل طوق ا قتي أع لم لها.
44	1	2	3	4	5	ان ا ت م اع ات ال ه ظلمت حل ل طوق فان ج ازال عمل ش كل م س امة م م قتي حرين ال جودة و ابتكار ل علوي.
45	1	2	3	4	5	ان ف لرة الواس فال م س م ر ق طوق قتي ام يبل عمل م م ث نك م ن م حرين هذا ل عمل ن طبق قوقة في علوي.
46	1	2	3	4	5	اذك ان من الك شيئا م ل يدول هي عمل م م ف ان م ح ا لة حرين قتي ج ل م ل شي ل ففضل.
47	1	2	3	4	5	ان المتقيد نافي ا م ل خت ق س ا ع م ع ن ا ا .
48	1	2	3	4	5	ا اصل ل ف ن أعمل م ع م قتر حون الت ف يرات ول حرين ات ل م ع م ل ع م.
49	1	2	3	4	5	المتقيد ان ن ك اللخير من الت عاون بين الت م س ي ر في مة ل جامة.
50	1	2	3	4	5	ان المتقيد ان ع ل في الت م س ي ر في مة ل جامة ع ل و ن م عا ل م س فال مش ت.

5	4	3	2	1	لدي الق مقدرتي لحييت حول ا البدعة لآيت طيقات فهيده.	75
5	4	3	2	1	لدي الق مقدرتي لحييت حول ا البدعة لآيت طيقات فهيده.	76
5	4	3	2	1	لدي الق مقدرتي لحييت حول ا البدعة لآيت طيقات فهيده.	77

جني شكرا



UUM
Universiti Utara Malaysia

Appendix - B

Summary of the Past Studies

No	Author	Iv	Med	Mod	Dv	Sector and country	Sampling	Result
1	Michael, et al (2011)	creative self-efficacy		Optimism	IWB	serves /tawan	340 employees	positive
2	Carmeli, Meitar & J Weisberg(2006)	self-leadership skills				public sector/ Israel	170 employees and supervisors	positive
3	Yidong & Xinxin (2013)	ethical leadership				companies/ china	302 employees	positive
4	De Spiegelaere & Gyes(2012)	JOB DESIGN				companies/ Belgium	952 employees	job control positive
								job demand negative
5	Messmann, et al (2010)	individual characteristics				HE/ German	58 teachers	positive
6	Stoffers, et al (2015)	organizational culture				manufacturer /Netherlands	53 employees	positive
7	Mura, et al (2012)	Intellectual Capital				organization / Italian	226 physicians	positive
8	Imran, et al, (2010)	organizational climate				organizations / Pakistan	320 managers	positive
9	Khaola, (2013)	Leadership				companies/Lesotho	100 participants	positive
10	Schermuly, et al, (2013)	leadership	psychological empowerment			companies/German	225 employees	positive

11	Bammens, et al (2014)	family businesses	Perceived Organizational Support			different setting/Dutch	1000 employees	positive
12	Reuvers, et al , (2008)	transformational leadership				Hospitals/ Australian	335 participants	Positive
13	Janssen, (2000)	Job demands				Industrial/ Dutch	170 employees	Positive
14	Janssen, (2005)	employees' perceived influence		supervisor supportiveness		Industrial/ Dutch	170 employees	Positive
15	Rahman, et al (2014)	psychological empowerment				HE/ Malaysia	393 lecturers	Positive
16	Ghani, et al, (2009)	psychological empowerment				HE private / Malaysia	312 lecturers	Positive
17	Chughtai, (2011)	between work engagement and	learning goal orientation			HE/ Ireland	168 research scientists	partially mediated
18	Imran & Haque, (2011)	transformational leadership	organizational climate as			Service/ Pakistan	320 managers	partial mediating
19	Sanders, et al, (2009)	LMX Satisfaction	HR practices			organizations /Dutch and German	272 employees	Mix
20	Afsar, et al (2014)	transformational leadership				Companies/ china	639 employees	Positive
21	Khan and Aslam, (2012)	transformational, transactional				bank / Pakistan	100 bank managers	Mix

		laissez-faire leadership style						
22	Agarwal, (2014)	LMX organizational support	engagement on			Service/ India	510 managers	Positive
23	Sapie, et al ,(2015)	work environment				Industry / Malaysia	254 employees	Mix
24	Dincer and Orhan, (2012)	emotional intelligence				banks / turkey	332 employees	Positive
25	Kheng, et al (2013)	Pro-Innovation Organizational Climate Leader-Member Exchange Social Capital				Services/ Malaysia	380 knowledge workers	Positive
26	Wong, (2013)	Management involvement	Organizational innovation Administrative innovation			manufacturing firm/ China	196 respondents	Positive
27	Hsiao, et al (2011)	Self-efficacy on				education/ Taiwan	546 teachers	positive
28	Scott and Bruce (1994)	leadership, individual prob-	Psychological climate			Industry/ us		

		lem-solving style, work group relations						
29	Singh and Sarkar (2012)	psychological empowerment				Education/ India	401/teacher	Mix
30	Marane, (2012)	psychological empowerment	Trust			Manufacturing/ Iraq	245 managers	partial mediating
31	Niu, (2014)	personality		job satisfaction		service /Taiwan	626 employees	Positive
32	Xerri (2012)	leader-member exchange	perceived organizational support			hospitals / Australia	104 nurses	Positive
33	Tsai, et al (2015)	LMX	psychological empowerment	motivational orientations.		companies /Taiwan.	359 employees	Positive
34	Lu ,Zhou & Leung, (2011)	conflict		contextual variables		China.	166 pairs of supervisors	Positive
35	Rune, (2013)	Personality traits		Job satisfaction		Danish financial company/ Denmark	294 employees	Positive
36	Jong & Hartog, (2007)	Leaders				knowledge- intensive service firm	consultants, researchers, engineers	Positive
37	Chang and et al (2011)	Team cohesion		Perception of E-R Fairness		post-secondary schools in Taiwan	546 administrative	Positive

