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THE IMPACT OF STRATEGIC EMPOWERMENT AND ORGANIZATION ENVIRONMENT IN ORGANIZATIONAL INNOVATION - ANALYTICAL STUDY IN UNIVERSITY OF DUHOK -IRAQ

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BİNGÖL ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
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STRATEJİK GÜÇLENDİRMENİN ÖRGÜTSEL ORTAM İLE ÖRGÜTSEL YENİLİĞE ETKİSİ - IRAK DUHOK ÜNİVERSİTESİNDE ANALİTİK ARAŞTIRMA

Hazırlayan

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YÜKSEK LİSANS TEZİ

Danışman

Yrd. Doç. Dr. Nazif DEMİR

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/ / 2018

Ayas Mohammed RASEED OMER

BİNGÖL ÜNİVERSİTESİ

SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜNE

AYAS MOHAMMED RASHEED OMER tarafından hazırlanan "THE IMPACT OF STRATEGIC EMPOWERMENT AND ORGANIZATION ENVIRONMENT IN ORGANIZATIONAL INNOVATION -ANALYTICAL STUDY IN UNIVERSITY OF DUHOK -IRAQ'' başlıklı bu çalışma, ... tarihinde yapılan tez savunma sınavı sonucunda .... başarılı bulunarak jürimiz tarafından İŞLETME Anabilim Dalı'nda Yüksek Lisans tezi olarak kabul edilmiştir.

TEZ JÜRİSİ ÜYELERİ (Unvanı, Adı ve Soyadı)

Başkan   : ……………………………….   **İmza: …………………..**

Danışman   : …………………………………   **İmza: …………………..**

Üye   : …………………………………   **İmza: …………………..**

ONAY

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Unvanı Adı Soyadı

Enstitü Müdürü

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ÖZET

Çalışma, Duhok Üniversitesi (UOD) / Irak'ta güçlenmenin ve inovasyonun etkisiyle ilgili organizasyon kültürünün arabulucu rolü üzerinde inceliyor. Bu çalışma için çerçeve, değişikliği desteklemek için teori birleştirilerek geliştirildi. Bu çalışmanın bulguları, bu teorileri ve stratejik karar verme sürecini desteklemektedir. Son on yılda örgüt kültürü ve yeniliği için önemli katkılar yapıldı. Akademisyenler, bu üç faktörün etkinliğinin sürdürülebilir rekabet avantajı ve daha iyi yenilik yeteneği sağlayabileceğini kabul etmektedir. Örnekler akademik ve üniversitelerden seçildi. Tasarlanan anket, 146 personele gönderildi ve üniversitelerden seçildi. Çalışmaya katılanlar çalışanlardır. SPSS (V.21) yazılımı kullanıldı. Bulgular, örgüt kültürünün, güçlenme ve yenilik arasındaki ilişkide arabuluculuk değişkeni olarak rolü olduğunu gösterdi. Özellikle, yetkilendirme, inovasyon yetenekleri ile önemli ilişkilere sahipti ve her ikisi de kısmen örgüt kültüründen geçiyordu. Çalışmanın sonuçları, bilginin eklendiği yenilik konusunda araştırma literatürüne ve örgütsel liderlerin kolajlarının genel davranışları ve yenilik yapma kabiliyeti için anahtarlar aradıkları saha uygulamalarına katkıda bulunması bekleniyor.

Anahtar Kelimeler: Güçlendirme, Organizasyon Kültürü, İnovasyon, Duhok Üniversitesi

ABSTRACT

The study examines the mediating role of organization culture as mediator on the impact of strengthening and innovation in Duhok University (UOD) / Iraq. The framework for this work was developed by combining theory to support change. Findings of this study support these theories and the strategic decision-making process. In the last decade, significant contributions have been made to organizational culture and innovation. Academicians acknowledges that the effectiveness of these three factors can lead to sustainable competitive advantage and better innovation capability. Samples were selected from academic and universities. The designed questionnaire was sent to146 staff and selected from universities. The respondents of the work are employees. SPSS (V.21) software was used. Findings showed the role of organization culture as mediation variable in the relationship between empowerment and innovation. Specifically, the empowerment had significant relationship with innovation capabilities and both of them were partially mediated by the organizational culture. The results of the study are expected to contribute to research literatures on innovation to which knowledge was added, and to the field practices, where organizational leaders are seeking keys to the general behavior of their collage and their ability to innovate.

Key Words: *Empowerment, Organization Culture, Innovation, University of Duhok.*

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Innovation has become widely recognized as a key to competitive success (Francis & Bessant, 2005). Scholars are mainly concerned with innovation because of the life requirements and the persistent desire for continuous change to be in accordance with individuals' needs and desires (Badawy, 1993). Developments in all aspects of life are attributed to innovation. Peter Drucker, one of the administration scholars, says that innovation is one of the main forces in economic and social development and a basic tool in the growing, resistance and adaptability of the contemporary organizations with the changing environmental conditions as those organizations with no innovation will shortly remove (Peter, 1985). Leaders of businesses of all sizes and from all industries make innovation among their top priorities and concerns, Innovation is a humanitarian activity done by the individuals that are characterized by certain features differentiating them from the others. Such activity presents new things in various forms leading to many advantages providing that the suitable environment is available (Scantlegury & Lawton, 2007).

Empowerment concept is repeatedly used in administration, human resources, strategic administration and total quality management studies. It is commonly applied in services sector, operations and production sectors. It is defined according to two trends, the first of which reflects some of the evoking practices designed by the organizations managements to improve the employees performance including the administrative leaderships through sharing them in decision making and reducing direct control (David, 1995).

The second trend indicates that empowerment is a self-decision made voluntarily by the employees through achieving the organizational goals and cooperating with others to realize common aims and practicing freedom behavior within the organization structure and message limits. This decision depends on an internal motivation reflecting the various abilities owned by the individuals consisting of experiences, skills, values and satisfactions (Baldry & Hyman, 1996).

Developing the organizational environment indicates the organization ability to create organizational conditions preparing the successful application for enhancing innovation opportunities. The mechanisms adopted by the organizations reflect diagnostic indicators for the organization management ability to assess its seriousness in preparing the organizational environment supporting both empowerment and innovation (Spender, 1996).

The current study adopts empowerment strategy as a philosophy aiming at activating innovation in organizations. The study model is based on a hypothetical approach indicating that Duhok University when adopting empowerment strategy could enhance innovation. This study examines the influence of empowerment on innovation and identifies the moderating role of organizational environment.

1.2 Research Problem

Today, almost all organizations face a dynamic environment characterized by rapid technological change, shortening product life cycles, and globalizations. Organizations need to be more creative and innovative than before to survive, to compete, to grow, and to lead (Tierney & Graen, 1999). An issue is that, for many sectors in general and manufacturing sectors in particular innovation seems unpredictable, mysterious, and apparently unmanageable (Tidd & Bavitt, 2005). Amabile (1998) emphasized the best means for realizing innovative organizations where innovation could be enhanced and she added that constructing such organizations require a full understanding for the innovative procedures to be adopted to develop and support innovation. This needs an efficient management for innovation and innovative environment. The organization management should protect innovation and select between supporting and encouraging the employees experiences for innovative thinking or encouraging the employees innovations. Concerning the preparation of the innovative environment, this is related to designing activities to evoke challenge and provide the employees with the freedom to perform their work and adopt work teams as mechanism for innovation and performance in addition to supporting and encouraging.

The current study adopts the empowerment strategy as a philosophy activating creation processes within the frame of organization that provide the relations among them. Empowerment within this philosophy provoke action invoked by the contemporary views

called by administration scholars including aims and results administration, exception administration, participation administration, crisis administration and others. Empowerment mechanisms could be used as an alternative for the previous views while focusing on creation administration as an integrated part of empowerment.

The empowered organizational environment depends on each individual participation in the organization and how to take part in the success of the organization including both the management and the employees (Nicholas, 1995).

The study is based on various hypotheses the first of which is using empowerment strategy for its ability to enhance creating in case the supporting organizational environment is available (Conrad, 2000). It is also hypothesized that a creation in the examined field could be determined and finding integrated and effective partial or whole relations among empowerment and empowerment and supporting organizational environment of innovation (Isaiho & Kofi, 2000). There are views provoking leadership centers in the strategic summits in the examined fields through containing force potentials in such relations and transforming them into administrational philosophy supporting the examined organizations in face of challenges. innovation and empowerment are connected in essence with the strategic vision of the scientific visions in field leaded as their visions are reflected when receiving empowerment philosophy and creation in managing scientific organization and the UOD which have all the innovation potentials scientifically and practically, Hence, the current research intends to investigate the moderating role of organizational environment in relationship between empowerment to organizational innovation.

1.3 Research Questions

The main questions could be raised framing the study problem:
1. Is there a relationship between empowerment and innovation?
2. Is there a relationship between organizational environment and innovation?
3. Is there a relationship between empowerment and organizational environment?
4. Does organizational environment moderate the relationship between empowerment and innovation?

1.4 Objectives of the Study

The current study aims at suggesting a mechanism providing an analytical frame based on a number of factors and dimensions empowerment the organization environment to contain empowerment strategy as the main proposed mean for enhancing organizational innovation. This will help the examined field (UOD) in testing the ability to apply empowerment strategy to enhance innovation. Accordingly, the main aims could be fixed:

1. To determine the relationship between empowerment and innovation?
2. To evaluate the relationship between organizational environment and innovation?
3. To determine the relationship between empowerment and organizational environment?
4. To evaluate the organizational environment moderate the relationship between empowerment and innovation?

1.5 Significant of the Study

1. The academic importance: This is clear in that the study is dealing with the most widespread topic in the contemporary organizations environment. Empowerment, innovation and knowledge are within an integrative and conceptual frame attempting to utilize theoretical knowledge accumulation to provide the literature and construct the supporting bases of field in a way that emphasize relations among the main variables and their minor factors thus confirming the test accuracy and objectivity.

2. The field importance: This is clear through the two indicators:
   a. The study deals with the recent and vital topics through examination and analysis to be utilized in supporting its performance.
   b. The study identifies the main dimensions of the study variables and their impacts on innovation and creative environment that develops knowledge.
   c. Introducing the previous experiences that the scholars used in forming empowerment concepts, environment and innovation to reach a theoretical view of the contemporary concepts to be moved into the Iraqi environment.
   d. Measuring the examined field response (UOD) for the empowerment strategy to be applied on all the leaderships.

e. Measuring the success of applying empowerment strategy when using factors, information availability, freedom, knowledge possession and other dimensions.

f. Reviewing organizational creative environment aspects supporting innovation in the examined field.

g. testing the ability of the examined field on applying factors supporting the organizational environment represented by the organizational culture, leadership pattern and material facilities.

h. Providing a practical view of how to use empowerment and innovation in moving universities from their traditional designs into a more creative design containing the current concepts in the creative administration.

3. The economic importance: This is clear through the study ability to arrive at positive results that are reflected on the national outcome through improving the performance of organizations in general and universities in particular when applying empowerment strategy to support organizational innovation.

4. The special importance: This is reflected through the possibility of improving the examined field UOD when applying the final form of the study sample.

1.6 Field of the Study

Framing the field of the study is one of the importance steps in the scientific research to determine study orientations and aims within clear and planned paths. Accordingly, the main fields are fixed:

1. Place field: UOD is selected as a place for making the field tests as this university is a service and educational organization.

2. Human field: Scientific leaderships in university is the study sample for those subjecting to scientific tests. This sample is represented by the teaching staff in the university who have a leading positions empowerment them to make decisions.

CHAPTER TWO
LITERATURE REVIEW

Previous studies are the one of the bases for any study in constructing the intellectual model. This is done through analyzing the aims consequence in such studies and fields homogeneity where the phenomenon factors and dimensions are examined. In addition, variance, symmetry or integrity among hypothesis is fixed to confirm validity. Dimensions of agreement or disagreement are noticed in results and conclusions to reveal the agreement with the contents of the current study wither they agree or disagree. Below are some of the studies that are classified into two groups, the first of which is concerned with empowerment and the second deals with innovation. The reason for such classification is the inability to find studies dealing with the integrated impact for both empowerment and innovations in one study.

2.1 Empowerment Studies

1. **Ugboro & Obeng, 2000: Top Management Leadership, Employee, Empowerment, Job Satisfaction and Customer Satisfaction in TQM Organization: An Empirical Study (Isaiah & Kofi, 2000).**

Top management leadership obligation and employees' empowerment are the most important among the dimensions of total quality management. As a result, many of top management leadership strategies and employees' empowerment have been suggested in many of the theoretical studies but without being empirically tested to point which of these are more efficient in realizing the proposed aims. This study made a field survey for some of the commodity organizations adopting total quality management as a main aim to determine modes of relation among top management leadership, employees' empowerment, job satisfaction and customer satisfaction. Results revealed positive significant relations among employees' empowerment, job satisfaction, top management obligation and customer satisfaction as employees' empowerment and high levels of job satisfaction are supported through top management leadership and obligation towards ends of total quality plans and goals to achieve customer satisfaction through creating the organizational

atmosphere emphasizing total quality and customer satisfaction. The study has pointed out a number of active strategies to achieve empowerment represented by authorizing decision making authority by the top management for the rest of management levels, allowing the participation of employees in decision making, supporting the employees' ability to reach the organizational sources in particular information and finally suggesting new roles for top management leadership and patterns in total quality environment.

2. Peter & Mason, 1999: Empowerment in Small Businesses.

This study targeted the test of applying empowerment in small businesses management based on the characteristics of small businesses concerning empowerment. The study emphasized that empowerment is related with large organizations more than being related with small organizations having an environment characterized by its quantitative and qualitative problems in particular the level of high complexity of managing small businesses through dealing with the various contemporary environment of the work. The study arouse the risks of considering small businesses as a micro image of the large ones and empowerment concepts and practices could be applied only in the large businesses. This is why the study hypothesized that small businesses could have no features indicating the success of empowering their employees because the empowerment taking place in these businesses is a mechanical one without the management effort as employees are directly dealing with business activities (due to the micro level). The employees acquired empowerment mechanically because of the daily direct intervention with the company activities. Adopting case study, the study concluded that the concept of empowerment in the growing small businesses is preferred to be considered as situational operations where the management abandon some of its authorities to certain employees. Trust and satisfaction with the employees abilities is integrated with such concept concerning the employees responsibilities and giving them more freedom to express their independence in a way that make them more creative. Empowerment is determined according to the manager motive related with the trust of the employees and satisfaction of their skills and safety when giving them such authorities.

The study has presented a clear view of empowerment in small businesses environment suggesting that models in the large businesses should not be applied in small businesses. Case study is adopted in this study and dealt with the economies of a number of

businesses in some countries in particular Russia, Malaysia and Britain. The study has also dealt with a number of contemporary strategic concepts in an attempt to find an agreement relation like organizational learning through focusing on empowerment to facilitate organizational and strategic learning. This is related with the organization change strategies described in the study as open ends changes as this could be an equivalent with continuous improvement strategy.

3. **Conrad, 1999: Employee Empowerment in Services: A Framework for Analysis.**

This study hypothesized that empowerment in service sector could lead to initiatives and inventions by the employees, enforcing the service quality presented to the customers. The study is based on a number of projects proposals discussing various approaches of empowerment in service companies similar in their activities and specializations, in particular ready food restaurants widely spread in various countries. Such restaurants present standard menus where certain technologies are practiced in production and presenting services for the customers.

These restaurants are not various in quality of foods served but various in freedom scopes given for the employees in over passing the standard menu and presenting some additional services. The study has discussed a number of case studies in some restaurants aiming at constructing an analytical framework to understand empowerment in service sector and the need to make complex systematic studies.

Accordingly, the study has presented two approaches for empowerment where the first one is called relational empowerment, the one that is related with management style and philosophy. The second is called motivational empowerment, the personal and individual empowerment related with freedom, independence, force and self control enjoyed by the individual through work self rush. In conclusion, the study emphasized the second approach considered as the character designating initiatives. The individuals characterized by such characters will be able to present inventions and creative works because they feel of their self value with the ability to affect the results and possess a force of distinguished performance.

The study concluded that empowerment helps the organizations in making the employees more enthusiastic and able to bear services responsibilities. The analytical framework presented by the study is a fivefold one and could be used in any environmental organization. These dimensions are: task, allocation, power, commitment and culture. The conclusions focused on empowerment outcomes through realizing the following organizational aims:

    a. Improved service quality.

    b. Increased service productivity.

    c. Reduced labor turnover.