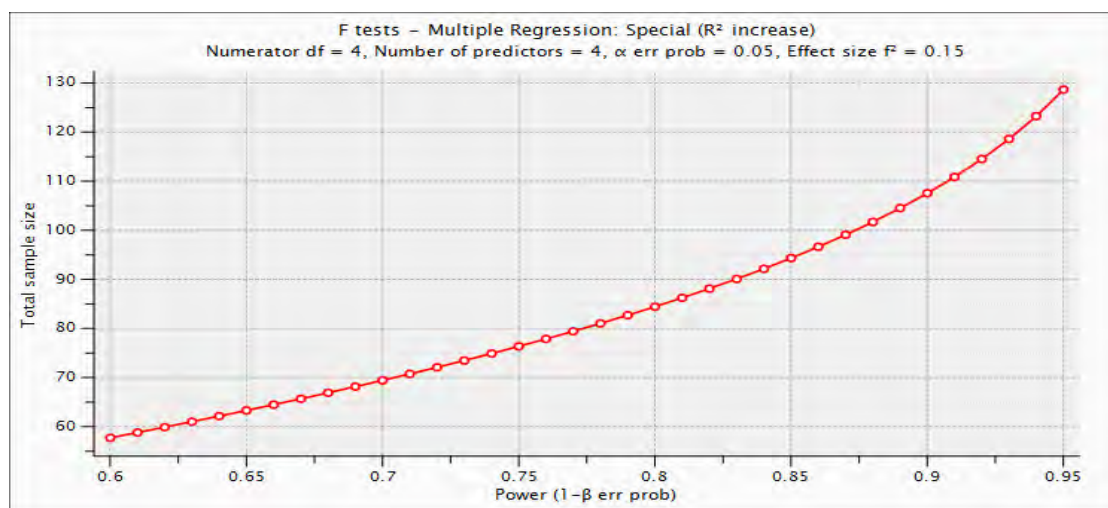
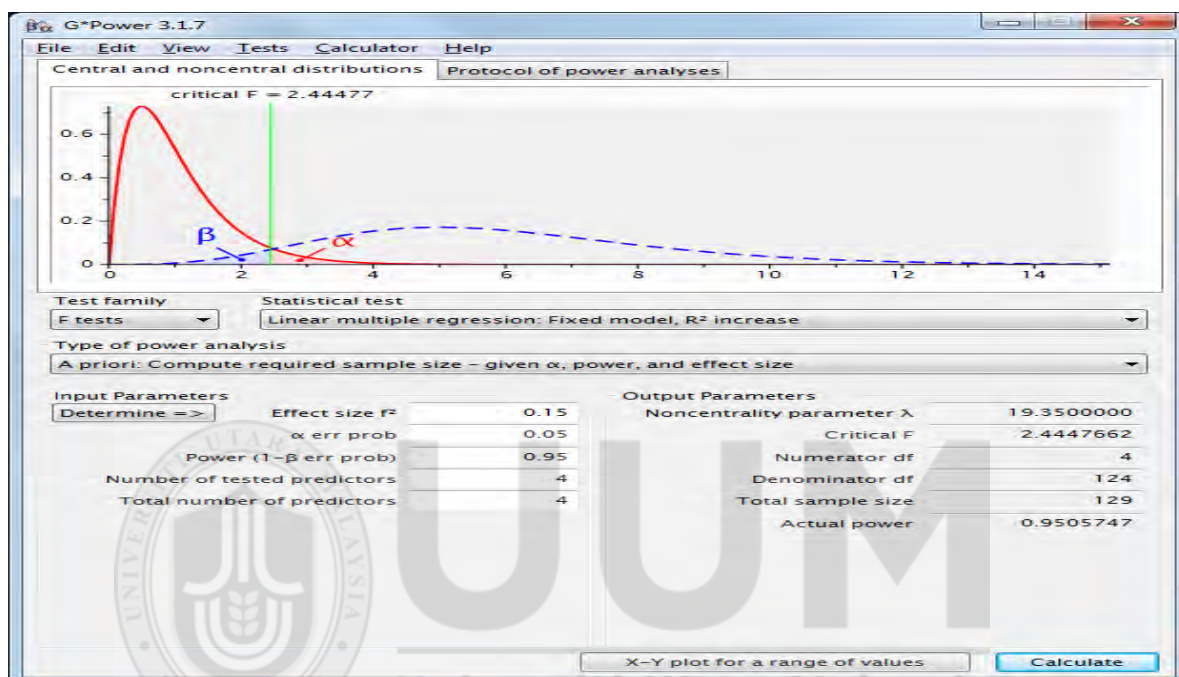
							staff in	
38	Salanova, et al (2007)	Job demands job resources				Spanish companies	244 participants	Positive
39	Chen et al (2010)	Personality Traits	Intrinsic Motivation Extrinsic Motivation			marine tourism commercial resort in Penghu, Taiwan.	215 valid	Positive
40	Zhang And Bartol (2010)	leadership, empowerment				large information technology company in China	670 professional employees	Positive
41	Hogan and Coote (2014)	organizational culture				service firm	100 principals of law firm	Positive
42	Jong and Hartog (2008)	Participative leadership External work contact				institute for business and policy research in the Netherlands	703 knowledge workers	Positive
43	Lin, et al (2011)	Leadership ,	Organizational Culture			Taiwan.	125 Taiwanese owned SBUs	Positive
44	Riivari et al (2012)	ethical culture				the public sector in Finland.	147 respondents	Positive
45	Uzkurt, et al, (2012)	environmental uncertainty				(SMEs) Turkey	156 SMEs in Turkey	market/demand turbulence and technological turbulence have a positive effect on the

								innovativeness of SMEs competitive intensity was not found to have significant effect on an SME's innovativeness
46	Sethibe and Steyn, (2016)	transformational and transactional leadership				from 52 South African companies	A sample of 3 180 respondents	Mix
47	Spanuth and Wald (2017)	characteristics of temporary organizations		reward system		various industry sectors Austrian- German	sample of 583 professionals,	Positive
48	Afsar, et al (2017)	Person- Organization Fit	Psychological Empowerment	Knowledge Sharing Behaviour		hospitals in Thailand.	800 nurses in hospital	Positive
49	Nusair, et al (2011)	transformational leadership				different public sector organizations located in the Northern region of Jordan.	358 employees	Positive
50	Odoardi, (2015)	proactive goal generation		role breadth self-efficacy		institutions in central Italy	395 male and female administrative employees	Positive

Appendix - C

Power Analysis

For Medium Effect



Appendix - D

Test of Non-Respondent Bias

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
EM_MEAN	Equal variances assumed	30.402	.850	.189	313	.850	.02210	.11675	-.20761	.25181
	Equal variances not assumed			.167	161.967	.867	.02210	.13200	-.23856	.28276
PE_MEAN	Equal variances assumed	2.040	.154	-1.126	313	.261	-.09111	.08092	-.25032	.06810
	Equal variances not assumed			-1.051	187.271	.295	-.09111	.08671	-.26217	.07995
TL_MEAN	Equal variances assumed	.110	.741	-.520	313	.603	-.06355	.12215	-.30389	.17680
	Equal variances not assumed			-.526	236.029	.600	-.06355	.12089	-.30171	.17462
QC_MEAN	Equal variances assumed	1.285	.237	2.591	313	.610	.31979	.12340	.07699	.56259

IWB_MEA N	Equal variances			2.174	142.25	.431	.31979	.14711	.02898	.61060
	not assumed				1					
	Equal variances	.055	.816	.962	313	.337	.07061	.07338	-.07377	.21498
	assumed									
	Equal variances			.930	207.01	.354	.07061	.07594	-.07911	.22033
	not assumed				6					



Appendix - E

Profiles of Respondents

Statistics					
	Age	WE	G	AQ	PT
N	Valid	315	315	315	315
	Missing	0	0	0	0

WE				
	Frequency	Percent	Valid Percent	Cumulative Percent
1	31	9.8	9.8	9.8
2	102	32.4	32.4	42.2
3	1	.3	.3	42.5
Valid 3	91	28.9	28.9	71.4
4	47	14.9	14.9	86.3
5	43	13.7	13.7	100.0
Tl	315	100.0	100.0	

AQ				
	Frequency	Percent	Valid Percent	Cumulative Percent
1	176	55.9	55.9	55.9
Valid 2	139	44.1	44.1	100.0
al	315	100.0	100.0	

PT

	Frequency	Percent	Valid Percent	Cumulative Percent
1	122	38.7	38.7	38.7
2	98	31.1	31.1	69.8
3	63	20.0	20.0	89.8
4	32	10.2	10.2	100.0
T	315	100.0	100.0	

		Age		
	Frequency	Percent	Valid Percent	Cumulative Percent
1	24	7.6	7.6	7.6
2	136	43.2	43.2	50.8
3	3	1.0	1.0	51.7
3	105	33.3	33.3	85.1
4	27	8.6	8.6	93.7
5	20	6.3	6.3	100.0

G

	Frequency	Percent	Valid Percent	Cumulative Percent
1	175	55.6	55.6	55.6
2	140	44.4	44.4	100.0
Total	315	100.0	100.0	

Appendix - F

Case Processing Summary (Missing Values) (Before replaced)

Replace Missing Values

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes ^a	
				Count	Percent	Low	High
EM1	338	3.59	1.158	0	.0	24	0
EM2	338	3.94	1.122	0	.0	42	0
EM3	336	3.19	1.293	2	.6	0	0
EM4	338	4.03	1.150	0	.0	40	0
EM5	336	3.96	1.169	2	.6	45	0
EM6	335	3.81	1.157	3	.9	0	0
EM7	338	3.84	1.210	0	.0	0	0
EM8	338	3.84	1.151	0	.0	0	0
PE9	337	4.00	.937	1	.3	26	0
PE10	337	4.33	.857	1	.3	18	0
PE11	338	3.90	1.045	0	.0	0	0
PE12	338	3.66	1.030	0	.0	12	0
PE13	338	3.90	.934	0	.0	0	0
PE14	338	4.14	.838	0	.0	15	0
PE15	338	3.99	.897	0	.0	21	0
PE16	338	3.52	1.039	0	.0	13	0
PE17	338	3.93	.931	0	.0	0	0
PE18	338	4.12	.844	0	.0	18	0
PE19	338	3.51	1.071	0	.0	14	0
PE20	338	3.59	.993	0	.0	10	0
TL21	338	3.45	1.286	0	.0	48	0
TL22	338	3.45	1.284	0	.0	47	0
TL23	338	3.59	1.137	0	.0	36	0
TL24	338	3.48	1.294	0	.0	49	0
TL25	338	3.47	1.282	0	.0	48	0
TL26	338	3.46	1.282	0	.0	46	0
TL27	338	3.49	1.269	0	.0	46	0
TL28	338	3.76	1.160	0	.0	0	0
TL29	338	3.56	1.152	0	.0	30	0

TL30	338	3.46	1.287	0	.0	45	0
TL31	338	3.78	1.197	0	.0	0	0
TL32	338	3.58	1.148	0	.0	36	1
TL33	338	3.24	1.394	0	.0	0	1
TL34	338	3.56	1.173	0	.0	32	0
TL35	338	3.68	1.181	0	.0	0	0
TL36	338	3.64	1.220	0	.0	0	0
TL37	338	3.66	1.206	0	.0	0	0
TL38	338	3.59	1.132	0	.0	27	0
TL39	338	3.49	1.257	0	.0	44	0
TL40	338	3.46	1.282	0	.0	47	0
QC41	338	3.65	1.243	0	.0	42	0
QC42	338	3.88	1.262	0	.0	45	0
QC43	338	3.82	1.221	0	.0	44	0
QC44	338	3.74	1.243	0	.0	0	0
QC45	338	3.59	1.217	0	.0	40	0
QC46	338	3.62	1.206	0	.0	40	0
QC47	338	3.51	1.201	0	.0	40	0
QC48	338	3.36	1.196	0	.0	41	0
QC49	338	3.32	1.188	0	.0	42	0
QC50	338	3.26	1.194	0	.0	46	0
QC51	337	3.29	1.197	1	.3	41	0
QC52	337	3.44	1.214	1	.3	41	0
QC53	338	3.35	1.255	0	.0	46	0
QC54	335	3.43	1.204	3	.9	41	0
QC55	338	3.31	1.233	0	.0	46	0
QC56	337	3.31	1.208	1	.3	43	0
QC57	337	3.29	1.236	1	.3	46	0
QC58	336	3.24	1.234	2	.6	47	0
QC59	338	3.23	1.233	0	.0	46	0
QC60	334	3.08	1.304	4	1.2	0	0
QC61	338	3.26	1.262	0	.0	51	0
QC62	338	3.32	1.208	0	.0	44	0
QC63	338	3.37	1.210	0	.0	42	0
QC64	338	3.48	1.191	0	.0	41	0
QC65	338	3.49	1.194	0	.0	39	0
QC66	338	3.30	1.208	0	.0	45	0
QC67	338	3.49	1.197	0	.0	42	0
QC68	338	3.45	1.218	0	.0	41	0
IWB69	338	3.91	.916	0	.0	.	.

IWB70	338	4.09	.791	0	.0	10	0
IWB71	336	3.92	.894	2	.6	0	0
IWB72	338	3.79	.971	0	.0	11	0
IWB73	337	3.55	1.082	1	.3	24	0
IWB74	337	3.77	.877	1	.3	9	0
IWB75	338	3.93	.794	0	.0	4	0
IWB76	338	3.95	.844	0	.0	.	.
IWB77	338	3.94	.868	0	.0	0	0

a. Number of cases outside the range ($Q1 - 1.5 \times IQR$, $Q3 + 1.5 \times IQR$).

Appendix - G

Assessment of Outliers



NO	No of respondent	Outlier
		Maha
1	316	336.003
2	321	336.003
3	322	318.8824
4	318	277.0028
5	328	267.5208
6	317	244.617
7	320	237.0315
8	333	227.6092
9	325	212.5656
10	319	209.7604
11	327	208.9835
12	329	204.3589
13	334	203.9236
14	335	200.5398
15	326	194.204
16	323	189.3517
17	337	183.7488
18	330	183.2234
19	324	176.9767

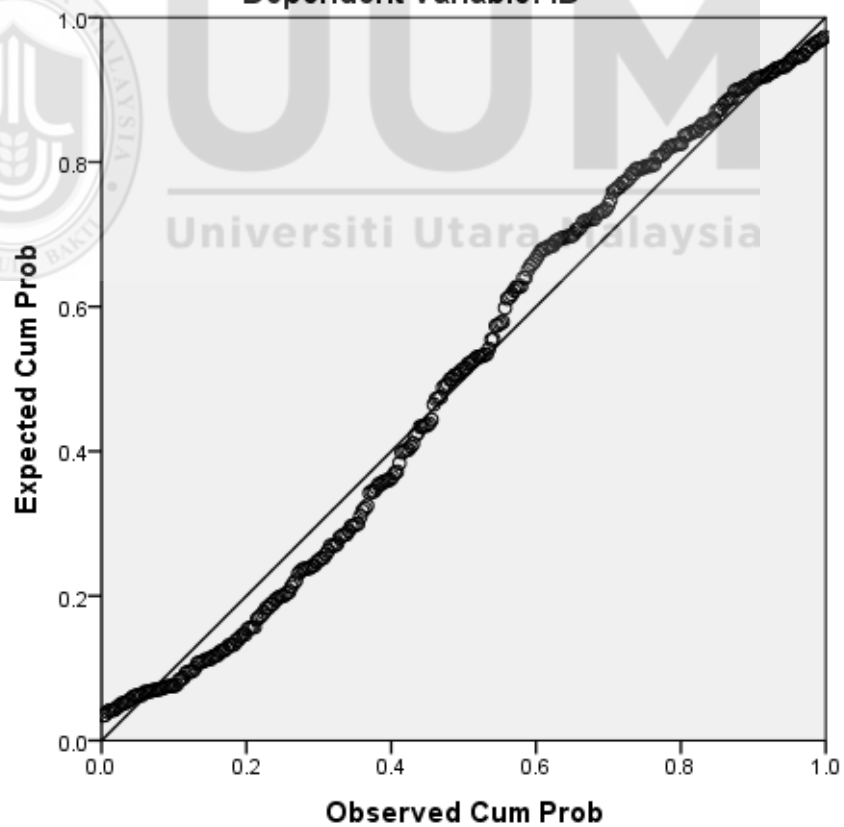
20	332	170.1664
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22	6	122.7343
23	8	121.62