4. Argyris, 1998: Empowerment: The Emperor's New Clothes.

The Emperor's New Clothes, a strange title, is selected by this study as a main introduction for criticizing empowerment. The title is related to an odd story told by the Japanese describing the invisible clothes of the emperor suggested by one of the intelligent tailors for one of the Japanese emperors to get rid of the emperor violence. The study confirmed that empowerment is like the emperor's clothes where its attributes are publicly appraised but inside there are wonders concerning the administrative introduction called empowerment that could be virtually applied.

The study points out that subject has received great attention where the organizations are trying to prepare employees with high motives, able to deal with the requirements of the new century and presented many of the studies and ideas to apply empowerment. However, most of these studies were not successful because of the work obstacles, including, as the study suggested:

    a. The inadequacy of change plans and supporting practices of empowerment in achieving an actual application as they contain paradoxes hindering invention and innovation.

    b. Hindering is sometimes done by the executive managers because they are willing to abandon controlling and issuing orders.

    c. The existence of paradoxes in the employees' views as empowerment for them is a good concept as long as it gives them personal responsibility but as soon as they empowered and become responsible, they start to complain.

d. The inconvenience among planning methods and rules in the organization in particular the structural and institutional building as the prevailing organizational structure could not encourage the employees to have responsibilities.

5. Johnson & Thurston, 1997: Achieving Empowerment Using the Empowerment Strategy Grid.

The study emphasize that the persistence in the competitive environment lived by the organizations and characterized by regulating markets to be more close, complicating customers needs and restructuring organizations force the organizations leaders to search for new methods to encourage the creative powers for the employees. Like total quality management and reengineering, empowerment has become one of the important concepts in the 1990s. The study has made a survey for the companies classified within (Fortune 1000) bills and concluded that (47%) of these companies have used a kind of self management or work empowered team mechanism while (66%) have planned for increasing the employees' participation and enforce their contributions in their companies activities. The survey results showed that what encouraged these companies to make change towards empowerment is the superior financial performance achieved and all employees' satisfaction through adopting empowerment strategy.

The study has used data contents analysis obtained from the largest US companies in particular GE Electronics Company at Maine where the company gained a lot through empowering the employees. The company was also restructured through dividing the company into (61) self management groups covering all the employees. The study found that the company productions increased by (110%) in comparison with the past five years and customers rejection of the products decreased by (35%), products cycle decreased by (90%) and employees compensations costs decreased by (75%) within the past five years.

Despite the conformations made by the study concerning the advantages of empowerment fixed by the increase of organization trends towards improving quality, reinforcing customers services and spreading ownership towards job, obligation and efficiency.

The study pointed out some of the obstacles faced by the organization in applying empowerment plans and confirmed three important issues hindering the successful implementation of empowerment:

a. Companies' failure in making a comprehensive evaluation for the employees' models before presenting the empowerment plan.

b. Companies' attempt to make a narrow definition controlled by the top management to widen empowerment.

c. The variance in the demographic factors among the individuals and working teams hinder the management initiatives to apply empowerment.

The study concluded with presenting a hypothetical model called empowerment strategy grid. It is an administrative tool constructed after reviewing many of the empowerment experiments adopted by the organizations. This tool, through the integration of the basic concepts of empowerment and team construction, helps to facilitate the organizations evaluation of developing working teams and the progress towards achieving organizations empowerment strategies.
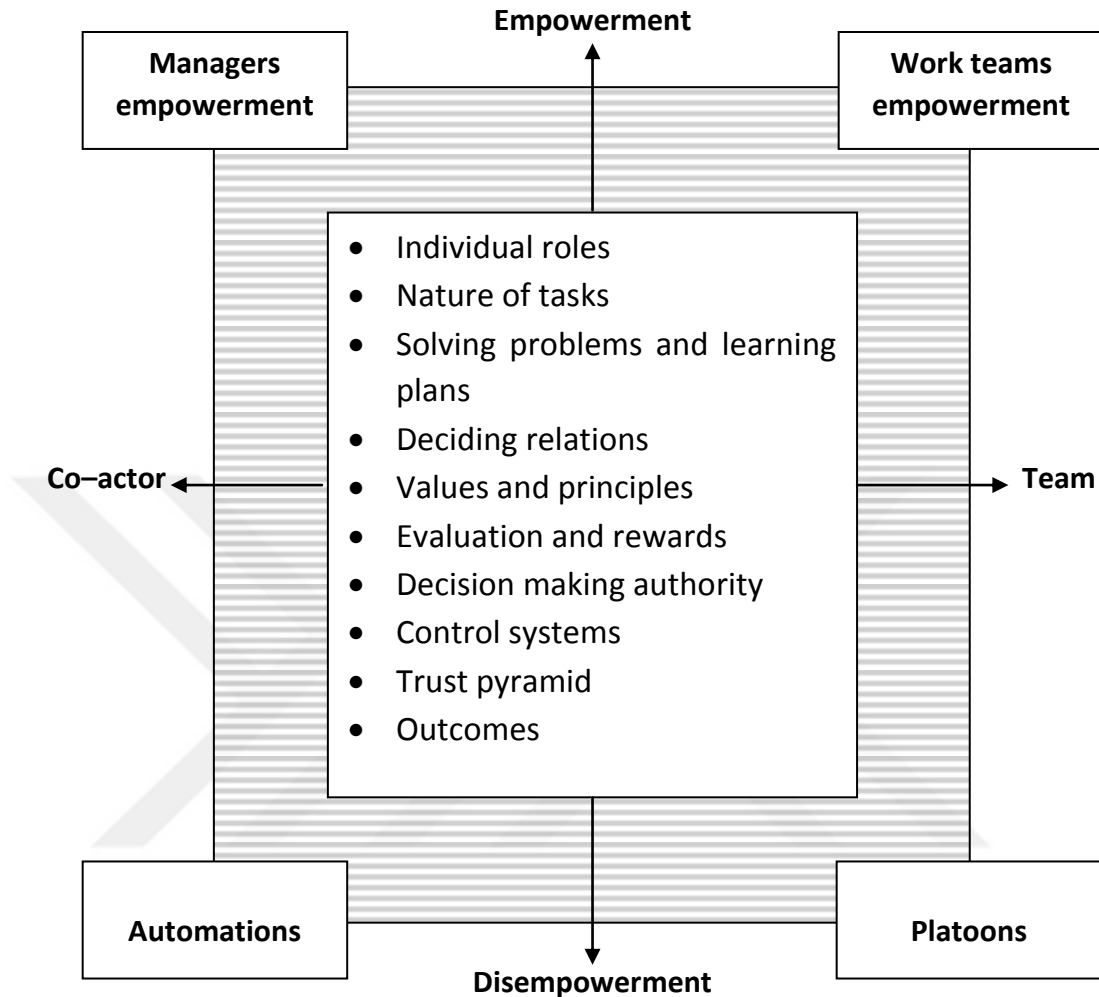
Figure (1) - Empowerment Strategy Network

Source: Johnson, Robin & Thurston, Flieabeth (1997). Achieving Empowerment Using the Empowerment Strategy Grid. **Leadership and Organization Development Journal**, vol. 18, No. 2.

6. Simons, 1995: Control in an Age Empowerment.

This study is concerned with reviewing the theoretical bases that form a logical answer for the question: how convenience could be found between empowerment and control? Contemporary organizations face increasing challenges on how to practice control on organizations living in a dynamic environment, increasingly changing requiring high flexibility and continuous innovation to meet the customers' needs and desires.

The continuous search for marketing opportunities and response for competition conditions require the search for a new method of control to substitute direct control. The

solution proposed by the scholars in cooperation with the organizations managements is empowerment that gives the employees the freedom for presenting initiatives in dealing with the customers' needs. However, questions were raised by the study:

- How the employees' behaviors could be suitable with the organization message and aims?

- How could the mistakes by those who are empowered could be avoided?

In an attempt to find answers, the study presented four patterns of control to examine how some or all of them are suitable for empowerment:

1. Diagnostic controls systems.
2. Beliefs systems.
3. Boundaries systems.
4. Interactive control systems.

The study concluded that these four control patterns are interactive efficient powers used with the same efficiency in particular when organizations are moved into more complex. Managers will be obliged to deal with the increasing opportunities and the competitive powers in a shorter time frame. In case the managers use such control tools efficiently they will realize the advantages of innovation and invention.

2.2 Innovation Studies

1. Bilich, 2001: Management of Innovation and Innovation.

This study discusses innovation and innovation management focusing on reasons of paying more attention for such topic and its characteristics. A review for innovation theories is used to show the intermingled relation between innovation and management, how innovation intervenes with innovation and how they are both interdependence.

The study has presented methods for reinforcing innovation cases and technologies, in particular for the scholars and the technicians in addition to discussing efficient management procedures of innovation and defining role of managers concerning innovation and innovation.

The study is based on the field survey covering some managers and consultants in industry consulting sector to define the various aspects of managing innovation including how to be achieved and its impacts on productivity and competitiveness in the organizations surveyed. Innovation management is receiving great attention for its role in enforcing and improving productivity and competitiveness. In case innovation issue is best dealt with it will give better results than any other issues in the field of developing management. Innovation issue is discussed from the view of the individual innovation to reach organizational innovation which innovation management that is the base for organizations survival. Without innovation management and regulation, it will be rather impossible to maintain competitiveness and meeting customers' needs and desires.

The study concluded that any organization should provide a suitable environment for innovation and there is a need for creative managers to realize such aim. This is one of the contemporary trends results in decreasing numbers of administrative authority levels to encourage innovation. This requires a new administrative approach like innovation management. Organizations emphasize mistakes results more than rewards in case of success. Such organizations frustrate the employees' will and prevent them for expressing new ideas. Innovation includes risks and innovative organizations present open communication systems to encourage ideas exchange and interpersonal contact. Contact and job satisfaction contribute efficiently in reinforcing innovation and innovation.

2. **Bryson & Matheny, 2001: Factors Promoting Innovative Performance in R & D Work Environment.**

The study confirms that the third millennium has come with unexpected challenges and opportunities for all types of organizations. Research and development activities are important in decreasing the challenges faced by the organizations for they provide creative and innovative solutions. Research and development units suggest the new products that are goods, services, new ideas or new methods in applying the technologies, or present distinguished ideas that could be applied to obtain economic gains for the benefit of the organizations and the community as a whole. The reinforcement of research and development specialists innovation is an important issue and despite the importance of reinforcing the employees' innovation inside the organizations, but not much is known

about the conditions encouraging or hindering the innovative performance for the employees. The study has reviewed many of the scholars who paid more attention for innovative employees characters expected to have innovative achievement like Tierney et al. (1999), Amabile et al. (1996), Woodman et al. (1993), Amabile & Gryskjewez (1987) and Woodman & Schoenfeld (1990). But study confirmed that all these studies will achieve only the little of the valid results for job environment impact on the creative performance and the impact of research and development administrations on innovative performance. Most of the studies in this field have not revealed accurately the impacts related with the personal and the environmental factors affecting innovation. The study conclusions are represented in a model called innovative job environment, the one presenting a comprehensive frame for the main variables affecting innovative performance for research and development specialists.

3. Chen & Richards, 2001: Team Innovation: Key Factors for Innovative Performance

The study reviews the accumulative studies related to team and how they formed and developed with reference to four stages model showed as terms including form, storm, norm and performance. In a later study another stage is added called adjourning. The two models, the original and the modified ones, suppose that team pass successively through these developed stages in order to achieve finally their active performance. Team performance is increasing till reaching the efficient level.

The study has proposed another alternative model to develop team including two barriers in developing the team. These are weak behavioral barrier and strong performance barrier. The model was connected with innovative leadership style including permanent structures for the challenging behaviors of the principles showed for the team.

The study has also pointed out a group of proposed factors related with the leadership procedures suggesting that leadership contributions affect teams progress across the barriers mentioned above. The study was done in the British state of Manchester including (33) tourist hospitals and the survey was made on February, 2000 to examine the teams characters in certain environments. Questions were given for (16) members from

(30) teams through questionnaires send by mail to service managers in each hospital. Response rate was (24.6%) and team members range between (3–7). Using factorial analysis, six factors were obtained from seven proposed factors and using Varimax methods, shared vision factors were made in addition to climate, resilience, idea owners, network activators and learning from experience. Reliability was (0.91) and Cronbach's–Alpha value was (0.92).

4. Amabile, 1998: How to Kill Innovation.

This study attempts to adopt the best methods to reach international oriented organizations where innovation could be reinforced. Constructing such organizations require the recognition of factors and procedures supporting, encouraging or hindering and killing innovation.

In order to arrive at accurate answers for such questions, the study tried to raise another question referring to innovation factors and dimensions. The question is: which is better for innovation management: reinforcing experience? Reinforcing creative thinking? Or selecting motives approach?

The study concluded that managers' ability varies in affecting the three factors of innovation: experience, innovative thinking and motivation as the two first factors are more difficult and more time consuming than motives. Experience, as the study states, could be reinforced through participation in scientific courses and specialized conferences in addition to field practices. Training reinforces the practices of creative thinking and creatively solving problems but the study confirmed that time and money will be more. The study concluded that examining motives and determining the suitable motives for the individuals will ease the organization fast results in comparison with reinforcing experience and developing creative thinking skills. However, this does not mean that the organization administration will abandon these two factors.

The study suggested some of the probable factors to reinforce creation represented by challenge, the design of work in a way evoking challenge for the employees to achieve high results and the freedom given for the individuals to make decisions concerning products development, methods of work and financial resources supporting innovation in

addition to work teams and mechanisms of formation, fixing and managing aims, encouraging managers and supervisors and organizations support for innovation.

The study adopted long term studies approach and lasted for more than two years. These studies were called team events study including (20) work teams working through three specialized industries: advanced technologies, consumptive and chemical products, using contrastive study approach and following up work teams results in order to show their ability to present the new or develop the established.

The study found that one of working teams in the chemical specializations are more creative than other teams due to using the following methods in supporting innovation:

1. Leadership pattern managing work teams, employees supporting methods and adopting balance in attention between work and employees.
2. Adoption of innovative methods in work design where they are more suitable with the employees in addition to responsibility and enjoyment.
3. Companionship, the support and encouragement of teams to cooperate with each other.
4. Freedom, the selection of how to implement the work.
5. Continuous field follow up to make the employees feel of the administration concern.
6. Scientific and cultural specializations variety for work teams members.

Finally, the study pointed out the activities where innovation is more obvious than others and these include operations, marketing, research and development. As for the financial and accounting activities, they were shown to be less oriented towards innovation.

2.3 Organizational Environment

Organizational environment could be defined as all the elements existing outside the organization and could affect the organization or some of its parts (Nixon, 1994).
Elements inside the organization are those through which the organization could detect where they should respond to. The study added that such elements could be found within the environment domain defined as the actual environmental field selected by the organization in addition to the regional and the geographical domain concerning its mutual

dealings or services presented (Johnson & Flieabeth, 1997). When defining the environment, focuses on the elements inside the organization unlike when mentioning the external and the internal elements affecting the organization. He defined the environment as everything consisting of social and material factors to be taken into consideration in the administrative decision making (Cacioppe, 1998). Defining environment confirms the separation of the internal organizational environment from the external environment (Savery & Luks, 2001). Daft (2001) views environmental uncertainty as the decision maker rare information concerning the environmental factors thus a difficulty in predicting the external variables and the organization failure in responding to the environmental factors. Daft (2003) added that the characteristics of the environmental field affecting uncertainty is the range where the external field is simple or complex and the range where the events are stable or instable. Thus, he divided the environmental field into two dimensions (simple–complex) and (stable–instable).

Generally, the studies dealing with the environmental uncertainty presented the elements and the components of such uncertainty forming the difficulty of relations among the organizations and the information available in the organizational environment. Information from the base for this imbalanced relation resulting in the environmental uncertainty.

Concerning the relation between empowerment and uncertainty, the main dimension for empowerment is information availability accurately and at time resulting the reduction of the environmental uncertainty. Decision makers have information to make efficient decisions enabling them to deal with the environmental variables and factors (Daft, 2008).