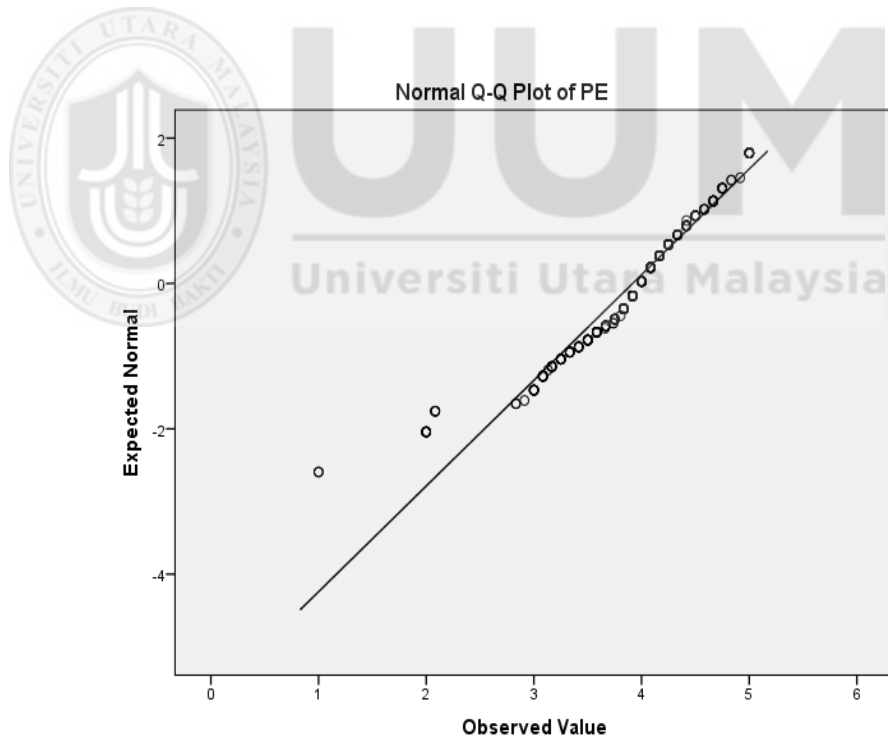
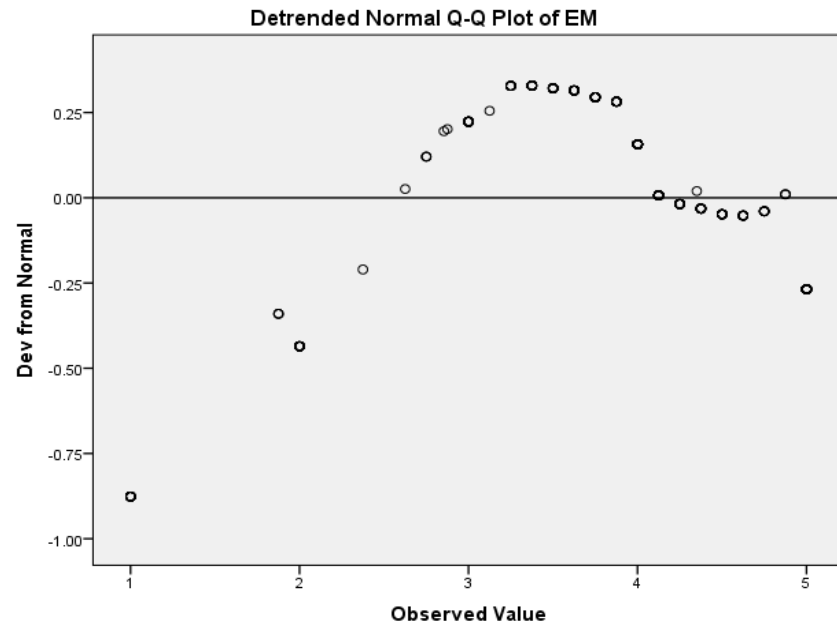
Appendix - H

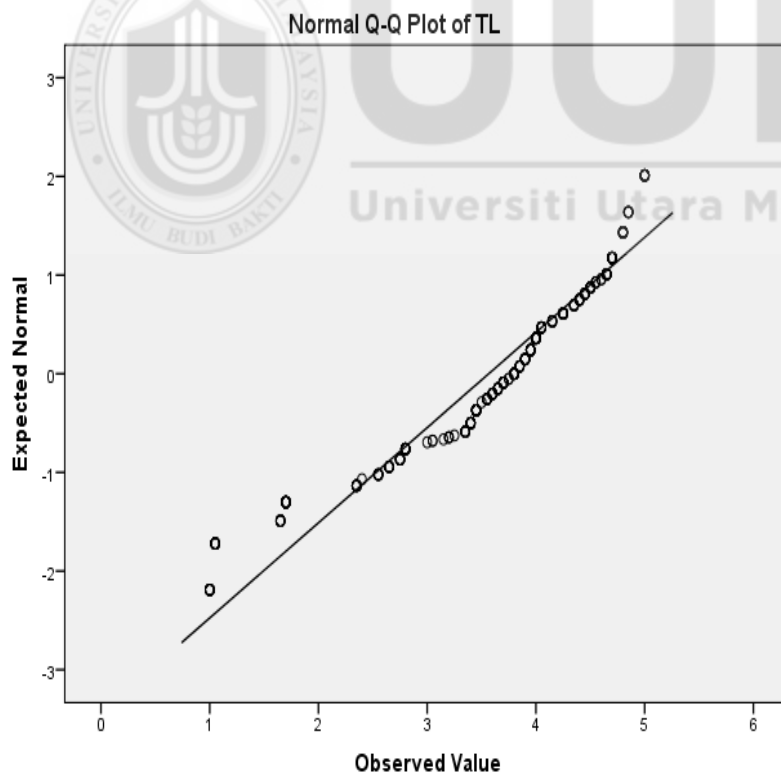
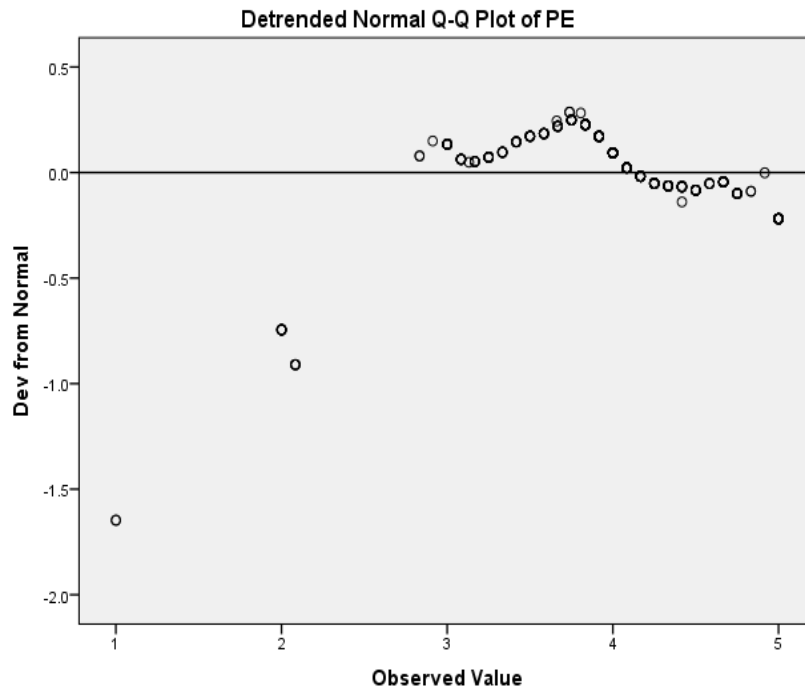
Test of Linearity

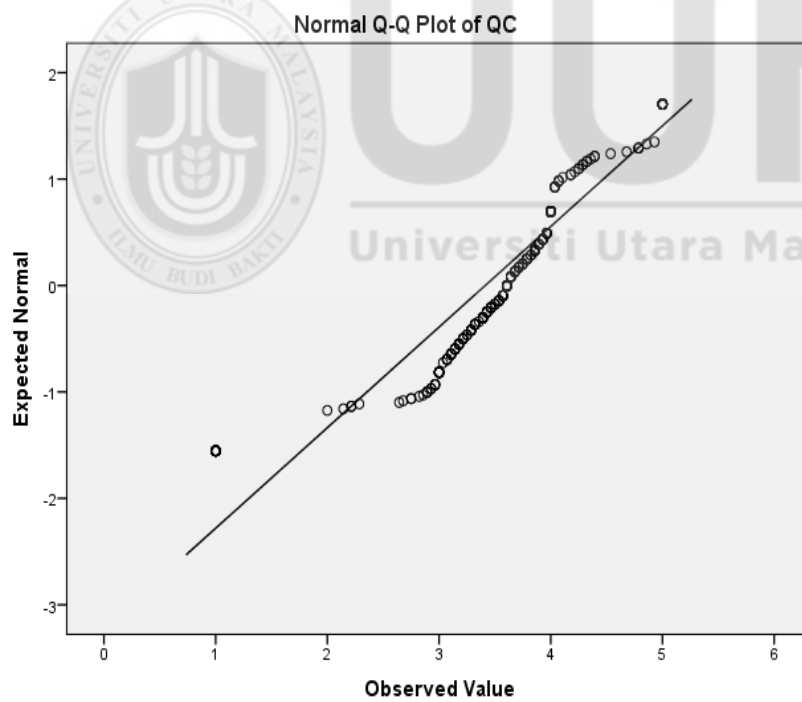
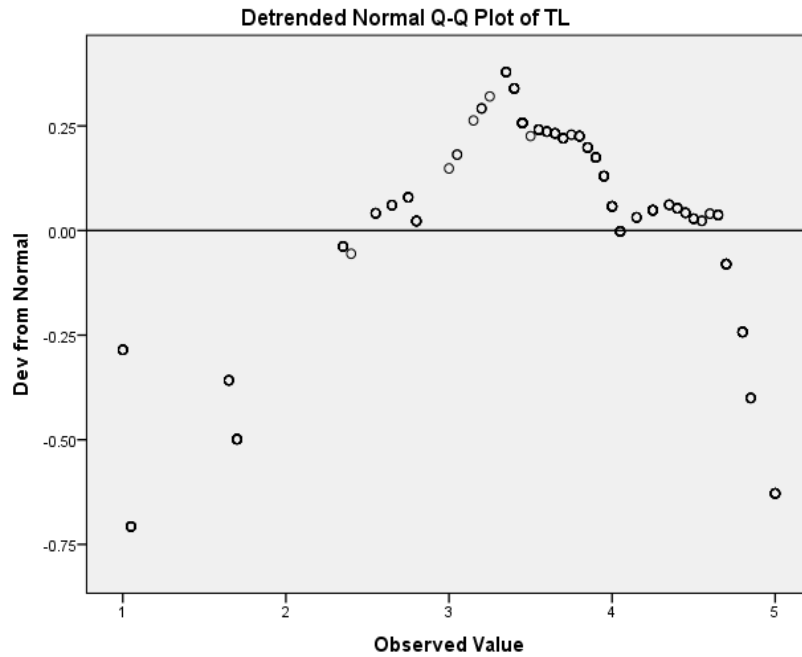
Normal P-P Plot of Regression Standardized Residual

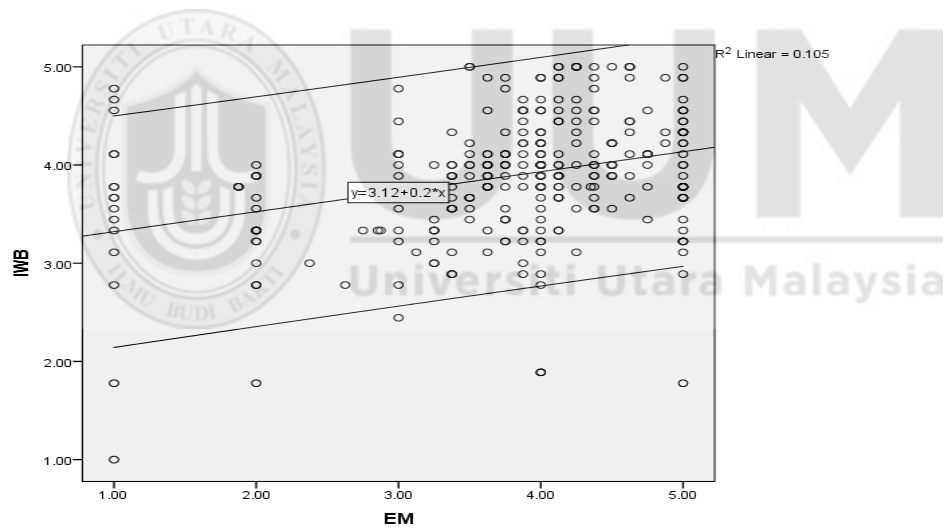
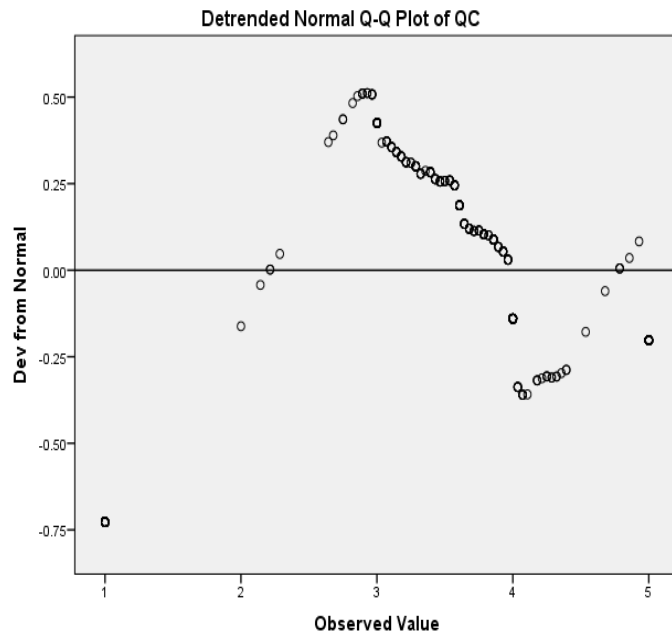
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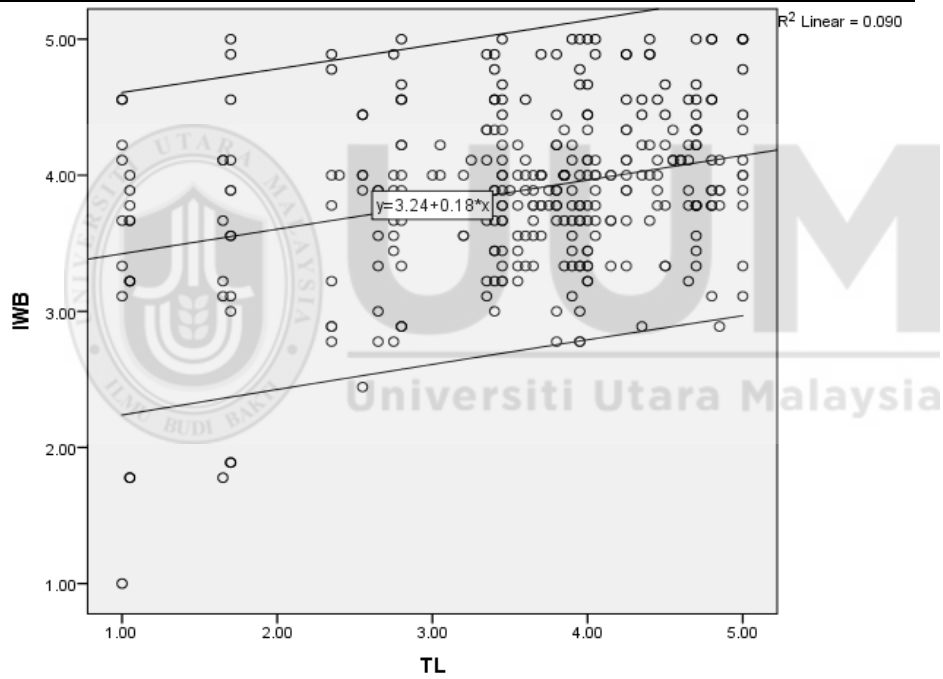
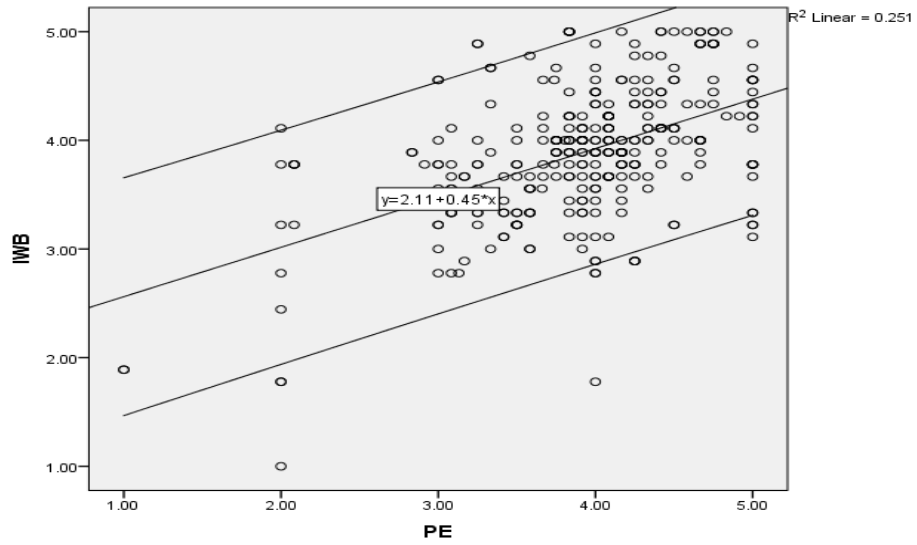