2.4 Evaluation of the Literature

The organization is usually related with the external environment through interactive relations affecting the organization through the human, material and information sources. The organization is providing the environment, as outputs, with goods, services, ideas or experiences. The external environment is the reason for the organization existence and the organization is in turn a part of the environment. Every organization utilizes the opportunities provided by the environment and avoid the threats imposed. This creates the so called environmental uncertainty that is difficult to deal with by the managements. Administration scholars attempt to study environment within an integrated frame of the

concept to present the suitable solutions for the incongruity between the organization and the environment.

1. Concept of the Organizational Environment:

Organizational environment could be defined as all the elements existing outside the organization and could affect the organization or some of its parts (Daft, 2008).

Elements inside the organization are those through which the organization could detect where they should respond to. The study added that such elements could be found within the environment domain defined as the actual environmental field selected by the organization in addition to the regional and the geographical domain concerning its mutual dealings or services presented (Bryson & Matheny, 2001). when defining the environment, focuses on the elements inside the organization unlike (Duncan, 1972) when mentioning the external and the internal elements affecting the organization. He defined the environment as everything consisting of social and material factors to be taken into consideration in the administrative decision making. Defining environment confirms the separation of the internal organizational environment from the external environment. Duncan said that there are factors within the organization or within the decision making unit where they should be concerned with as part of the environment (Chen & Richards, 2001). It is necessary to distinguish between the internal and the external environment. The internal environment consists of the material and the social factors related with the internal aspects of the organization or the decision unit while the external factors environment consists of the social and material factors related with the external aspects of the organization or the decision unit (Bilich, 2001).

2. Classification of the Organizational Environment:

There many classifications in the literature depending on various views mainly based on factors and components affecting the organization directly or indirectly. These classifications could be summarized as follows:

a. General and Specific Environment:

Robbins (1990) divides the environment into general and specific and stated that the general one is the factors that indirectly affect the organization including the economic, the political, the social, the legal and the cultural factors. The specific environment is the factors directly affecting the organization upon which focus is made to be controlled and adopted. This is represented by the individual impacts of such factors on the organization and the specific environment consists of agents, consumers, suppliers, competitors, governmental organizations, unions, commercial unions and pressure groups. Similarly, Schermerhorn & Osbon (1997) classified the environment into general including the main elements that affect the organization operations. The technical elements are added by Schermerhorn in comparison with Robbins. Specific environment is represented by the consumers, competitors, governmental legislations, group and individuals the organization is dealing with.

b. General and Task Environment:

Most of the researchers replace the specific environment with the task environment with the same factors and dimensions. Daft (2001) pointed out the general environment has a direct impact on the regular activities of the organization but with indirect impact including government, social and cultural sectors, economic conditions, technology and financial resources. Task environment includes the sectors through which the organization is directly and vitally interact with including industry, raw materials, market, human resources and international sectors (Conrad, 2000).

c. External and Internal Environment:

Many of the researchers have classified the environment into external and internal the first of whom is Duncan (1972) stating that the external environment is a group of material and social factors outside the organization of the decision unit. It includes customers and importers in addition to competitors and social, political and cultural components.

The internal environment is represented by the organizational components and the scientific, cultural and administrative skills of the organizational staff in addition to the

functional components characterizing the regulating units. It also includes the components of the organizational level components consisting of integrative and practical goals and aims among the units and the individuals to realize the organizational goals (Ball & Mcculloch, 1996).

Ball & Mcculloch (1996) classified the organizational environment into external and internal where the study clarified the organizations control on the external and the internal environment factors. Internal factors are located within the control while the external factors are outside the organization control where it adopts various strategies to adopt. As for the external factors mentioned by the study are similar to those mentioned in the previous studies while the internal ones include production factors (capital, raw materials, individuals) and organizational activities (individuals, finance, operations, marketing). However, divisions included within the organizational environment classification are the dominant in addition to other classifications not different from those classifications.

Daft (2001) mentioned the international context, as another classification for the environment, indicating that the international sector could directly affect most of the organizations as local sectors as a whole could be affected by the international events. The study confirmed that many of the scholars failed in assessing the importance of the international events or they still think locally. The difference among the local and the international organization is decreasing because of the electronic technology development and such development reduce distances, time and measures in addition to variances among the political and the monetary systems (Los, 2000). This has resulted in the growth of the international trade within the past three years. The study also added that free trade and European Union agreements in addition to the emergence of new industrial states, Korea, Spain, Taiwan, and Russia and China shift into the market economy, participation agreements among North America countries and other participations in other parts of the world all resulted in international relations requiring new governmental regulations have their impacts on many of the governmental, social and cultural sectors (Cutler, 2000).

The above classifications are interrelated. As for external environment components, there is an agreement on such components and its indirect impacts on the organizations.

The components of the internal environment are varied as some call them task environment or specific environment. The peculiarity of some components is related to the impacts of the scholars orientations and hypothesis.

Accordingly, the current study will use the term, the organizational environment for the following reasons:

1. The difficulty to distinguish among the impacts and components of the external and the internal environment.
2. The impacts and the components of the internal environment are more obvious than the components of the external environments in particular within the environment of the contemporary organizations where distances and cultures are removed.
3. The emphasis upon dividing the environment into internal and external is a recognition of the fact that there is no feature for the system theory, namely openness and mutual impact between the whole and the part.
4. The main factors in distinguishing among the components of the external and the internal environments is the ability of the organization to control such factors and components. Many of the external factors are controllable depending on the strategies adopted by the organizations and their innovative abilities are means for high intuition and future vision. In addition, there are many of the internal components not controlled by the organization. Thus, governing factors and components is not important in distinguishing between the internal and the external environments.

3. Environmental Uncertainty:

Studies examine and assess the environment depending on the uncertainty and its direct impacts on the decision makers ability in adopting conditions and behaviors serving the organization ends and aims. Environmental assessment depends on two main characteristics the first is the environment simplicity and the second is the components stability.

The simplicity and the complexity of the organizational environment depend on the components of the environment and the factors activating the organization in addition to the

variety of such factors. The stability indicates the environmental components and factors changes and the possibility to predict such changes. Each of these dimensions could be a straight line with two dimensions and simplicity could be represented as follows:

Simple ←——————————————————————→ Complex

Stability could be represented as follows:

Stable ←——————————————————————→ Instable

Within these two dimensions, studies examined the implicit relations explaining the environmental characteristics and their continuous change in addition to their impacts on organizations and the mechanisms adopted by the organizations to deal with them. Emery & Trist (1965) emphasized that the main problem in examining the environmental variables is the change of the environmental structure inside the organizations and this change is increasing towards complexity. The study mentioned four types for casual texture resulting in four features of the organizational environment as follows:

1. First step (first dimension): The simplest among type of the organizational environment where goals are fixed, unchanged and randomly distributed. Such environment is called the stable– random environment.

2. Second step (second dimension): The environment here becomes more complex but still stable and characterized by the clustering grouping and maintain its existence through environment prediction. Such environment is called the stable–clustering environment.

3. Third step (third dimension): There are more than similar environments as related to type and sector where it is difficult to predict the organization environment. There is a need to fix the goals accurately in order to be able to meet the competition needs. Such environment is called the turbulent–reacting environment.

4. Fourth step (fourth dimension): The environment here becomes more complex where it is called the turbulent field and variances among the organizations arise from reactions and interventions among the environment components. The organizations adopt three mechanisms to deals with the turbulent field:

a. Growth to agree with the environment determinants.

b. Deep cooperation among the various economies and the rest of the community.

c. More studies and development to face competition.

Duncan (1972) confirmed the reaction of the internal and the external environments factors resulting in four characteristics of the organizational environment arising from the two main dimensions:

1. The simple–complex dimension resulting in:
   a. Stable–simple environment.
   b. Stable–complex environment.
2. The stable–dynamic dimension resulting in:
   a. Dynamic–simple environment.
   b. Dynamic–complex environment.

The study itself presented a clear concept of the environmental uncertainty, a phenomena consisting of three components (Malcolm, 1996):

1. Shortage of information related to the environmental factors of the decision makers.
2. Unknowing of decisions impacts in case the decisions are wrong.
3. Inability to point out the probabilities concerning how the environmental factors affect the success or the failure of the decision unit in performing decision making.

Lawrence & Lorsch (1967) presented a concept for the environmental uncertainty consisting of three main elements:

1. Lack for information clarity.
2. The wide gap of the information feedback resulting from the organization outputs and activities.
3. Lack for casual relations perception among the phenomena and variables.

Daft (2001) views environmental uncertainty as the decision maker rare information concerning the environmental factors thus a difficulty in predicting the external variables and the organization failure in responding to the environmental factors. Daft added that the

characteristics of the environmental field affecting uncertainty is the range where the external field is simple or complex and the range where the events are stable or instable. Thus, he divided the environmental field into two dimensions (simple–complex) and (stable–instable).

Generally, the studies dealing with the environmental uncertainty presented the elements and the components of such uncertainty forming the difficulty of relations among the organizations and the information available in the organizational environment. Information form the base for this imbalanced relation resulting in the environmental uncertainty.

Concerning the relation between empowerment and uncertainty, the main dimension for empowerment is information availability accurately and at time resulting the reduction of the environmental uncertainty. Decision makers have information to make efficient decisions enabling them to deal with the environmental variables and factors.

4. Strategies of Dealing with the Environmental Uncertainty:

Strategies adopted by the organizations managements in dealing with the environmental uncertainty are different depending on the complexity and stability of the uncertainty components. Organizations rely on their abilities and flexibility to adapt with the environment components and factors. Currently, more attention is made for interrelations where organizations aim at adopting them as an alternative for the traditional competition. Paying more attention for agreements, merging and common projects among the organizations raise an important question in the contemporary organizations environment concerning the end of the competition age and the start of the agreements, merging and common agreements age.

Studies have classified the adaptation strategies depending on classifying the organizational environment into internal and external ones, namely into internal strategies when organizations adopt the mechanisms to govern the components of the internal environments and external strategies to deal with the components of the external environment.

a. Internal Strategies to deal with the Environmental Uncertainty:

Jackson (1989) dealt with a number of strategies as an attempt to control uncertainty factors including buffering, the storage of raw materials necessary for the future production; elimination where environmental impacts and customers demands fluctuation are reduced through the products offered by the organization and accurate predictions; and rationing where organization ration the use of the resources depending on the priorities. Leavitt focused on four means to adapt with uncertainty including withdrawal where the organization close borders for certain time; the selected penetration that resembles focus strategy where the organization focus efforts in certain field; adaptation requiring high flexibility; and actual or practical adaptation where mechanisms, like advertisements, are used to realize this strategy (Al Dahan, 1992).

Daft (2001) presented some of the internal strategies to deal with the environmental uncertainty as follows:

1. Locations and units where units are established to deal with the environment.
2. Borders and isolated areas where the main activity is protected and isolated from the environment.
3. Planning and prediction where certain units for planning are established for planning and predicting to reduce the impacts of the environment.

There are also some of the internal strategies adopted by the organizations to deal with the environmental uncertainty including:

1. Differentiation: Organization refer to accurate specialization in dealing with the environment. This is useful in increasing the individuals and the units focus on accurate details and deal with certain aspects of the environmental uncertainty.
2. Integration: It refers to cooperation among the organizational management and formations to realize the organizational goals. Integration could be either vertical or horizontal.
3. Organic System: It was suggested by Barns and Stalker (1961) where organizations, living in instable and uncertain environment, adopt a flexible and adaptable organizational pattern. This is mainly adopted by the majority of the organizations

when dealing with the organizational environment in particular those living in environments characterized by changing and complex components.

Daft (2001) presented some ideas related to the advantages of adopted the organic system in the organizations. He confirmed that characteristics of the organic system is not ideal for the organizations in particular when the environment is instable for a long time. The approach presented by Daft as a solution is adopting the two systems, the organic and the mechanical within one organization, i.e. adopting the ambidextrous approach. This is based on advantaging the mechanical and the organic systems in the practical applications. The organic system is used to present ideas in the form of innovation but it is not the best and the suitable for the successful application of such innovations (Vossen, 1998).

b. External Strategies to deals with the Environmental Uncertainty:

The strategies and means viewed present the approaches used by the organizations to deal with the requirements of the organizational environment with a focus on the internal components. This forms one dimension of the environmental impact on the organization. There is another dimension of the environmental impact, the impact of the remaining organizations working within the same sector or even within other sectors and their probable impacts. This resulted in the increasing attention of such aspect of the mutual relations among the organizations. One of the studies Daft (2008) confirmed that the organizations in a response for their needs for the resources maintain a certain balance in their relations with the other organizations on one side and their independence on the other side. The organizations realize such balance through attempts, manipulate and control other organizations. In order to survive, the concerned organization attempts to control the elements in the environment or change them according to two strategies adopted by the environment management (Wolfe, 1994):

1. Establishing new ties with the basic elements in the environment.
2. Restructuring the environmental formation.

2.5 Organizational Environment within Empowerment and Innovation

Developing the organizational environment indicates the organization ability to create organizational conditions preparing the successful application for enhancing

innovation opportunities. The mechanisms adopted by the organizations reflect diagnostic indicators for the organization management ability to assess its seriousness in preparing the organizational environment supporting both empowerment and innovation. In order to cover these indicators, this section will deal with these aspects.

1. Empowerment Environment:

Organizations are seeking for the environment where empowerment could rise and succeed and provide the necessary requirements for this.

Organizations willing to find such environments are supposed to find certain mean for establishing systems and operations not restricting the employees movement and freedom in work (Margret, 1999). The organizations managements should focus on the positive (ideal) behaviors of the employees and reward them in addition to providing the possibilities of developing the organizational structure to change the undirected (negative) behavior. It is preferred to subject the employees for learning and development plans in particular those having self management abilities. Management is not only found in the peak where the mutual trust between the management and the employees are necessary in addition to efficient participation in making decisions and high degree of horizontal and vertical communications besides the employees ability to tackle the disputes with the managements and find the suitable solutions (Collins, 1997).

Collins (1996) focus on two important factors for the success of empowerment programs in the organizations. The first one is education and the second one is participation in the decision making in particular those affecting the individuals.

The empowered organizational environment depends on each individual participation in the organization and how to take part in the success of the organization including both the management and the employees.

Simons (1995) indicated the borders intervention and fading between the formal and the informal leadership in particular within the organizations where there is a leader of leader.

One of the studies confirmed that the organization management should create the organizational environment supporting empowerment where the individuals select

empowerment as a means for individual and group survival. This increases the possibility of the organizational success because the individuals efforts will focus on the same ends due to the personal commitment of the results (Wan & Shi, 2001).

The study also confirmed that the aim of empowerment is the individual success within the organization vision and message. In case this is realized, the organizational environment should support the following three practices (Appelbaum & Leroux, 1999):

1. **Freedom of Act.** Organizational focus will be towards the successful achievements and understanding the individuals expectations through their participation in the performance responsibility and providing the necessary materials besides self trust.
2. **Commitment.** The employees acceptance at all the organizational levels of their responsibilities for their behaviors.
3. **Collaboration.** The voluntarily intervention of the employees in their personal and others success.

Any organization when deciding to implement the empowerment plans will have to determine the organizational properties or characteristics of empowerment. One of the studies presented many of these factors helping in preparing an organizational environment contributing in realizing the empowerment plans. These factors are (Appelbaum & Leroux, 1999):

1. Clear vision and challenge. High empowered individuals feel that they understand the top management vision and strategy and thus will feel that they are able to work independently instead of being directed by the top management. Such vision is a challenge for the employees because of their abilities to improve their position.
2. Openness and Team Work. The empowered individuals should feel that they are a part of the organization culture emphasizing the value of its human asses. They should feel that they are able to solve the problems and their ideas are seriously considered.
3. Discipline and Control. High empowered individuals realize that their organizations provide them with clear ends and limits framing responsibilities and authorities.
4. Support and a Sense of Security. Empowered individuals should feel of the social support by their leaders and peers and they should be rewarded instead of punished.

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Another study dealt with the necessary democratic environment for the success of empowerment and presented the clear considerations of how change occurred in the organizational environment necessary for developing empowerment in addition to searching for reasons of individuals failure in the democratic system provided by empowerment (Brower, 1995).The study stated that this is due to lack of education and knowledge preventing participation and predicting failure in viewing relation between participation and the political decisions taken by the organization (Faribore, 1991).

One of the studies presented an analytical approach depending on two dimensions of the organizational environment of empowerment. It helps in empowering organizations through testing their ability to implement empowerment and could the organizations utilize empowerment. The study confirmed that this depends on the organizational condition concerned with development and subject to top management values and satisfactions (Baruch, 1998).