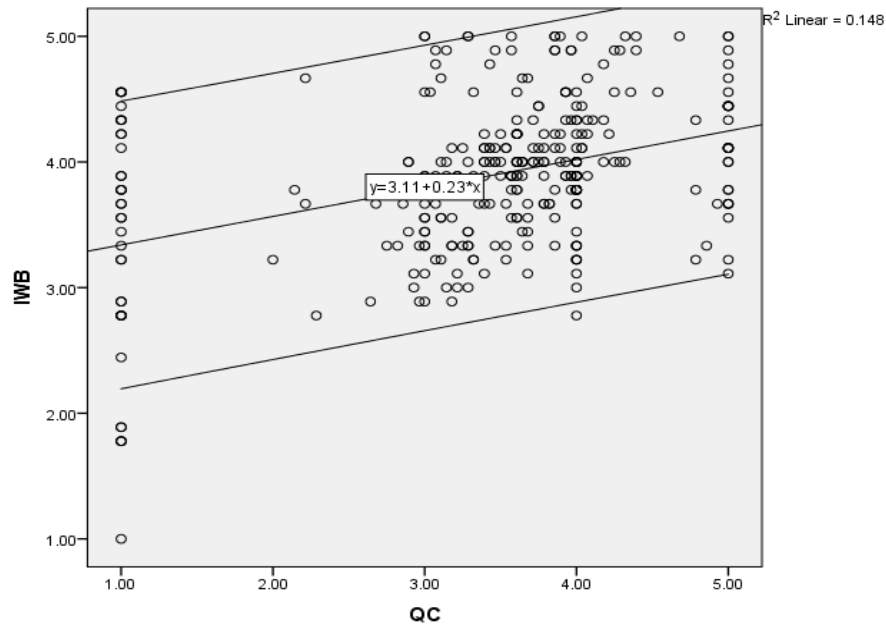












Appendix - I

Correlations

Correlations

		IWB	EM	PE	TL	QC
Pearson Correlation	IWB	1.000	.323	.501	.300	.385
	EM	.323	1.000	.224	.155	.197
	PE	.501	.224	1.000	.170	.290
	TL	.300	.155	.170	1.000	.069
	QC	.385	.197	.290	.069	1.000
Sig. (1-tailed)	IWB	.	.000	.000	.000	.000
	EM	.000	.	.000	.003	.000
	PE	.000	.000	.	.001	.000
	TL	.000	.003	.001	.	.111
	QC	.000	.000	.000	.111	.
N	IWB	315	315	315	315	315
	EM	315	315	315	315	315

PE	315	315	315	315	315
TL	315	315	315	315	315
QC	315	315	315	315	315

Appendix - J
Loadings and Cross Loadings (Before Deletion) (Original Model)

	EM	IWB	PE	QC	TL
EM1	0.828506	0.244653	0.19261	0.15705	0.168448
EM2	0.911416	0.340398	0.238255	0.227878	0.14205
EM3	0.618123	0.114977	0.039109	-0.00091	0.046264
EM4	0.897563	0.332895	0.303595	0.219308	0.167553
EM5	0.918781	0.352689	0.257585	0.206133	0.144207
EM6	0.884777	0.268187	0.192855	0.172237	0.10581
EM7	0.860219	0.300639	0.184136	0.204632	0.124037
EM8	0.892092	0.372453	0.202965	0.194184	0.174346
IWB69	0.318251	0.819339	0.453456	0.361492	0.310263
IWB70	0.279576	0.799376	0.524098	0.297495	0.308723
IWB71	0.350494	0.710313	0.420133	0.26363	0.204685
IWB72	0.194459	0.728991	0.394555	0.225234	0.17183
IWB73	0.10077	0.421245	0.181219	0.218509	0.029451

IWB74	0.205909	0.780353	0.378871	0.257299	0.264725
IWB75	0.258264	0.729404	0.326636	0.345362	0.200201
IWB76	0.324244	0.783849	0.384441	0.312917	0.274777
IWB77	0.262405	0.804286	0.407055	0.315075	0.266936
PE10	0.288253	0.48744	0.807697	0.377371	0.220509
PE11	0.184397	0.340347	0.735751	0.184812	0.141161
PE12	0.183233	0.338044	0.772775	0.159028	0.093658
PE13	0.20127	0.463734	0.849977	0.240483	0.148613
PE14	0.241163	0.515248	0.792769	0.349788	0.123572
PE15	0.118574	0.321621	0.755799	0.262147	0.085498
PE16	0.110576	0.402755	0.723027	0.148137	0.08118
PE17	0.200861	0.378083	0.792178	0.235592	0.127405
PE18	0.194663	0.5147	0.844081	0.370885	0.146638
PE19	0.085102	0.232042	0.486832	0.057966	0.12035
PE20	0.131761	0.362192	0.762458	0.130167	0.090757
PE9	0.266074	0.403297	0.770233	0.275469	0.176865
QC41	0.218809	0.393218	0.340942	0.816473	0.083389
QC42	0.241545	0.406809	0.346499	0.819047	0.086546
QC43	0.22725	0.406927	0.310908	0.896882	0.08855
QC44	0.246289	0.380722	0.338344	0.886659	0.081119
QC45	0.200432	0.359979	0.242214	0.874153	0.042481
QC46	0.168144	0.295643	0.244986	0.876945	0.040547
QC47	0.199971	0.394031	0.310184	0.918607	0.078648
QC48	0.188586	0.358366	0.303228	0.918903	0.058342