The model presented by the study depends values and beliefs perspective adopted by the top management and could be classified into two dimensions: beliefs and fairness. This in turn depends on the management trends in making strategic decisions to implement empowerment (Frank & Charles, 1992). Satisfactions here means the top management belief in empowerment philosophy and fairness is the approach adopted by the management to deal with the employees. This model is called the binary model and when connecting the two dimensions, four minor dimensions will result, four scenarios to apply and interpret empowerment. Figure (2) shows the model presented by the study and could be analyzed as follows:

The first dimension: could empowerment be applied in the organization?

The second dimension: could the individuals be awarded or not.

Fairness

	Duality disassociate empowerment	Enlightened high empowerment
	Fraudulent empowerment	Low empowerment

(diagram with axes: vertical axis "Fairness" High/Low, horizontal axis "Belief" Low/High; quadrants: Duality disassociate empowerment, Enlightened high empowerment, Fraudulent empowerment, Low empowerment)
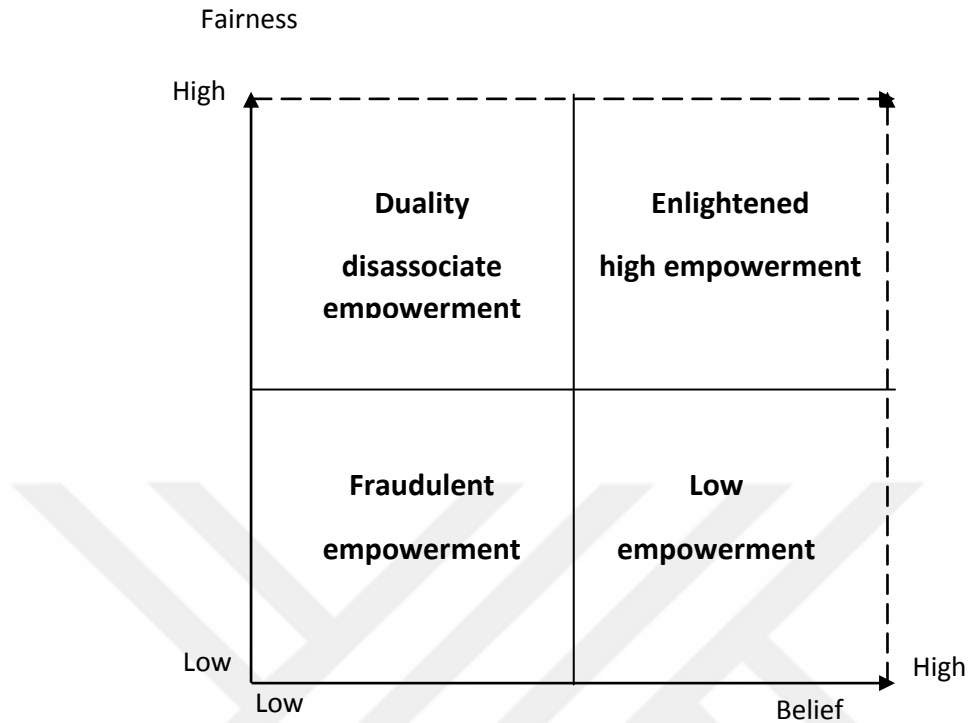
Figure (2) - Binary Model of Empowerment

Source: Baruch, Y. (1998). Applying empowerment: organizational mode. **Career Development International**, vol. 3, No. 2.

The main challenge facing the contemporary management is finding the environment where the individuals are voluntarily cooperate, commitment and move towards realizing the organizational goals and only then the organization will be able to apply empowerment to enhance the empowered employees trends to be more innovative.

2. Innovation Environment:

Roshka (1989) depicts the innovating environment as the direct media for social, cultural and institutional impacts where innovations develop or vanish. Organizations that have repeated activities and newly innovative works, produce goods and present services and ideas and these last for a certain period to meet the customers' needs but such needs are not limited and the customers attempt to satisfy their needs. This require that the organization should practice innovative activities to develop the products to satisfy such needs and this in turn require the preparation of the organizational requirements to realize such activities (Long, 1996). The development of organization outputs proceed on to

develop the organization output to reach the customers with less cost and time and with high quality. This requires an innovative design, operations and resources or there will be no demand and the organization then will be unable to meet the new needs of the customers.

Confirmed that organizations, in order to prepare the organizational environment supporting innovation, should provide the following (Brower, 1995):

1. A system for discovering the innovative employees to make them participate within innovation teams.
2. Innovation tests for all the organization members.
3. Efficient communication systems for exchanging views, presenting and solving problems.

Another study pointed out that organizations should provide the innovative environment for discovering the innovative employees and support their innovations within the following factors (Faraj, 2000):

1. Establishing a system for discovering the innovative employees and appointing them in case they are outside the organization.
2. Adopting a system for collecting ideas from the employees with self initiatives.
3. Adopting the suitable organizational atmosphere focusing on sharing leadership, efficient communications and the available information systems in addition to supporting and encouraging risk.
4. Adopting efficient systems in material and significant motivation.
5. Providing freedom and independence for the innovations.
6. Establishing goals dates.
7. Establishing the general guidelines without intervention in establishing accurate criteria.

This agrees with another study in establishing the characteristics for the innovative organizational environment as follows (Abdul Muneem, 2000):

1. Establishing an efficient systems for employment, development and promotion.

2. Adopting attacking strategies in facing problems and collecting information.

3. Establishing research and development units.

4. Adopting non–central, organic and flexible system.

5. Adopting the democratic system in leadership.

6. Allowing the innovative employees to detect all the organization parts to find the suitable solutions.

Amabile (1998) emphasized the best means for realizing innovative organizations where innovation could be enhanced and she added that constructing such organizations require a full understanding for the innovative procedures to be adopted to develop and support innovation. This needs an efficient management for innovation and innovative environment. The organization management should protect innovation and select between supporting and encouraging the employees experiences for innovative thinking or encouraging the employees innovations. Concerning the preparation of the innovative environment, this is related to designing activities to evoke challenge and provide the employees with the freedom to perform their work and adopt work teams as mechanism for innovation and performance in addition to supporting and encouraging.

Pointed out the innovative organizational environment according to the indicators mentioned by (Younis, 2002) :

1. Competition with various directions.

2. Searching for integration.

3. Searching for new resources and means of work.

4. Developing and enhancing the leader knowledge as it is the base for an innovative environment.

The same researcher confirmed that innovative environment is a means for forming innovative ideas as it helps the individuals to go beyond the familiar and allow the deep thinking of the real meanings derived from the employees, the customers and the competitors. The ideal environment for innovation should be provided with the search for better vision, finding innovative solutions and excluding the unnecessary solutions (Younis,

2001). The same study confirmed that the main features for the innovative environment include the following ⟨Wan & Shi, 2001⟩:

1. Experimental Trend where innovative ideas are directed towards making experiments to detect the range of stabilizing use for future durations and making changes.
2. Preparation of the Healthy Environment where social and positive interaction is developed among the individuals and free dialogue is established.
3. Spontaneity reflecting the innovative employees ability to present innovative ideas spontaneously in case the suitable environment is provided.

2.6 Factors of the Organizational Environment within Empowerment and Innovation

Studies vary in selecting the factors affecting the organizational environment contents and components. This depends on the environment and its specialization in addition to the studies trends and the approach adopted. This section will cover a wide range of factors that could be the most important in sharing common features to activate empowerment and innovation.

1. Organizational Culture:

Studies concerned with the organizational culture presented various definitions regarding concepts and contents. One of the studies confirmed that the organizational culture is a common system of values and beliefs developing within the organization and clearly determine the members' behavior (Schermerhorn & Osbon, 1997).

Another study indicated that the organizational culture is the directed values and beliefs, understanding and methods of thinking shared by the organization members themselves. The study added that culture is the undocumented part of the organization (Daft, 2001).

Methods of thinking and common perception gathering the organization members around contemporary issues in the organizations environment is the new elements presented in the previous definition.

Organizational culture is defined by another study as the communication where the individuals identify their organizations, roles and duties (Appelbaum & Leroux, 1999). This also indicates that culture is a communication and a reaction among the employees where they identify their roles.

Another study mentioned the elements, confirming that organizational culture is values, criteria and practices of the individuals inside the organization. Three basic elements of the organizational culture are mentioned in the study (Schein, 1990):

1. Values: The organization members beliefs in realizing positive results expressing the organization ambitions.
2. Norms: Measures agreed by the individuals to govern their behaviors and performance in work. They are the guide for the individuals behavior.
3. Practices: Formal and informal procedures adopted by the organization to complete activities and tasks.

Thus, the organizational culture is presented within two levels. The first one is invisible reflected by symbols, tales, rituals within the organizations. The second one is latent expressed by the hypothesis, beliefs, thinking, self internal governance (Daft, 2008). The organizational culture has unlimited goals but value identity and organizing behavior are among the organization goals.

One of the studies confirmed that organizational culture has two functions the first of which is to achieve internal reaction and integrity among the organization members to be able to know how to react and cooperate. The second one is helping the organization to adapt with the external environment to achieve the goals in particular quick response of the customer needs and removal of competitors (Cutler, 2000).

Najem (2000) indicated that the organizational culture has many of the important functions including:
1. Feeling the identity of the employees.
2. Obligating the individuals to more important issues.
3. Supporting the organization stability as a social system.
4. Guiding the employees behavior.

a. Empowerment Culture:

Empowerment is related with the organizational culture power. This is why many of the organizations in 1990s applied empowerment through urging the employees to self merging with their organizations culture and making decisions suitable with the values and criteria of the organization by means of independence as a contemporary dimension of organizational culture (Bilich, 2001). Organizations kept on applying this approach till empowerment becomes the important among the internal elements in changing the organizational culture.

Baruch (1998) confirmed that organizational culture is among the factors for the success of empowerment.

Another study indicated that applying empowerment entails the basic change of the organizational culture environment in addition to examining the failure of some experiments related to empowerment in particular the individuals failure in efficient participation with the moral and value system of empowerment (Margret, 1999). The study attributed this to the knowledge shortage preventing participation and failure in making connections among participation and the strategic decisions.

Concerning the relation between strong culture and empowerment, (Robert, 2001) pointed out that strong culture supports empowerment through the following:

1. Communication and clarity in presenting the message within strong culture organizations.
2. Efficient communications reducing uncertainty in strong culture organizations.
3. High levels of agreement due to the main values and beliefs in strong culture organizations.
4. Social currency based on right paths help the employees in strong culture organizations. This is measured through fame, knowledge and relations network and constructed according a mixture of communications, trust, power for making useful roles depending on formal and informal titles.
5. Individual trends are reduced in strong culture organizations and the individuals are guided to talk unanimously.

Stated that empowerment is the important aspect in constructing strong organization culture able to face the news challenges (Appelbaum & Leroux, 1999). The study also confirmed that strong culture is a mirror for the power of value and moral criteria adopted by the individuals, groups and organization as a whole.

The study also confirmed that managers in various administrative levels find in employees strong culture a source indicating their commitment and efficient participation in applying empowerment. The relation between empowerment and organizational culture is a strong one of them leads to the other. The manager refers to strong features of commitment in the area led and reconsiders the authorizations given non centrally with more authorities given and establishing administrative questioning forms within the whole goals agreed upon (Appelbaum & Leroux, 1999).

High levels of empowerment could form a strong cultural environment in any of the organizations because the empowered individuals have self reaction and merge within the ways the works are performed. Thus, they are able to make decisions in the absence of politics and written procedures.

b. Innovation Culture:

Innovation is related with the strength of the organizational culture supporting and encouraging innovation where this is the main element in supporting innovation. This, as Cutler (2000) confirmed, require the following practices:

1. Giving the innovated individuals freedom in their works.
2. Adopting empowerment or goals and results management, in particular when empowered individuals take part in special projects or self management teams.
3. Giving the innovated individuals more challengeable works as this will be the main motive for repeating success.
4. Providing an efficient and fair system of financial and significant rewards.
5. Preparing the necessary technologies for the innovated individuals and facilitating the opportunities to obtain such in case not available.
6. Preparing the suitable organizational environment supporting the innovated individuals.

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Johnson and Scholes (1993) confirmed the paradigm culture role in supporting innovation depending on the contents of such paradigm consisting of experiences acquired by satisfactions and suggestions moved through generations to focus on the role of the innovated and their impacts on the organization.

The culture web of innovation is based on the paradigm culture consisting of the following:

1. Stories narrated by the organization members through generations focusing on the innovative activities.
2. Rituals related to the organization life and practices in protecting innovation within certain rituals repeated as an annual tradition.
3. Symbols which are the good aspects in the organization life concerning innovations.
4. Power structures that affect the construction of the organization cultural system and powered trends in supporting innovation.
5. Organization structure including the formal and informal relations and their impacts on supporting innovation.
6. Control referring to conformity between control and independence within the dominant cultural system.

Lynch (2000) indicated that organizational culture reacts with innovation where focus should be on factors and values coherence supporting innovation. These factors include:

1. Encouraging innovated ideas presented by the employees and supporting the winning ideas through rewards.
2. Interactive learning with mutual impacts indicating the random and non regular ideas that are various in sources.
3. Establishing various work teams consisting of ideas makers.
4. Providing horizontal structure and non–bureaucratic organizations.
5. Providing administrative leadership having a clear vision and future perspectives.

Al Qaryooti (1989) referred to elements of innovative and cultural structure elements including common goals and values among the organization management and the

employees. This is based on meeting the employees needs, treating them as human and intellectual sources, training them and enhancing performance criteria.

The studies mentioned have examined many of the factors and the dimensions for determining the organizational culture suitable for empowerment and innovation. Below some of these factors will be reviewed and these will be empirically tested.

a. Managerial Ethics:

Professional practices in organization in general and educational organizations in particular should be not suspicious ethically. Ethical behavior components, trust and integrity, should be reviewed daily but some behaviors incompatible with the dominant criteria appeared. The organizations managements should be familiar with such probable behaviors in order to change them.

Morals in general are personal attitudes and beliefs of what is right or wrong, good or bad (Fritz & Conkel, 1999). They could be a group of criteria or behavioral levels not accepted by a certain community and any individual or group behavior incompatible with these is not ethical (Burten, & Thakur, 1997). Another study confirmed that morals as a system are governed by the ethical relations of the individuals in certain profession, organization or religion (Schwepker, 1999).

The previous definitions indicate some of the satisfactions that could be summarized as follows:

1. Each individual has a certain definition of ethics because they vary from one individual to another. What is ethical for some could be not for the others.
2. Ethics are relative thing where they could not be accurately governed.
3. Ethical behavior is reviewed by the individuals and the groups as right or wrong depending on some socially accepted criteria derived from the religious teachings, norms, traditions and rituals.

Administrative ethics are principles and rules guiding the managers behavior and thinking or what is good or bad, right or wrong within the organizations environment (Burter & Manab, 1997).

One of the studies presented a three dimension perspective of the ethical and administrative behavior in organizations within analytical frame for a triple oriented relation (Andrew, 1992):

1. The organization relation with the employees should be governed by fairness criteria in rewards and work suitable environment should be provided.
2. The employees relation with the organization should be governed by integrity, confidentiality, loyalty and commitment criteria.
3. The organization relation with the stakeholders, the customers, the suppliers, the competitors, the government and the society should be governed by certain criteria for each of these groups in accordance with organization interests.

b. Managerial Transparency:

Managerial transparency is of the contemporary concepts widely used in general sector organizations in particular and private sector organization in particular. Mechanisms and practices of managerial transparency in organizations is related with administrative corruption spread and its ethical morals impacts in some organizations and all the communities. Many governments adopt this strategy as a probable treatment for some unethical practices. Managerial transparency is related with governmental activities and organizations concerning development, administrative development and changes mechanisms adopted to adapt with environment factors and variables. Many of the studies tackled transparency concepts and goals the requirements of its successful application.

Al Lousi (2000) presented transparency as the clarity of legislations and accuracy of works done within the organizations in addition to adopting clear and accessible administrative practices to make objective and accurate decisions.

Khrabsha (1997) indicated that managerial transparency is the clarity of legislations, easy to be understood and characterized by their clear language, flexibility and development according to the economic, social and administrative variables in addition to simplifying procedures, information disclosure and accessibility.

Attiyah (2001) presented another dimension for the transparency reflecting some questioning of the governmental institutes. The study confirmed that transparency means

that the governmental general institutes should be inside a glass box where everyone could clearly see the activities and tasks and how they are done.