QC49	0.193526	0.366143	0.306408	0.923339	0.041358
QC50	0.140849	0.261985	0.197514	0.831081	0.056186
QC51	0.176126	0.343478	0.302407	0.913053	0.074795
QC52	0.227602	0.415736	0.35536	0.921982	0.08228
QC53	0.192555	0.328651	0.314606	0.897866	0.092649
QC54	0.145889	0.310649	0.242095	0.869446	0.037687
QC55	0.127388	0.232137	0.213359	0.835345	0.049275
QC56	0.179216	0.317753	0.281528	0.897417	0.059736
QC57	0.17177	0.311096	0.256226	0.891173	0.056061
QC58	0.204451	0.318112	0.289266	0.885993	0.050889
QC59	0.218205	0.351205	0.308468	0.890374	0.009246
QC60	0.190067	0.325547	0.321254	0.846014	0.02869
QC61	0.156491	0.279309	0.190911	0.822404	-0.00274
QC62	0.122318	0.240764	0.175464	0.837756	-0.02139
QC63	0.17912	0.32322	0.239632	0.83505	0.095067
QC64	0.210458	0.341349	0.286995	0.906603	0.02848
QC65	0.221545	0.398829	0.344931	0.912242	0.057261
QC66	0.133248	0.308915	0.215705	0.832705	0.087891
QC67	0.163149	0.337547	0.229438	0.861627	0.118378
QC68	0.159156	0.314102	0.242601	0.844032	0.095198
TL21	0.110062	0.296061	0.139467	0.055569	0.94146
TL22	0.110062	0.296061	0.139467	0.055569	0.94146
TL23	0.219163	0.277214	0.197563	0.071051	0.790896
TL24	0.110062	0.296061	0.139467	0.055569	0.94146

TL25	0.110062	0.296061	0.139467	0.055569	0.94146
TL26	0.110062	0.296061	0.139467	0.055569	0.94146
TL27	0.110062	0.296061	0.139467	0.055569	0.94146
TL28	0.170738	0.275012	0.168847	0.077159	0.837217
TL29	0.16956	0.26074	0.116648	0.048725	0.822255
TL30	0.121723	0.305092	0.14968	0.061527	0.938551
TL31	0.14696	0.297359	0.201555	0.051282	0.863646
TL32	0.213127	0.269314	0.193377	0.067844	0.783753
TL33	0.065638	0.15036	0.138162	0.080866	0.469091
TL34	0.16956	0.26074	0.116648	0.048725	0.822255
TL35	0.170738	0.275012	0.168847	0.077159	0.837217
TL36	0.170738	0.275012	0.168847	0.077159	0.837217
TL37	0.170774	0.274112	0.163751	0.078262	0.84046
TL38	0.169107	0.260896	0.108554	0.046042	0.825222
TL39	0.110062	0.296061	0.139467	0.055569	0.94146
TL40	0.110062	0.296061	0.139467	0.055569	0.94146

Appendix - K

Prediction Relevance of the Model

Blindfolding Excluding Extrinsic Motivation			
Total	SSO	SSE	1- SSE/SSO
IWB	2520	1858.053	0.263
Case 1	SSO	SSE	1- SSE/SSO
IWB	498.7683	366.259	0.2657
Case 2	SSO	SSE	1- SSE/SSO
IWB	460.1627	306.2732	0.3344
Case 3	SSO	SSE	1- SSE/SSO
IWB	340.9956	281.4191	0.1747
Case 4	SSO	SSE	1- SSE/SSO
IWB	439.7561	308.6256	0.2982
Case 5	SSO	SSE	1- SSE/SSO
IWB	444.3693	319.5082	0.281
Case 6	SSO	SSE	1- SSE/SSO
IWB	335.9479	275.9676	0.1785

		Psychological Empowerment	
Total	SSO	SSE	1- SSE/SSO
IWB	2520	1884.634	0.252
Case 1	SSO	SSE	1- SSE/SSO

IWB	498.7683	367.8046	0.2626
Case 2	SSO	SSE	1-SSE/SSO
IWB	460.1627	296.8309	0.3549
Case 3	SSO	SSE	1-SSE/SSO
IWB	340.9956	304.1841	0.108
Case 4	SSO	SSE	1-SSE/SSO
IWB	439.7561	315.1424	0.2834
Case 5	SSO	SSE	1-SSE/SSO
IWB	444.3693	304.8588	0.314
Case 6	SSO	SSE	1-SSE/SSO
IWB	335.9479	295.8135	0.1195

	Quality culture		
Total	SSO	SSE	1-SSE/SSO
IWB	2520	1955.893	0.224
Case 1	SSO	SSE	1-SSE/SSO
IWB	439.7561	340.7024	0.2252
Case 2	SSO	SSE	1-SSE/SSO
IWB	444.3693	328.6951	0.2603
Case 3	SSO	SSE	1-SSE/SSO
IWB	335.9479	271.454	0.192
Case 4	SSO	SSE	1-SSE/SSO
IWB	498.7683	407.134	0.1837
Case 5	SSO	SSE	1-SSE/SSO
IWB	460.1627	323.3356	0.2973
Case 6	SSO	SSE	1-SSE/SSO
IWB	340.9956	284.5721	0.1655

	Transformational leadership		
Total	SSO	SSE	1-SSE/SSO
IWB	2520	1972.023	0.218
Case 1	SSO	SSE	1-SSE/SSO
IWB	498.7683	394.1836	0.2097
Case 2	SSO	SSE	1-SSE/SSO
IWB	460.1627	341.0987	0.2587

Case 3	SSO	SSE	1-SSE/SSO
IWB	340.9956	272.6897	0.2003
Case 4	SSO	SSE	1-SSE/SSO
IWB	439.7561	335.5812	0.2369
Case 5	SSO	SSE	1-SSE/SSO
IWB	444.3693	363.9952	0.1809
Case 6	SSO	SSE	1-SSE/SSO
IWB	335.9479	264.474	0.2128

Appendix - L

Common Method Variance Test

Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	24.771	32.170	32.170	24.771	32.170	32.170
2	15.385	19.980	52.150			
3	7.208	9.361	61.512			
4	4.943	6.420	67.931			
5	2.621	3.404	71.336			
6	2.141	2.780	74.116			
7	1.674	2.173	76.289			
8	1.221	1.586	77.875			
9	1.121	1.456	79.331			
10	1.023	1.329	80.659			
11	.964	1.252	81.911			
12	.804	1.044	82.956			
13	.765	.993	83.949			
14	.735	.955	84.904			
15	.672	.873	85.777			
16	.618	.802	86.579			
17	.604	.784	87.363			
18	.542	.703	88.066			
19	.505	.656	88.722			
20	.461	.598	89.320			
21	.447	.581	89.901			
22	.415	.540	90.440			
23	.390	.506	90.946			