Paul (1998) focus on one aspect of transparency, information flow, as transparency represents the complete information flow by the managers to the organization. This confirms that information are the essence of transparency as information clarity reflects all the activities.

Thus, transparency consists of some factors that could be shown as following:

1. Information clarity and flow to all the administrative levels and for all those interested.
2. Laws, legislation and regulation clarity and accessibility.
3. Work procedures and steps clarity with the necessary requirements and documentations.
4. Financial center of the organization disclosure in addition to its activities, budgets, assets and returns.

2.7 Transparency Goals and Importance

Organizations adopt managerial transparency to realize many goals including the solutions of administrative problems, identification of obstacles facing administrative development plans and tackling some of unethical behaviors in the organization environment through adopting transparency mechanisms and practices (Linda, 1997).

Managerial transparency importance are various presented at first by Al Lousi (2000) according to the following indicators (Linda, 1997):

1. Managerial transparency is the important among the policies adopted by the states to reduce administrative corruption.
2. Transparency increase enhance the citizens trust and those dealing with the organizations regarding the procedures adopted.
3. Transparency increase means work procedures clarity and the necessary requirements for implementation.

4. Transparency application enhance the organization efficiency due to decreasing levels of administrative corruption.

5. Transparency enhance administrative control and increase efficiency through the procedures clarity.

Attiyah (2001) added other indicators for the transparency importance as follows:

1. Transparency is the base for judging the governmental departments management of their sources to sustain the society welfare.

2. Transparency is based on decisions publicity as confidential decisions make it difficult to enable questioning.

3. Transparency express the governmental, nongovernmental organizations and citizens right to be familiar with activities, projects and how they are financed and implemented.

The current study confirms that presenting transparency according to this perspective is similar to empowerment factors and dimensions, including information flow, participation, clarity of the organization strategic view and establishing the guidelines for various activities. This confirms that transparency could be adopted as a dimension of empowerment for its comprehensive factors.

Information, laws, procedures and financial center transparency are issues making empowerment and innovation pass through distant dimensions. Working according to this perspective makes freedom and decision making highly efficient and then the logic result is more inventions, initiatives and innovations in the transparent governmental organizations environment.

Empowerment and innovation success depend on the leadership philosophy in the organization and adopting innovation as an indispensable activity and empowerment as an approach enhancing innovation.

Leadership theories are based on two main axis the first of which is characterized by the autocratic management focusing on tasks, formal structures, central authority, issuing orders and mono communications. The second one focus on democracy, consultation, cooperation in decision making, respecting and appreciating the employees.

Accordingly, many theories rose within the past decades dealing with leadership, leader and their contents within three trends. The first one viewed characteristics of the administrative leaders in particular the social, psychological and physiological ones. The second one refers to administrative leader behaviors in using motives and authority in addition to variance concerning work and workers.

The third trend focus on the situations faced by the leaders necessitating interaction according to causes of such situations and their probable results and then the leader ability to deduce the situation and how to deal with such situation depending on experiences and skills.

Bennis defines the leader as the person knowing what he/she wants and why and has skills of communicating with the others. He describes leadership as the process focusing on knowing what and how something is needed (Appelbaum & Leroux, 1999).

According to this modern view of leadership, the first is a process where leaders are not individuals with followers but members in a society authorized with certain tasks. Such society consists of individuals belonging to certain organizations and have common history, values, performance, satisfaction and a way for negotiating, communicating.

This contemporary concept of leadership opposes the traditional theories based on the idea that leadership entails a leader and followers and there is a dominance, motivation and impact. But modern theories focus on leadership as a social process occurring among groups of individuals doing common activities. So, leadership is not defined as a group of the leader characteristics but defined as a process coordinating efforts to work together (Duvall, 1999).

This group includes the leader too but most of the individuals contribute according to this concept in the activities where each of the individuals is supposed to have a certain role in leadership.

The idea of group leadership have appeared in the contemporary empirical experiments where all the individuals contribute efficiently within the concept of self leadership instead of leadership behaviors and actions shown by some as formal leaders in organizations (Appelbaum & Leroux, 1999).

Modern studies deal with leadership as a complicated and mutual impact process passing the dominant and traditional view concerned with the leaders characteristics and relation with the followers.

The last ten years of the twentieth century presented many of the leadership theories including the visional, compensational, transformational, integration and skills and abilities leadership.

Most of these theories criticized the great man theory and leaders are born not made that were and still dominant.

However, the main question here is: how empowerment and innovation are related with this issue? Concerning empowerment, there is a need for a rational concept of leadership (Ugboro & Obeng, 2000). This begins with assessing leadership scenarios, targeting the leadership actions, leader behaviors and belief in possessing all the individuals for leadership characteristics and behaviors. This is called the small does of leadership and the main factor is trust, where the employees are given the trust in order these small does are efficient. Trust rise from the leader ability and integrity and this comes from how activities are performed and managed by the leader. In case trust is decreased, others desire to cooperate will be removed. The efficient leader have behaviors depend on searching for what the others have and utilize them after given the enough trust. These leaders find that dialogue with any individual is an opportunity to reveal leadership through showing the leadership characteristics. This means leadership revival inside the individual and enhancing cooperation and participation. Small does leadership is what the individual want and what the leader could do to acquire the employees.

2.8 Empowerment and Innovation Efficient Leadership Properties

Studies have presented various hypothesis testing how leadership could be successful for applying empowerment and innovation. One of the studies have attempted to make a structural model including five personal dimensions related with leadership to be selected to identify impact relations and how they are related. These include:

1. Urgency.
2. Agreeableness.

3. Emotional stability.

4. Intellect.

5. Conscientiousness.

The study have found strong connecting relations among these dimensions but with no results concerning the impacts, i.e. results of these dimensions for the empowered leader due to the difficulty of fixing efficiency measures and their ability to diagnose and classify leaders according to such dimensions (Appelbaum & Leroux, 1999).

Another study have applied these dimensions depending on the employees productivity but with some difficulties faced due to many intervening variables affecting productivity. Another study focused on four features could considered the most important in supporting empowerment and innovation (Conrad, 2000):

1. Ability for clarifying strategic orientation of the organization.

2. Encouraging others participation in leadership.

3. Ability for clarifying expectations related to goals, tasks and authorities.

4. Solving conflicts among the individuals.

Another study focus on some features preferred to be available in empowered leaders including (Baruch, 1998):

1. Ability to authorization.

2. Trust in others.

3. Ability to win others commitment.

4. Ability to prepare and coordinate requirements and resources.

5. Rewards initiatives.

6. Courage and risks.

7. Persistence.

Llyod & Southen (1999) confirmed that empirical administrative experiments showed new concepts related to organization leadership that drastically changed concepts of leadership. These could be summarized as the following (Llyod & Southen, 1999):

1. **Envisioning.** This is based on an idea that administrative leader is able to clarify vision and communicate it to the others due to the leader's perception of the organization future trends and the organizational goal. Vision is communicated through the envision ability owned by the leader.

2. **Energizing.** It is the administrative leader ability to evoke enthusiasm within the work team. Psychologists indicate the importance of such factor in realizing the positive aspect. Energizing is enhanced through the administrative leaderships abilities to present external motives to urge the employees characterized by independence and self orientation.

3. **Empathizing.** This activity is related with the administrative leaderships ability to recognize the surrounding environment efficiently to enable them to control the changes in particular when performing important changes. The important here is providing the supporting environment by the leader where employees feel comfort and show their feelings faithfully.

4. **Empowerment.** This refers to the administrative leadership abilities to reveal the individuals latent powers to be used for the favor of the organizations they are leading.

These activities interaction and merging is a suitable base for creating the organizational environment supporting innovation and inventions. Vision gives a common perception of the organizational trend in goals and creates motives to realize such aims. Empathizing supports the staff in performing this operation while empowerment provides the suitable environment where better performance could be presented.

2.9 Roles of the Contemporary Leadership

Administrative leaders in the contemporary organizations have new roles passing the traditional ones like planning, organizing, control and motivation. These new roles are represented by facilitating, coordinating and training because the basic task for today leaders is helping the individuals on how to learn new roles in particular decision making, negotiation, self monitoring and working within special teams.

Stephen (1998) confirmed that administrative literature and empirical experiments presented so many terms not familiar in the previous literature. Trainers, supervisors, facilitators and coordinators are terms used for those having managerial affairs.

Blanchard et al. also pointed out that applying empowerment needs various stages and each of these stages adopt a leadership pattern suitable with that stage. There is a need for qualifying programs suitable with each of these stages including (Stephen, 1998):

1. **Enthusiasm Stage.** Individuals here are eager for empowerment but with no complete knowledge. This stage needs a guiding leadership to tell the individuals how to apply empowerment. The leader here is called the guide.

2. **Dissatisfaction Stage.** Empowerment needs high skills in having the new responsibilities in addition to support, encouragement and providing the necessary materials. The leader here is called the facilitator.

3. **Satisfaction and Performance Stage.** In this stage the employees perception of empowerment importance is enhanced in addition to the clear understanding of roles and responsibilities. This stage needs efforts coordination among the individuals. The leader here is called the coordinator.

4. **Persistence and Decisions Stage.** This stage is characterized by stability and high performance. Individuals need to learn new skills in decision making, solving problems, negotiation and how to face conflict. The leader trains the individuals on these skills and how to face them.

2.10 Evaluation of the Literature

Reviewing the efforts made by the scholars in examining and analyzing innovation and empowerment show the wide scope of knowledge presented by these studies thus enriching the intellectual framework of the current study and strengthening the intellectual matrix of the researcher.

Accordingly, some of the evaluative indicators of these studies could be presented including:

1. The availability of intellectual agreement among the scholars in selecting the common among factors and dimensions between two variables as there were common factors and dimensions tested and analyzed by these studies.

2. Organizational environment is the common element for innovation studies. The decisive factor for the success of both innovation and empowerment is the availability of the supporting organizational environment for both of them.

3. The absolute recognition that there is an agreement on the importance and vital role of innovation in the success of the organizations to realize their aims and ends. In addition, emphasis is made on the importance of empowerment for organizations and there are many critics for empowerment suspecting the ability of this strategy on performing a vital role in the success of these organizations to realize their aims and ends because of the difficult field application.

4. Many of the studies tested their hypothesis depending on case study and content analysis approaches with field surveys to reach more accurate results.

5. Studies varied when testing hypothesis in selecting the fields where the tests were made. Some studies tested empowerment in service industries while innovation studies focused on industrial sector more than other sectors. The current study selected an educational organization thus differing from other studies.

6. The hypothesis that the current study will use will vary in comparison with other studies. This is logical as hypothesis rely on the selected problem, aims of the study and nature of each examined field.

7. The different trend of the study lies in collecting between empowerment and innovation variables that is not applied in the previous studies. Empowerment as a decision variable could lead in case not applied efficiently to enforcing innovation which is an aim variable.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Theoretical Framework

The study model is based on a hypothetical base referring to the adoption of UOD for empowerment strategy that could lead to innovation enhancement. To apply this, empowerment requires decision makers being satisfied by such concept in addition to being satisfied of what the individuals have of potential abilities to be revealed through empowerment. This entails the disclosure of information and everyone participation as information spread could enhance trust of the scientific leaderships. Empowerment also requires the independence of scientific leaderships and individuals that is related with guiding frames directing their powers towards realizing the university aims, values and strategies. These leaderships could be given a freedom to make decisions and act accordingly.

Empowerments also requires the knowledge that is available in the scientific leaderships and reflect experiences, values and traditions that activate training and qualification plans in addition to using dialogue as practices enhancing knowledge. The hypothetical view of the current study will be complete through the availability of factors of the organizational environment like culture, leadership practices and facilities supporting the opportunities of being mixed with empowerment to provide the supporting media for innovation

Accordingly, the study sample is designed to include three parts the first of which represent decision variable including empowerment represented by information, independence and knowledge in addition to nine minor dimensions. The moderate variable is the organizational environment including three main factors: leadership, organizational culture and facilities in addition to other minor variables, while innovation is the target variable.

Figure (3) - Research Framework

Source: (By the Researcher)

3.2 Research Hypothesis

1. To determine the relationship between empowerment and innovation?
2. To evaluate the relationship between organizational environment and innovation?
3. To determine the relationship between empowerment and organizational environment?
4. To evaluate the organizational environment moderate the relationship between empowerment and innovation?

3.3 Researching Approaches

The field Studies rely on one or more of the study approaches including the descriptive, experiential, historical, comparative approaches in addition case study and content analysis approaches. The current study mainly depends on two approaches, the experimental through testing the study hypothesis and content analysis through analyzing documents, records and reports used by the UOD in documenting all innovation policies and reporting financial sources.

3.4 Research Design

A research design can be defined as an action plan for getting from here to there, where here may be the initial set of questions to be answered, and 'there' is the set of answers or conclusions about these questions (Babbie, 2004). The present study employs a quantitative survey method to gather data. A quantitative study is defined as an inquiry into a social or human issue based on testing a theory composed of variable, measured with

numbers and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true (Creswell, 2002).

3.5 Instruments and Measurement

The primary data for the study were collected through survey method by using standardized structured self-administered questionnaires. Questionnaires are essential to and most directly associated with survey research (Babbie, 2004). For the purpose of this study, the researcher employed five previously used instruments, which had also been validated found to be reliable and valid, and were subsequently used in many other studies.

As mentioned earlier, the scores used to represent each descriptor in all the above four instruments were on a Likert scale continuum from 1 to 5. The five – point scale is chosen for this study because, according to (Allen and Rao, 2000) the wider distribution of scores around the mean gives more discriminating power and also it is easier to establish covariance between two variables with greater dispersion (that is, variance) around their means. They also argued further that the 5 – point scale measure is well accepted in both the academic and industry research settings especially for the dependent measure. In other words, those involved in model development advocate more points because of the increase variance and better chances of demonstrating covariance among the key variables. Furthermore, high precaution was given too during data interpretation process.

The data collection instrument used for this study was a survey questionnaire research design being selected based on the research questions. The operationalization of the four explanatory constructs (empowerment, organization and environment) involved the development of the scales and a pilot study to determine the adequacy of the data collection technique and the validity/reliability of the overall instrument.

3.6 Data Collection Procedures

Following the recommendation of Brislin (1986) that implied that the questionnaire should be translated to measure its validity and reliability, the questionnaire was translated by two professional and the modified accordingly. In order to design the questionnaire and

to get a high response rate, the researcher followed the main guidelines of Dillman (1978, 2000) and Sudman and Bradburn (1982). First, the questionnaire was translated from English language to Arabic language. It was anticipated that it would be easier for the respondents to understand if the questionnaires were posed in Arabic language and this would encourage them to respond to the survey. Sekaran (2003) suggests that it is important to ensure that the translation of the instruments is developed accordingly. Therefore, the English version was translated into the Arabic language by a native Arabic who is fluent in both languages (English and Arabic) and has expertise in management studies. The Arabic questionnaire was then translated back into English again by another person with the same qualification. Finally, the researcher examined and compared the translation version with the original version.

3.7 Data Analysis

Upon completing the task of data collection, preliminary test was conducted to determine the response rate, inter-rater agreement, reliability, and validity of the study construct. Factor analysis and reliability analysis were used to assess the validity and reliability of the independent variable empowerment as well as the moderative variable of organizational environment. Response rate was computed by calculating frequency and percentage of response and later compared to the sample size determined before data collection. The descriptive statistics namely mean, median, standard deviation, frequencies, and percentage were used to describe the main characteristics of the sample, and to testing hypotheses a correlation analysis will using in order to test the degree of relationship between variable. The correlation analysis results reveal the direction, strength, and significance of the study variable (Sekaran, 2003) also multiple regression analysis will use to test the significant predictors of innovation from empowerment. Multiple regression test will provide understanding of how much variance in the dependent variable is explained by the independent variable when theorized to influence simultaneously the former (Sekaran, 2003). In this study, the quantitative data will be analyzed by using various statistical analysis software of (SPSS V.21). Tale (1) below shows a summary of analysis procedures and techniques employed in this study.

Table (1) - Summary of analysis procedures and techniques employed in the current study

Analysis procedures	analysis techniques	Definition
Evaluating measurement instrument	Reliability	The stability and consistency of the measuring instruments. Assessed by Cronbach's Alpha.
	Construct Validity	A test that look at the fit degree between accuracy of measurement instrument and propose of measurement design through factor analysis
Getting a feel for the data	Normality test	A test that use to determine whether a data collection distributed normal besd on Skuss and Kurtoss
	Frequencies	The number of the repeat observation per unit of time.
	Mean	The average of the observation number
	Variance	A test that used to measure the homogeneity degree of responses.
	S. Deviation	The square root of the variance.
Testing hypotheses	Correlation	A test that used to analysis the relationship of independent variable in the other variables.
	Regression	A test that used to analysis the effects of independent variable in the other variables.
	F test	A test that used to determine whether there is a significant of regression model.
	T test	A test that used to determine whether there is a significant relationship between variables.

CHAPTER FOUR

THE FIELD STUDY

This chapter attempts at preparing the necessary techniques to examine the field through adopting mechanisms achieving the study aims in testing the hypothesis and the relation among the variables, factors and dimensions.

4.1 The Study Society and Sample

Innovation in Iraq in general and the higher education and the scientific research in particular is characterized by including basic components and dimensions to face all forms of challenge. This study adds another significance for the traditional significances indicated by the studies in the scientific approaches because innovation is a reflection of the cultural components that Duhok University enhance. First of all, a review of this university will be presented.

1. Duhok University

Duhok University is among the ancient universities locally started in Duhok in 1992 through establishing College of Agriculture and collage of Medicine related administratively with the Ministry of Health.

Table (2) - Colleges at Duhok University according to Years of Foundation

N	Collage	Year
1.	College of Agriculture	1992
2.	College of Medicine	1992
3.	College of Law and Political Sciences	1997
4.	College of Engineering	1994
5.	College of Humanities	1994
6.	College of Dentistry	2008
7.	College of Pharmacy	2009
8.	College of Veterinary Medicine	1996
9.	College of Administration and Economics	1996
10.	College of Science	1997
11.	College of Basic Education	2001
12.	College of Physical Education	2003
13.	College of Spatial Planning & Applied Science	2007
14.	College of Nursing	2007
15.	College of Education - Akre	2009
16.	College of Health Sciences	2012
17.	College of Basic Education – Amedy	2016

2. Sample of Study:

Selecting the study sample has been an obsession till finishing the testing of the study hypothesis to realize the aims. Selection accuracy depends on possibilities of success because relating what is derived in the theoretical part with a good selection of the field ensure conclusions and recommendations interact with the real world to enhance such recommendations to be translated into innovative action.

This is why Duhok University is selected because it is a scientific institute providing the governmental departments with scientifically or practically qualified staffs in order that these institutes realize their goals. The graduate that is scientifically and educationally qualified in addition to the research scientifically prepared will present successful solutions for problems suffered by the environment in addition to finding cooperation mechanisms with the society sectors. These are symbols agree with the decision of selecting this educated organization because the reasons of selecting the sample (strategic apex) representing the scientific leaderships lie in the responsibilities they have as follows:

1. The responsibility of the scientific leaderships in forming the strategic view of the university.
2. Translating this view into message, ends and strategic goals to be implemented.
3. Providing all the necessary sources and distributing them according to the strategic plans made.
4. Adopting the organizational culture based on respecting ideas and suggestion contributing in developing the university innovation.
5. Adopting innovation as strategies to create the competitive features.

It is also logically hypothesized that these leaderships are able to include administrative concepts and terms in the form of strategies contained by the current study to be tested with a support depending on the hypothesis of providing accumulative experience for the university leaderships.

In order to accurately test the hypothesis and realize the study aims, the sample was restricted to the scientific leaderships in Duhok University, in particular each of teaching staff members. The leading scientific pyramid of the university consist of:

1. President of the university.
2. Vice President of the university.
3. Deans of colleges.
4. Deans of colleges assistants.
5. Heads of the scientific departments.
6. Heads of Unites.

The first three terms form the university board while the fourth one consists of deans of colleges assistants for administrative and students affairs, scientific affairs and higher studies.

3. Pilot Study:

The current study depended on mechanisms of scientific research to ensure the accurate determination of the study variables, factors and dimensions depending on the scientific leaderships views in the university because of their direct interaction with their jobs.

Accordingly, a pilot form (appendix 1) was prepared to examine the views of those studies and their response for the study variables and factors in addition to determining the personal and professional characters.

Pilot study form was distributed among all members of the study sample including the scientific leaderships in Duhok University as shown in table (3). The total response ratio was (80%) and number of the returned forms was (117) out of (146) forms.

Table (3) - Number of the Responders to the Pilot Study and their Positions

Titles Repetition	University president	President assistant	College deans	Deans assistants	Heads of departments	Heads of unit	Total
Repetition	1	3	17	25	38	33	117
Ratios	100	100	100	73.51	75.23	66.14	80

Accordingly, the pilot study included the following axis:

4.2 Personal Information

This is concerned with the personal information of the study sample as illustrated in table (4) and this aims at pointing the following:

1. **Scientific title.** Table (4) shows that the majority of the scientific leaderships are assistant professors (50) out of the study sample (117) while professors were (10). This reflects positive significances indicating that the majority of the scientific leaders are holding high scientific titles indicating the seriousness of the university administration to give positions for them.

2. **Scientific qualification.** Table (4) shows that Ph.D. holders are the majority where they were (77) and only (40) of them hold M.Sc. This distribution indicate the university administration interest in giving high leading positions to Ph.D. holders meaning intellectual addition used in the scientific field.

3. **Source of the degree.** Results of classifying the pilot study members according to source of the degree indicate high foreign universities are majority in number and most of the scientific leaders obtain their degrees from outside universities graduated. This is a probable indicator of the relation among them and their colleges supposing a kind of loyalty and commitment in the relation between the two sides.

4. **Service years in the university.** This indicates that (52) of the scientific leaders has more than (31) years of service in the university. This is a positive indicator referring to the experience accumulation enjoyed by those leaders and their experience in dealing with the situations they are facing. This positive indicator is enhanced in university board because most the members serve for than (31) years.

5. **Age.** Age groups reveal of the pilot sample reveal a kind of similarity with the years of service indicator. More of them are within the group (50) years and this indicates that age groups under which the scientific leaders are refer to intellectual and emotional mature for the study sample.

As for gender and social status, table (4) refers to the logical distribution according with age and years of service.

Table (4) - Personal Characters of the Pilot Study Sample

Scientific leaders / Personal characters	Board	Assistants	Heads of departments	Heads of unit	Total
1. Scientific title					
a. Professor	6	1	3	-	10
b. Assistant prof.	11	3	28	8	50
c. Lecturer	-	11	7	7	25
d. Assistant lecturer	-	-	-	1	32
2. Scientific qualification:					
a. PhD	17	3	38	19	77
b. M.Sc.	1	5	4	30	40
3. Source of last degree:					
a. Iraqi Universities	3	11	12	10	36
b. Arabic universities	-	-	3	2	5
c. Foreign universities	14	12	18	32	76
4. Service Years					
a. Less than 10 years	-	-	-	2	2
b. 10–20 years	1	10	8	-	19
c. 21–30 years	13	9	17	5	44
d. 31 years and over	12	3	18	19	52
5. Age groups					
a. less than 30 years	5	2	18	15	40
b. 30–39years	2	7	1	8	18
c. 40–49 years	2	8	5	1	16
e. 50 years and over	10	6	19	8	43
6. Gender					
a. male	15	3	39	30	87
b. female	2	-	18	10	30
7. Social status:					
a. married	17	3	35	60	115
b. single	-	-	2	-	2

2nd Axis: Information about the Scientific Formations:

This includes some questions about the formations led by the pilot study sample to detect their properties as follows:

1. Formations Classification:

Surveying the scientific leaders views concerning the classification of the formations in accordance with the three main specializations, applied scientific, pure and humanitarian, reveals (55) formations of the applied scientific and (34) within the pure. The study also concludes some mistakes that were avoided through personal interviews related to:

1. Some colleges include more than one scientific specialization.
2. Absence of certain legislations accurately governing some ambiguities in detecting the identity of some departments and units as being pure scientific or applied.

Table (4) presents the distribution of the scientific formations according to the scientific specialization.

Table (5) - Formations Distribution according to Scientific Specialization

Leaders / Specializations	Board	Assistants	Heads of departments	Heads of unit	Total
Pure science	6	10	12	6	34
Applied science	8	6	14	27	55
Humanitarian	3	2	13	10	28
Total	17	18	39	43	117

2. Specialized Side Interested in Innovation:

Surveying the views of the study sample reveal the viability of a specialized side interested in innovative works as shown in table (5). The positive response was (74) of the

responders and those with negative response were (44). This does not represent the personal interviews results for the following reasons:

1. The university board and the assistants answers concerning a side interested in innovation were based on the scientific units tasks concerning innovation while the pilot study question was concerned with a specialized side having the responsibility of managing innovation affairs only.

2. According the personal interviews, the pilot study confirms the absence of such sides in the university administration and colleges.

Table (6) - Scientific Leaderships Views concerning a specialized side interested in innovation

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Yes	12	16	27	19	74
No	5	2	12	24	44
Total	17	18	39	43	117

3. Legislations related to Innovation:

The survey of the scientific leaders views concerning the legislations governing innovation and the innovative showed that (70) of the scientific leaders confirmed the existence of such legislations in form of laws, decisions and regulations, (47) of them oppose this result. This is a negative indicator showing the unfamiliarity of those leaders with such legislations and this is true on two of the university board and two of the assistants. Such indicators entails the university administration to find a mechanism providing the scientific leaders with opportunities to be familiar with legislations governing innovative works to be a motive for innovation.

Table (7) - Scientific Leaderships Views concerning the availability of legislations governing innovation

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Yes	12	13	25	20	70
No	5	5	14	23	47
Total	17	18	39	43	117

4. Writing Legislations:

Table (7) shows whether legislations governing innovation are written and widely spread. (79) of the scientific leaders confirmed the existence of such administrative contexts while (17) gave indecisive answers. This is a negative indicator supporting table (7) in that those surveyed are not familiar with such legislations weakening their trend towards innovation.

Table (8) - Scientific Leaderships Views concerning writing legislations

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Yes	11	18	19	31	79
Rather	6	-	6	5	17
No	-	-	14	7	21
Total	17	18	39	43	117

5. Rewarding Innovation Systems:

The survey results concerning rewarding innovation show that (70) of the scientific leaders confirmed the absence of such systems where (39) of them were heads of departments and units. This indicates the absence of such system in colleges and the university as a whole. Personal interviews results support this where they confirmed the absence of authorities for rewarding innovation works except the individual initiatives by some of those leaders. As for rewards, the higher governmental leaderships give such rewards.

Table (9) - Scientific Leaderships responses concerning rewarding innovation works system

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Yes	5	6	19	21	50
No	12	12	20	22	70
Total	17	18	39	43	117

6. Item for Innovation in the Budgets:

The survey results concerning an item for innovation in the university and colleges budget show that (69) neglect such financial item forming (80%). This indicator agrees with the indicators of no side concerned with innovation in the university and such unit means an independent budget. Table (9) shows the responders views concerning this item.

Table (10) - Scientific Leaderships responses concerning an item in the budget for innovation

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Yes	5	6	20	21	51
No	12	12	19	22	69
Total	17	18	39	43	117

7. Quality of Rewards:

Financial sources are the decisive element in encouraging innovation. In order to know the availability of such important sources in the university, scientific leaderships views were surveyed depending on five responses as shown in table (10). The study concluded that such sources are rare because (28) confirmed that they are rare and only (19) confirmed that they are enough and (38) was neutral.

Table (11) - Financial sources available for supporting innovation

Leaders / Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Very enough	-	-	-	-	-
Enough	2	8	4	5	19
Accepted	7	8	15	8	38
Rare	7	--	11	10	28
Very rare	1	2	9	20	32
Total	17	18	39	43	117

8. Material Facilities Supporting Innovation:

Financial sources are necessary for supporting and activating innovation and these include workshops, laboratories, tools, equipment, raw materials, offices, communication means, transportation and information. Scientific leaderships views were surveyed concerning the availability of such sources and results are shown in table (11). Responders confirmed that sources are available where (50) of them confirmed that in addition to (31) confirmed that they are largely available while (31) confirmed that they are not available. The excessive views confirming the absence of such sources didn't pass (5.8%).

Table (12) - Scientific leaderships views concerning the viability of material facilities

Leaders Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Greatly available	-	-	-	-	-
Available	1	7	1	4	13
Enough available	7	7	14	9	37
Not available	7	1	13	10	31
Greatly not available	2	3	11	20	36
Total	17	18	39	43	117

9. Rituals of Rewarding Innovative Works:

Rewarding the innovation works is a critical factor in supporting innovation in particular if such rewarding is done within certain rituals adopted by the university and the colleges within their general and private celebrations. Table (12) indicates that these activities are not well organized in the university.

Table (13) - Scientific leaderships views concerning the rituals for rewarding innovation

Leaders Responses	Board	Assistants	Heads of departments	Heads of unit	Total
Always	-	-	-	-	-
Frequently	2	8	4	5	19
Sometimes	7	8	15	8	38
Very little	7	--	11	10	28
Rarely	1	2	9	20	32
Total	17	18	39	43	117

The responders views confirmed that such rituals are limited because the total of the negative trends (sometimes, very little and rarely) were (93) and the positive trends (always and frequently) were (29). This indicates that the university is not interested in such rituals.

3rd Axis: Innovation Works:

1. Forms of Innovation:

The third part of the pilot study defined innovation as innovation or invention leading to quality developments in addition to being a genuine scientific writing or research. It also includes the adoption of new administrative methods to promote performance and reduce costs. Accordingly, views of the scientific leaderships were surveyed concerning their agreement on these dimensions and they were given response alternatives among (0) in minimum to (5) in maximum. Some of the statistical means were used to analyze the results including repetitions, rates, means, standard deviation and variance ratio as illustrated in table (13).

Table (14) - Responders views concerning forms of innovation

Variables	Response alternatives												X	SD	C.V%
	Negative trend						Positive trend								
	0		1		2		3		4		5				
	F	%	F	%	F	%	F	%	F	%	F	%			
X1	1	0.83	0	2.5	0	0	15	12.5	34	28.33	67	55.83	4.33	0.97	22
X2	0	0	0	1.67	2	2.5	11	9.17	47	39.17	57	47.5	4.28	0.86	20
X3	0	0	0	0	1	0.83	18	15.0	40	33.33	61	50.83	4.34	0.76	18
X4	1	0.83	0	0	3	2.5	30	25.0	49	40.83	37	30.38	3.98	0.89	22
X5	0	0	0	0.83	1	2.5	26	21.67	53	44.17	37	30.83	4.02	0.84	21

Table (14) shows that the mean agreement of responses was (18) indicating the agreement that innovation include most of the indicators mentioned in the pilot study. Most the dimensions got means passing the response number (4) indication no large deviations and variance coefficients are in their minimum limits. Comparing the dimensions with each other, there appear an agreement in dimension (3) concerning innovation as an independent research contributing innovatively in science and technology. The less agreement was in dimension (4) including that innovation is a distinctive research in humanities.

2. Features of Innovation in the University:

There is almost an agreement about all the dimensions used to measure innovation and these were determined through classifying the university and colleges aims into four groups examined through adopting activities divided in turn into four groups.

Table (15) - Scientific leaderships responses concerning indicators of innovation in the university

Variables	Response alternatives												X	SD	C.V %
	Negative trend						Positive trend								
	0		1		2		3		4		5				
	F	%	F	%	F	%	F	%	F	%	F	%			
X6	1	.83	8	9.17	10	8.33	29	24.17	42	35.0	27	3.5	3.5	1.23	35
X7	0	0	2	4.17	10	8.33	22	18.33	57	47.5	26	3.47	3.74	1.02	27
X8	1	.83	2	4.17	4	3.33	31	25.83	48	40.0	31	3.77	3.77	1.05	27
X9	2	1.67	8	9.17	8	6.67	30	25.0	35	29.17	34	3.55	3.55	1.30	36
X10	2	1.67	0	2.5	7	5.83	26	21.67	38	31.67	44	3.89	3.89	1.14	32
X11	1	0.83	1	3.33	4	3.33	26	21.67	40	33.33	45	3.95	3.95	1.08	27
X12	2	1.67	0	0.83	6	5.00	19	15.83	41	34.17	51	4.07	4.07	1.08	26
X13	0	0	2	4.17	4	3.33	36	30.00	44	36.67	31	3.76	3.76	1.01	27
X14	5	4.17	5	6.67	16	13.33	45	37.5	29	24.17	17	3.13	3.13	1.25	40
X15	2	1.67	1	3.33	5	4.17	37	30.83	50	41.67	22	2.62	3.62	1.04	39

Goals are technical depending in the university peculiarity represented by presenting outputs for the society as graduates gathering the scientific and practical skills to meet the society needs of such skills. These goals reflect six dimensions included in the pilot study represented by achieving high rates of success, quantitative weight of success, educational aims, opening new departments, adopting new scientific approaches and applying developed educational means. The second group is the supporting goals represented by scientific researches and participation in conferences while the third group is called sustainability goals reflected by getting financial returns and establishing common projects with the governmental sectors. The fourth group of goals are represented through the positive interaction with environment measured by size of continuous education plans. Numbers mentioned in table (15) reflect some agreement on the indicators proved by means of each variable where the mean was (3.25) and deviations are parallel and approximate. The same thing is applied to difference factors that are within the sensible statistical limits.