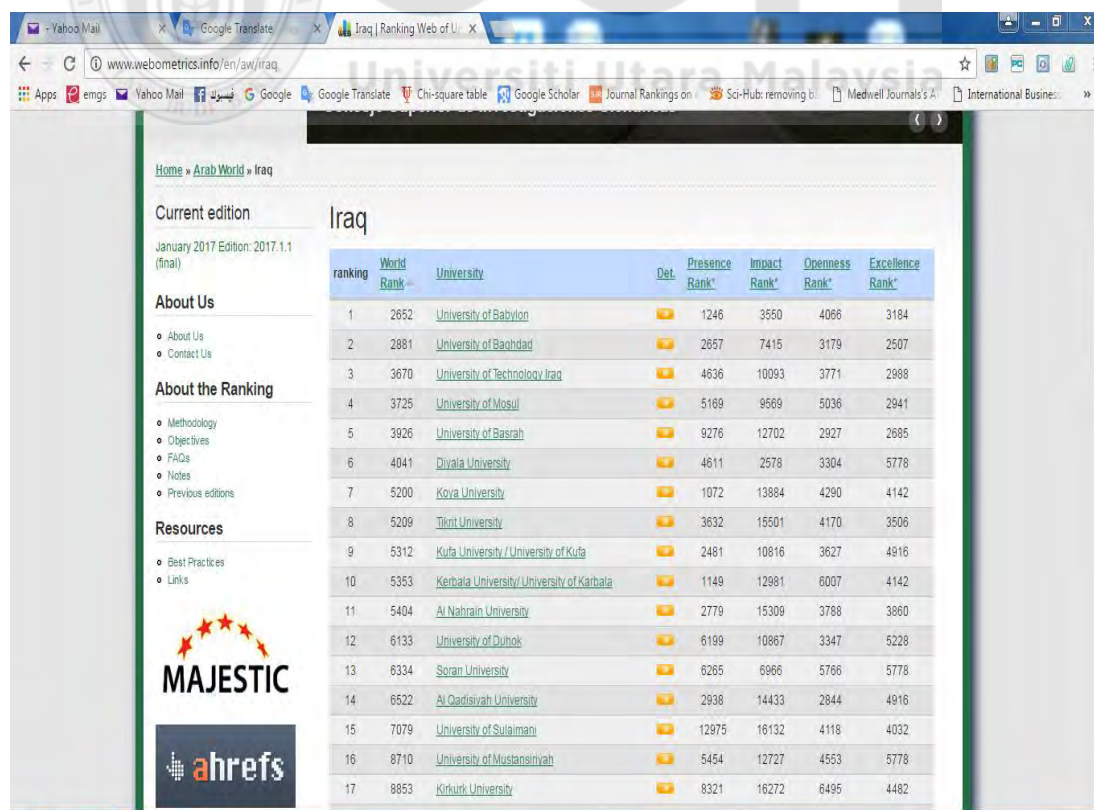
24	.380	.493	91.439
25	.360	.467	91.907
26	.354	.460	92.366
27	.342	.445	92.811
28	.317	.412	93.223
29	.308	.399	93.623
30	.290	.376	93.999
31	.268	.348	94.347
32	.267	.347	94.694
33	.259	.336	95.030
34	.253	.328	95.358
35	.230	.299	95.657
36	.227	.295	95.952
37	.220	.286	96.238
38	.203	.263	96.501
39	.189	.245	96.747
40	.181	.235	96.982
41	.170	.220	97.202
42	.162	.211	97.413
43	.157	.203	97.616
44	.146	.190	97.806
45	.140	.182	97.988
46	.133	.173	98.161
47	.129	.167	98.328
48	.126	.164	98.491
49	.116	.151	98.642
50	.112	.145	98.787
51	.109	.141	98.928
52	.094	.122	99.050
53	.092	.120	99.170
54	.081	.105	99.275
55	.077	.100	99.375
56	.075	.097	99.472
57	.068	.089	99.561
58	.064	.083	99.644
59	.056	.073	99.717
60	.051	.066	99.783
61	.042	.054	99.837
62	.039	.051	99.888
63	.033	.043	99.930

64	.026	.034	99.964		
65	.012	.016	99.980		
66	.009	.012	99.992		
67	.006	.008	100.000		
68	1.000E-013	1.000E-013	100.000		
69	1.000E-013	1.000E-013	100.000		
70	1.000E-013	1.000E-013	100.000		
71	1.000E-013	1.000E-013	100.000		
72	1.000E-013	1.000E-013	100.000		
73	1.000E-013	1.000E-013	100.000		
74	1.000E-013	1.000E-013	100.000		
75	1.000E-013	1.000E-013	100.000		
76	-1.000E-013	-1.000E-013	100.000		
77	-1.000E-013	-1.000E-013	100.000		

Extraction Method: Principal Component Analysis.

Appendix - M

Ranking Web Universities (2017)



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Current edition
January 2017 Edition: 2017.1.1 (final)

About Us

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About the Ranking

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- FAQs
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- Previous editions









































Resources

- Best Practices
- Links

MAJESTIC

ahrefs

ranking	World Rank	University	Del.	Presence Rank*	Impact Rank*	Openness Rank*	Excellence Rank*
1	2652	University of Babylon	🇮🇶	1246	3550	4066	3184
2	2881	University of Baghdad	🇮🇶	2657	7415	3179	2507
3	3670	University of Technology Iraq	🇮🇶	4636	10093	3771	2988
4	3725	University of Mosul	🇮🇶	5169	9569	5036	2941
5	3926	University of Basrah	🇮🇶	9276	12702	2927	2685
6	4041	Diyala University	🇮🇶	4611	2578	3304	5778
7	5200	Koya University	🇮🇶	1072	13884	4290	4142
8	5209	Tikrit University	🇮🇶	3632	15501	4170	3506
9	5312	Kufa University / University of Kufa	🇮🇶	2481	10816	3627	4916
10	5353	Kerbala University / University of Karbala	🇮🇶	1149	12981	6007	4142
11	5404	Al Nahrain University	🇮🇶	2779	15309	3788	3860
12	6133	University of Duhok	🇮🇶	6199	10867	3347	5228
13	6334	Soran University	🇮🇶	6265	6966	5766	5778
14	6522	Al Qadisiyah University	🇮🇶	2938	14433	2844	4916
15	7079	University of Sulaiman	🇮🇶	12875	16132	4118	4032
16	8710	University of Mustansiriyah	🇮🇶	5454	12727	4553	5778
17	8853	Kirkuk University	🇮🇶	8321	16272	6495	4482

ranking	World Rank	University	Det.	Country	Presence Rank*	Impact Rank*	Openness Rank*	Excellence Rank*
59	2642	King Saud bin Abdulaziz University for Health Sciences			4432	7833	1936	2014
60	2652	University of Babylon			1246	3550	4066	3184
61	2661	University of Bahrain			5912	5880	2200	2401
62	2661	Al Quds University Arab University in Jerusalem			3522	4203	2704	2964
63	2692	South Valley University			4436	8105	2406	1956
64	2696	Jazan University			4919	7394	1181	2433
65	2702	Université Kasdi Merbah Ouargla			1330	2121	4633	3795
66	2807	Petroleum Institute Abu Dhabi			10591	9510	1290	1798
67	2832	Lebanese International University			12251	1561	4570	3664
68	2881	University of Baghdad			2857	7415	3179	2507
69	2892	Tabuk University			4745	8117	2301	2342
70	2912	British University in Egypt			3363	9854	2542	1992
71	2912	Université de Bejaia			2190	10432	2234	2014
72	2939	Sohag University			4843	10723	2590	1733
73	2965	Université Mohamed Khider Biskra			1344	9569	2663	2415
74	3010	Philadelphia University at Jordan			1008	6325	2840	3255
75	3035	German University in Cairo			9128	6615	2251	2775
76	3050	Beni Suef University			7034	11974	1750	1711
77	3107	Université Selim I Ferhat Abbas Sétif			1538	10723	2833	2307
78	3107	University of Technology			1856	2161	2303	2030

Universiti Utara Malaysia

Appendix – N

Certificate of translation office



SCHOOL OF BUSINESS MANAGEMENT
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Dear Participant

I would like to inform you that I am currently conducting my Ph.D. in Business Administration at Universiti Utara Malaysia. The title of the study is "THE FACTORS INFLUENCING INNOVATIVE WORK BEHAVIOUR IN HIGHER EDUCATION IN IRAQ". I greatly appreciate your valuable time and efforts that you will spend in filling out this questionnaire. I expect to have your accurate answers that will enable me to reach real results. The information obtained through this study will be treated strictly confidential and will be used for study purposes only.

I thank and appreciate your close cooperation and God bless you

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Appendix - O

Certificate for editing

**REVIEWS INDIA**

To Whomsoever It May Concern

This is to certify that the dissertation listed below has been proofread and edited meticulously by an expert English editor. The issues concerning following areas have been corrected: grammar, punctuation, word choice, spelling and sentence structure.

Manuscript title: The Factors Influencing Innovative Work Behavior among Academicians in Iraq

Author: Tahir Noaman Abdullatif



Date issued: 18.12.2017



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Director,
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