3. Potentials of Innovation:

Table (15) shows the variance in potential of innovation depending on classifying knowledge into pure, applied and humanitarian sciences. Potentials of innovation are active in the pure and the applied sciences more than the humanitarian and this is confirmed by the numbers. Views agree on innovation in the humanitarian specialization is less than (3.70).

Table (16) - Scientific leaderships views concerning potentials of innovation according to scientific specializations

Variables	Response alternatives												X	SD	C.V%
	Negative trend						Positive trend								
	0		1		2		3		4		5				
	F	%	F	%	F	%	F	%	F	%	F	%			
X16	0	0	0	1.67	1	1.67	16	13.33	41	34.17	59	49.19	4.27	0.87	20
X17	0	0	0	0	0	1.67	14	12.5	50	41.67	53	44.17	4.28	0.87	17
X18	2	1.67	0	2.50	5	4.17	40	33.33	39	32.5	31	25.83	3.70	1.08	29

The sensitivity generated after personal interviews with the scientific leaderships because some of the legislations governing work in the university environment creates some variance in viewing scientific specializations. Some of these legislations govern summer field practices in all the governmental departments. Individuals within the pure and the applied scientific specializations have practices in sectors giving privileges more than those given by sectors for humanitarian specializations. The field practices as a mechanism for enhancing innovation is turned into some conflict to obtain more incentives resulting in gaining financial returns while the essence of the activity takes a formal dimension.

The data presented in table (16) confirm that all aspects of life need all kinds of sciences and innovation is present in all the specializations either scientific or humanitarian.

4. Sources of Innovation:

All the views agree that sources of innovation at the university level are having skills and ability of innovative thinking and the desire for innovation. As scientific title and degree, responders state that they are not necessary for achieving innovation. It is not necessary that the innovator has a high scientific degree or title despite most reject the importance of both factors.

Table (17) - Scientific leaderships views concerning sources of innovation

Variables	Response alternatives												X	SD	C.V %
	Negative trend						Positive trend								
	0		1		2		3		4		5				
	F	%	F	%	F	%	F	%	F	%	F	%			
X19	0	0	0	0	1	0.83	9	10.0	38	31.67	69	75.5	4.45	0.76	16
X20	0	0	0	0	1	0.83	3	5.0	36	30.0	77	64.17	4.57	0.63	14
X21	0	0	0	0	1	0.83	6	7.5	42	35.0	68	56.67	4.47	0.67	15
X22	0	0	2	4.17	9	7.50	23	19.17	43	35.83	40	33.33	3.86	1.09	28
X23	3	2.50	3	5.0	13	10.83	37	30.38	33	27.50	28	23.33	3.45	1.24	36
X24	0	0	0	1.67	2	2.50	16	13.33	49	40.83	50	41.67	4.18	0.87	20
X25	0	0	0	0	0	0	7	8.33	35	29.17	75	62.5	4.54	0.64	14

Table (17) shows that (14) of the scientific leaders disagree that scientific qualification is a source of innovation while (22) of them disagree that scientific title is a source of innovation. Source (X24) indicating the possibility of applying theories empirically refers to the possibility of not recognizing the scientific leaders for such source (moving theories into applications) because of not perceiving administration ideas, philosophy, principles and the theories. Most of those leaders with scientific specializations far from the administrative specializations necessitating the availability of various skills for the favor of the scientific administrative leader success in performing tasks.

4th Axis: Measuring Empowerment:

Table (17) refers to indicators enhancing the possibility of applying empowerment strategy in the university. The dimensions of the measure indicate that most of the scientific leaders enjoy some qualifications suitable with their leading role and the tasks they have aim at realizing the aims of their colleges. They enjoy the ability of moving the activities of achieving their aims and have the necessary experience to pass the problems of performance.

The scientific leaders, in order to enjoy the properties of empowerment, need a freedom accompanied by guiding limits to test means of achieving goals (X28) and the freedom of selecting how to do their work (X31). Personal interviews reveal these indicators and most of those surveyed confirmed that there is administrative non centrality in the university indicating a kind of normalization in work procedures that give no suitable space for the scientific leaders to select methods for realizing their aims.

Table (18) - Indicators of measuring empowerment for scientific leaderships in the university

Variables	Response alternatives												X	SD	C.V %
	Negative trend						Positive trend								
	0		1		2		3		4		5				
	F	%	F	%	F	%	F	%	F	%	F	%			
X26	1	0.83	0	0	0	0	3	5.0	43	35.83	70	58.33	4.50	0.72	17
X27	0	0	0	0	2	1.67	5	6.67	46	38.33	64	53.33	4.43	0.69	16
X28	2	1.67	19	15.8	25	20.8	37	33.3	23	19.2	21	11.5	2.21	0.96	21
X29	1	0.83	3	2.5	9	7.5	24	22.5	56	46.67	24	20.0	3.71	1.00	27
X30	0	0	0	0	6	5.0	19	18.33	56	46.67	36	30.0	4.01	0.82	20
X31	2	1.67	17	14.2	29	24.2	33	30.0	21	17.5	15	12.5	2.25	1.23	24
X32	0	0	1	0.83	0	0	9	10.0	38	31.67	69	57.5	4.45	0.74	17
X33	0	0	0	0	1	0.83	8	9.17	41	34.17	67	55.83	4.45	0.69	16

Testing Hypothesis:

H1: Empowerment has a significant relationship with innovation.

Based on 117 academicians, the following results were recorded. Table 4.1 shows the result which indicates the two variables also positively and strongly associate; $R^2 = 0.989$, Adj. $R^2 = 0.989$, and $F(1,115) = 27749.147$, $p < 0.01$. This means 99% of the variance in the innovation capabilities increases was explained by the empowerment. Approximately 99% of the variance of the Innovation is accounted for by its linear relationship with the <u>organizational culture</u> the regression equation for predicting the Innovation is:

Regression Equation (y) = a + bx + e

Innovation = 0.002 + 1.011 (empowement) + e

Table (19) - Measuring degree of association between empowerment on Innovation using Simple Linear Regression

	F(1,115)	B	SE B	Beta	T	*p*
Outcome: **Innovation** Predictor: **empowerment**	27749.147	1.011	0.006	0.994	166.581	0.0001[**]

Note: $R^2 = 0.989$, Adj. $R^2 = 0.989$, [**] $p < 0.01$

H2: Organizational environment has a significant relationship with innovation.

Based on 117 academicians, the following results were recorded. A linear regression analysis was used to evaluate the effect of the organizational environment on the innovation. Table (19) shows the result which indicates the two variables were significant associated; $R^2 = 0.007$, Adj. $R^2 = 0.004$, and F (1,115) = 2.104. Therefore, regression equation can be developed in this context, so accept this Hypothesis.

Table (20) - Measuring degree of association between Organizational environment on Innovation using Simple Linear Regression

	F(1,115)	B	SE B	Beta	T	*p*
Outcome: **Innovation** Predictor: **Organizational environment**	2.104	0.020	0.014	0.082	1.450	0.0048[**]

Note: $R^2 = 0.007$, Adj. $R^2 = 0.004$, [**] $p > 0.05$

H3: Empowerment have a Positive relationship with organization environment.

Based on 117 academicians, the following results were recorded. A linear regression analysis was used to evaluate the effect of the empowerment on the organization environment. Table (20) shows the result which indicates the two variables were positively and strongly associated; $R^2 = 0.941$, Adj. $R^2 = 0.941$, and F (1,115) = 5015.595, p < 0.01. This R^2 means 94% of the variance in the organization environment is explained by the empowerment. Approximately 94% of the variance of the organizational environment is accounted for by its linear relationship with the empowerment. The regression equation for predicting the innovation capabilities:

Regression Equation (y) = a + bx + e

organizational environment = 0.176 + 0.981 (empowerment) + e

Table (21) - Measuring degree of association between Empowerment on Organizational Environment using Simple Linear Regression

	F(1,115)	B	SE B	Beta	T	p
Outcome: **Organizational Environment** Predictor: **Empowerment**	5015.595	0.981	0.014	0.970	70.821	0.0001[**]

Note: $R^2 = 0.941$, Adj. $R^2 = 0.941$, [**]p < 0.01

H4: Empowerment, Organizational environment, Innovation

$R^2 = 0.027$ b=0.196 F(1,115)= 12.058   T(115)=1.434 P<0.001

$R^2 = 0.114$ b=0.369 F(2,114)= 14.619 T(114)= 2.648 P<0.000

R^2 change 0.9

R^2 increase but b value increase but it is significant it means Full moderator

Therefore, Organizational environment moderate the relationship between the empowerment and the innovation. However, the results show the Organizational environment mediate fully the relationship between the empowerment and the innovation.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This chapter is the analytical and theoretical conclusion of the current study for the positive and negative relations whether significant or not in addition to the recommendations and suggestions.

5.1 Conclusions
5.1.1 Theoretical Part

Analyzing empowerment and innovation philosophies as humanitarian philosophies is indispensable and it is possible to present the following indicators:

1. Organizations that provide the environment encouraging innovation are provided with certain features providing suitable atmosphere for activating innovation while those following inflexible rules and procedures in addition to strict control systems are unable to encourage innovation.

2. Empowerment strategy indicates the adoption of non-centrality as a mean and method by the top management but this will need additional efforts to ensure the successful application for administrative practice including the creation of additional learning opportunities through qualifying those empowered to enable them for using the power efficiently.

3. Adopting empowerment strategy contribute in dealing with human resources as organization resources to achieve its goals through efficiently enhancing administrative and technical operations. Empowerment free those empowered and increase their trust making innovation as their goal in contrast to severe centrality and traditional patterns in management and supervision.

4. Empowerment is one of the criteria contributing in raising achievement levels. Empowerment was a limited concept dealt with by the management. Empowerment could have some philosophical implications for management by goals or by participation but the concept is expanded to include decision

making at all the administrative levels away from bureaucratic contexts or the so called ordering management.

5. Relating empowerment and innovation is justified. Empowerment as a strategy means providing administrative leaderships at all levels with the abilities allowing them to behave independently and freely in the situations they face. In addition, management is supported and encouraged to release the innovative individuals powers.

6. Empowerment, as presented in the literature, seems to be like dynamic balance among contributions presented by the individuals in the form of abilities, experiences, values and positive conditions parallel with the rewards presented by the organizations for them. Empowerment seems to expand the organizations demands for what is needed by the individuals in raising performance and at the same time expanding the employees demands concerning their independence and expressing themselves.

7. The reason behind concluding this in the current study is that organizations look at the individuals as sources that should be invested to realize their aims. These organizations are willing for the individual's cooperation and the last are willing to confirm their rights in selecting the suitable way to do jobs. Empowerment represent the mechanism for raising integration between the managements and the individuals at all levels through presenting approaches making them more able to have responsibilities and all this will encourage self discipline inside the organization.

5.1.2 Empirical Part

1. Statistical analysis results indicated three levels of empowerment, the high, the medium and the low, and there were significant differences among them. Results also indicated the majority of the study sample trends towards high empowerment in the first place, then the medium and low rates towards low empowerment. These results agreed with the pilot study for the same sample indicating that scientific leaderships have qualifications similar with the leaderships roles to achieve the goals of their colleges. They are able to

motivate their goals and have the necessary knowledge for passing performance problems. The only variance in the disagreement for after independence and freedom results among the results of both the pilot and the empirical studies. Pilot study results showed no independence and freedom for the study sample while the empirical study showed a different trend in dealing with this dimension. This is proved by high empowerment indicators for the study sample and such problems are due to inaccuracy in using questionnaires in behavioral studies.

2. Statistical tests results showed significant difference among the four groups of the scientific leaderships. University board group was the first as related to empowerment levels, then heads of departments, followed by heads of units and lastly deans assistants. This verifies the four hypotheses but with (90%) because of some insignificant differences between heads of departments and heads of units groups due to the similar activities for both these groups. University board trend towards high empowerment indicated that most of the decisions, including the strategy, are made by the university board while the usual decisions are made by deans of colleges and need no previous approvals. Accordingly, deans of colleges are independent to manage their colleges affairs according to the existing instructions and the only exception is not using some of the authorities for reasons that are rather professional.

3. Results showed no significant difference among the examined groups for the empowerment three factors, information, independence and knowledge despite a certain probability towards knowledge that took the first place, followed by information then independence. These results explain the importance of the three factors in the success of empowerment, indicating the individuals needs for knowledge, information and independence to make decisions.

4. Statistical analysis testing the relation among the three groups of empowerments, the high, the medium and the low, and its three factors, information, independence and knowledge, showed significant differences.

High levels selected knowledge in the first place with significant differences with independence and information and no such differences between independence and information. Medium levels selected information as priority with significant differences with knowledge but not with independence while those with low levels had trends towards information with significant differences with knowledge but not with independence. This agrees with the seventh hypothesis with (90%) because of some of the insignificant relations confirming these results:

  a. The need for the medium empowered individuals for more information and independence to have their roles better in the empowerment environment. This will in turn enhance innovation in the examined field.

  b. The need for the low empowered individuals for independence and information, in particular deans assistants, to activate their roles towards positive trends.

5. Scientific research as a private individual innovation recorded the highest product presented by the scientific leaders followed by supervision, then certificates and at writing at last. These results show the following indictors:

  a. There is some kind of scientific competition in making and publishing researches among the study sample.

  b. There are material and significant facilities available for making and publishing researches.

  c. The scientific research activities are related with scientific promotions resulting in more material and significant indicators.

6. Results of X^2 tests for measuring the relation between empowerment as decision variable and organizational innovation as a target variable showed a positive significant relation with (0.05) between the two variables. This statistical relation has logical significances indicating the roles of leaders, in particular those highly empowered, to encourage and enhance university innovation. Empowerment starts at the administrative peak depending on the

administrative leadership satisfaction with the abilities of the university staff to present innovation.

7. Statistical results showed no significant results among factors of the organizational environment as a decision variable and empowerment factors as a target variable. This is the same in measuring the mutual relation between them in addition to the negative results shown by the statistical tests among factors and organizational environment and innovation. This could indicate the possibility of presenting some innovative works by the scientific leaders with individual motivations governed by materialistic motives not subjected directly to the effects of the organizational factors.

5.2 Recommendations

Empirical conclusions indicate the possibility of activating and enhancing innovation when university leaderships adopt empowerment strategy. Recommendations and suggestions could have their impact in activating innovative activities as follows:

1. Establishing training courses to qualify the scientific leaders at the university and such courses deal with the contemporary administrative approaches.

2. Selecting the scientific leaders according to certain features based on experience, skills values according to Ability to authorize, Trust in others, Giving the others abilities within empowerment philosophy, Ability to oblige the others, Abilities of clarifying roles and responsibilities, Rewards initiatives, Encourage and having responsibilities, Faith in innovation as a higher value in the organization life.

3. Despite the high levels shown by the statistical analysis of empowerment, the high levels of medium empowerment and the less of low empowerment entails the attention of the university administrative to activate mechanisms enhancing the increase of empowerment levels. Thus, scientific leaderships will be more able to behave in the situations they are facing through having independence in practicing activities.

4. The four scientific leaderships groups showed a variance in the levels of empowerment. The university boards tended for high empowerment in

comparison with other groups in particular the deans assistant group where their response was the lowest. These results confirm that the university units are not benefiting the potential powers for these groups the current study recommend to activate the role of the deans assistant giving and enabling them to perform their roles more efficiently through adopting the following mechanisms:

    a. Redistribution of the deans assistant structure as follows:

  i. Dean assistant for scientific and affairs and higher studies.

  ii. Dean assistant for administrative and financial affairs.

    b. Reappointing the college register to be in charge for the students affairs connected directly with college dean. This will make the deans more free to establish and develop the strategies for their colleges.

5. The need for those groups recording medium empowerment to have information and in order to enhance levels of empowerment there is a need for information availability about the university goals and strategies. Thus, it is recommended to establish an integrated information system using the available developed techniques. The proposed system is an internal information system among the university units, like the intranet.

6. It is recommended that researchers and higher studies students be called to test the measures prepared in this study in various organizational environments and in all sectors to reveal its efficiency.

7. In order to enhance innovative activities in Duhok University and encourage empowerment factors, the current study recommends the following:

    a. Giving the technical and administrative staff the freedom to make decisions within certain agreed limits to reduce the procedures hindering innovative activity.

    b. Rewarding the employees for each activity contributing in realizing the university goals in particular the innovative activities.

    c. Abandoning direct control method and allowing the administrative leaderships at all levels to work independently.

d. Helping the administrative scientific administrations in enhancing the potential powers for the employees through providing learning opportunities to possess more experiences and skills and then enhancing knowledge possession chances.

5.3. General Suggestions

1. The pilot study and the personal interviews at all the colleges indicated the absence of specialized units for encouraging innovation due to the absence of certain item concerned with innovation at the university budget. Most of those surveyed agreed on not spreading the instructions concerned with innovation. Thus, there is a need for the following:

   a. Establishing a certain unit under the title Department of Innovation and Invention.

   b. Establishing certain units for innovation at all the colleges to be related administratively with the Department of Innovation and Invention.

   c. The Department of Innovation and Invention activities include:

   i. Various activities not restricted to their place limits at the university to move into the private business environment and general sector at all the organizations including the industrial and the service to:

      1. Present the available innovative abilities in the university to make contracts.

      2. Present various kinds of help for the innovative in particular in the administrative field.

      3. Present and explain laws and regulations through various mechanisms including periodicals, conferences and database.

      4. Have the role of mediator among the innovative and their innovative works and the sides to encourage innovation.

      5. Maintain the innovative rights and establish legal contracts to ensure the financial rights.

6. Issue a scientific periodical concerned with innovative activities in the university to be widely distributed.

7. Supervise the rewarding of innovative works according to certain rituals enhancing the researchers trend for innovation.

8. Supervise the evaluation of innovative works through forming special committees to reward the innovative.

2. There is a weak response for the scientific leader to respond to applying the theories empirically. This could be a result not understanding the contemporary administrative approaches by the scientific leaders. Thus, the current study recommends the following:

5.4. Future Projects

1. Examining the strategies adopted by the Iraqi educational institutes including cooperation mechanisms and higher education fund as contemporary mechanisms invented by the Iraqis. This will enhance the positive aspects of such strategies to evoke and encourage the innovative activities in the educational institutes.

2. Deeply examining empowerment and mechanisms of application to reveal how it could be successful in other sectors, in particular the service and the goods.

3. examining employee enlistment that integrates with the empowerment concept to see whether it could be applied in our organizations.

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APPENDIX (1)

QUESTIONNAIRE FORM

Personal Characters of the Scientific Leader:

1. Scientific leader is any member of the teaching staff at Duhok University having a scientific position at any of the university departments and colleges. The scientific pyramid consists of the following titles: president of university, assistant president of the university, deans of colleges, assistants of deans, heads of scientific departments and units.

2. Current position: Date:

3. Scientific title: Date:

4. Scientific qualification: Date:

5. General specialization:

6. Accurate specialization:

7. Last degree side:

8. Total service years at college:

9. Total service years at university:

10. Date of current position occupation:

11. Age:

12. Marital status:

13. Gender:

Innovative Works:

Innovative works refer to an invention, creation, development, administrative method or practices in the university within the pure science, applied and humanitarian fields whether in medicine, agriculture, industry, services, architecture, arts, sports etc. providing that they are genuine and formally documented in addition to their economic and social benefits.

a. General innovative works for the scientific leader:

1. Have you ever presented innovative works according to the previous definition?
   Yes (   ) No (   )

2. In case the answer is Yes, what are the titles of the innovative works:

   (   )

   (   )

   (   )

3. In which of the fields your innovative work is classified:

   Scientific (   ), Technological (   ), Medical (   ),

   Agricultural (   ), Engineering (   ),   Industrial

   (   ), Humanitarian (   ), Others (   )

4. The sides benefiting your innovative work:

   (   )

5. Rewards and prizes:

   (   )

6. A brief review of your innovative work.

7. In which of the classes your innovative work is classified after evaluation.

   Strategic (   ), important (   ), useful (   )

b. Private innovative works for the scientific leader:

1. Scientific research. It is the scientific theoretical or applied product prepared according to the scientific research approaches published in an Iraqi or foreign scientific periodical.

   - Number of published researches:

     inside the country (   )

     outside the country (   )

- Evaluation of the published scientific researches: genuine

    (   ), valuable (   ), useful (   )

- Type of the published researches: applied (   ), basic

    (   )

2. Writing and translation:

- Number of the written books (   )

- Type of the written books: textbooks (   ), specialized

    (   ), general (   )

- Number of the translated books (   )

- Type of the translated books: textbooks (   ), specialized (   ),

    general (   )

3. Scientific rewards:

title	side	date	reasons

4. Certificates

type	side	date	reasons

5. Supervising higher studies:

    Diploma ( ), Master, (   ), Doctoral (   )

c. Innovative works for the organization led by the scientific leader:

No.	Type	Field	Side	review

Innovative Works:

Innovative works refer to an invention, creation, development, administrative method or practices in the university within the pure science, applied and humanitarian fields whether in medicine, agriculture, industry, services, architecture, arts, sports etc. providing that they are genuine and formally documented in addition to their economic and social benefits.

A. Innovation is understood according to various forms. In your opinion, could innovation includes the following? (put (✓) to your answer)

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
1. Making innovation leads to new horizons						
2. Applicable invention leads to production development.						
3. Distinctive research contributes innovatively in scientific fields						
4. Distinctive research contributes innovatively in humanitarian fields						
5. Starting new administrative methods promotes performance, decrease cost or time						

B. After reviewing the general significance of innovation, as mentioned in (a) above, in your opinion is innovation in the university has its own features to include the following: (put (✓) to your answer)

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
1. Achieving high success rates						
2. Achieving qualitative weight of success						
3. Achieving educational goals						
4. Opening new scientific units						
5. Preparing new scientific approaches						
6. Adopting new teaching methods						
7. Applying new teaching methods						
8. Positively interacting with the society						
9. Achieving large returns						
10. Establishing common projects with other sectors						

a. In your opinion, where dose innovation lie?

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
1. pure science (chemistry, mathematics, etc)						
2. applied sciences (agriculture, administration, etc)						
3. humanitarian sciences (arts, etc.)						

b. What is the impact of innovation resources for the scientific leader in the university

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
1. having skills in works						
2. able to innovation thinking						
3. possessing experience						
4. having high scientific qualification						
5. having high scientific title						
6. having empirical possibilities to apply theories						
7. having the desire for innovation						

Measuring Empowerment:

Empowerment indicates the strategy adopted by the organizations for realizing the competitive and strategic performance in the foreign environments. Such strategy gives the administrative leaderships at all the levels the opportunity to make decisions concerning the problems without referring to high levels.

Below are some items measuring your empowerment in your job. Put (✓) beside your answer.

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
a. Information availability						
1. Able to access information						
2. Information available for my questions						
3. I have enough techniques to obtain and exchange information						
4. It is easy to obtain the necessary information						
5. My employees are aware of my information						
6. I believe that hiding information has negative impacts						
7. I believe that disclosing information enhance the employees trust						
8. I believe in the employees abilities to have responsibilities						
9. My organization makes more responsible when accessing information						
10. My employees are unable to have responsibility without information						
11. Various communication channels are available						
12. I make use of all the available						

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
communications in the organization						
b. Limited Independence						
13. I am fully aware of the strategic vision of the organization						
14. I have enough information about the organization goals						
15. I contribute in making strategies for realizing my organization goals						
16. I am free to make activities that achieve my organization strategies						
17. I feel free to discuss my ideas with the top management						
18. I have authorities to correct mistakes without referring to top management						
19. I could make suggestions clearly and freely						
20. I am independent in making decisions without prior approvals						
21. I have clear view of my freedom in making decisions						
22. I believe in the clear view that leads to the correct way						
23. I give individuals the independence						
24. I give the individuals the guiding lines to help them in making decisions						
25. I put guiding lines to ensure correct direction for powers						
26. I believe that direct control limits the individuals abilities for innovation						

Items	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
Response alternatives						
	5	4	3	2	1	0
27. Adopting self control enhance high performance opportunities						

Empowered and Innovative Environment:

This indicates the organizational medium where organizational factors are dominant encouraging innovation and making the innovative empowered and able to achieve the organization goals.

Items	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
Response alternatives						
	5	4	3	2	1	0
a. Organizational Culture						
1. Top management make us feel of common values and satisfactions						
2. Certain rituals are adopted in the organization for rewarding innovation						
3. I feel that values at the organization are incompatible with mine						
4. Top management deals with individuals as valuable source						
5. Top management at all levels depend on forming high ethical criteria						
6. Top management at the organization is committed to job ethics						
7. Mutual significant climate is governing the organization						
8. Top management is aiming at integrity at main priority						

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
9. Top management could pass professional criteria						
10. Top management is making all the individuals familiar with the organization rules						
11. Management discloses the financial center for everyone						
12. To management make all the rules and regulation clear						
13. Organization management could make moderate aims for reaching high degree of performance assessment						
14. Organization management is not using the organization vehicles for personal purposes						
b. Pattern of Leadership						
15. Top management is continuously clarifying the strategic trend of the organization						
16. Top management is encouraging individuals participation in decision making						
17. Top management is clarifying all the expectations concerned with goals and tasks						
18. Top management is continuously working hard for solve conflicts						
19. Top management is the facilitator for achieving organizational goals						
20. Top management is adopting the role of trainer in teaching the individuals the new skills						

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
21. Top management is adopting the coordinator role for efforts to achieve the organizational goals						
22. Top management is encouraging individuals for creative thinking						
23. Top management is focusing on tasks and how they are done						
24. Top management is formally dealing						
25. Top management is not concerned with the personal life of the employees						
26. Top management is directing the employees to what should be done in the organization						
27. Top management is directing the employees to what should not be done in the organization						
28. Top management believes that all the individuals have leadership behaviors						
c. Organizational Facilities						
29. There are enough resources for innovation in the organization						
30. There are enough financial resources for aiming at innovative ideas						
31. Finance deficiency for innovative ideas the problem in this organization						
32. Lack of staff is among the important factors in hindering the organization from applying innovative ideas						

Items	Response alternatives					
	strictly agree	agree	rather agree	rather disagree	disagree	strictly disagree
	5	4	3	2	1	0
33. Rewards system adopted encourages innovation						
34. Rewards system provides earnings only for those not opposing management						
35. Management is continuously concerned with innovative individuals						
36. Organization management is giving enough time for innovative ideas						
37. Financial facilities are available for developing new ideas						
38. Innovation is supported and encouraged in this organization						
39. Being able for innovative work is not encouraged by the management						
40. Organization is dominant by a climate for investing ideas						

APPENDIX (2)

<u>Internal consistency of the variables of the study</u>

Table (1) - Responders views concerning forms of innovation

	X1	X2	X3	X4	X5
X2	0.258*				
X3	0.247*	0.460*			
X4	0.452*	0.260*	0.058*		
X5	0.072*	0.299*	0.409*	0.774*	
X6	0.447*	0.283*	0.354*	0.431*	0.213*

Table (2) - Scientific leaderships responses concerning indicators of innovation in the university

	X7	X8	X9	X10	X11	X12	X13	X14
X8	0.444*							
X9	0.626*	0.571*						
X10	0.544*	0.542*	0.503*					
X11	0.620*	0.440*	0.562*	0.588*				
X12	0.594*	0.574*	0.630*	0.537*	0.516*			
X13	0.554*	0.388*	0.471*	0.411*	0.499*	0.506*		
X14	0.440*	0.630*	0.537*	0.452*	0.260*	0.058*	0.450*	
X15	0.072*	0.599*	0.409*	0.572*	0.774*	0.774*	0.440*	0.540*

Table (3) - scientific leaderships views concerning potentials of innovation according to scientific specializations

	X16	X17	X18
X17	0.418*	0.370*	0.350*
X18	0.478*	0.514*	0.553*
X19	0.454*	0.486*	0.470*

Table (4) - Scientific leaderships views concerning sources of innovation

	X19	X20	X21	X22	X23	X24
X20	0.279*	0.256*				
X21	0.415*	0.530*	0.433*			
X22	0.579*	0.350*	0.448*	0.438*		
X23	0.615*	0.306*	0.279*	0.274*	0.362*	
X24	0.679*	0.453*	0.315*	0.275*	0.488*	0.358*
X25	0.306*	0.279*	0.274*	0.362*	0.306*	0.279*

Table (5) - Indicators of measuring empowerment for scientific leaderships in the university

	X26	X27	X28	X29	X30	X31	X32
X27	0.671*						
X28	0.492*	0.595*					
X29	0.536*	0.597*	0.558*				
X30	0.542*	0.519*	0.706*	0.453*			
X31	0.513*	0.541*	0.678*	0.538*	0.634*		
X32	0.599*	0.488*	0.520*	0.427*	0.617*	0.560*	
X33	0.354*	0.499*	0.594*	0.486*	0.510*	0.623*	0.552*

APPENDIX (3)

<u>Variables Descriptive</u>

Table (1) - Frequencies, Mean and Standard Deviation for Variables of Study

	F	%	F	%	F	%	F	%	F	%	Mean	SD
x1	78	66.667	24	20.513	8	6.838	3	2.564	4	3.419	4.19	1.08
x2	58	49.573	26	22.222	25	21.368	3	2.564	5	4.274	3.7	1.1
x3	61	52.137	26	22.222	17	14.530	11	9.402	2	1.709	3.75	1.11
x4	75	64.103	28	23.932	11	9.402	1	0.855	2	1.709	4.24	0.91
x5	55	47.009	17	14.530	15	12.821	25	21.368	5	4.274	3.24	1.28
x6	74	63.248	29	24.786	10	8.547	2	1.709	2	1.709	4.22	0.93
x7	64	54.701	38	32.479	12	10.256	1	0.855	2	1.709	4.09	0.87
x8	68	58.120	36	30.769	11	9.402	0	0.000	2	1.709	4.18	0.85
x9	78	66.667	27	23.077	10	8.547	0	0.000	2	1.709	4.32	0.87
x10	68	58.120	32	27.350	15	12.821	0	0.000	2	1.709	4.13	0.89
x11	62	52.991	40	34.188	12	10.256	1	0.855	2	1.709	4.07	0.86
x12	78	66.667	27	23.077	9	7.692	1	0.855	2	1.709	4.3	0.9
x13	65	55.556	37	31.624	12	10.256	1	0.855	2	1.709	4.11	0.88
x14	72	61.538	34	29.060	7	5.983	2	1.709	2	1.709	4.23	0.89
x15	80	68.376	25	21.368	9	7.692	1	0.855	2	1.709	4.33	0.9
x16	67	57.265	40	34.188	5	4.274	3	2.564	2	1.709	4.17	0.89
x17	75	64.103	24	20.513	13	11.111	2	1.709	3	2.564	4.16	1.03
x18	70	59.829	31	26.496	12	10.256	2	1.709	2	1.709	4.14	0.93
x19	72	61.538	31	26.496	8	6.838	4	3.419	2	1.709	4.17	0.97
x20	57	48.718	33	28.205	19	16.239	5	4.274	3	2.564	3.79	1.02
x21	70	59.829	28	23.932	10	8.547	5	4.274	4	3.419	4.02	1.11

x22	64	54.701	31	26.496	19	16.239	1	0.855	2	1.709	4.01	0.92
x23	64	54.701	37	31.624	13	11.111	0	0.000	3	2.564	4.07	0.91
x24	67	57.265	35	29.915	13	11.111	1	0.855	1	0.855	4.16	0.82
x25	49	41.880	26	22.222	23	19.658	15	12.821	4	3.419	3.35	1.11
x26	63	53.846	42	35.897	7	5.983	2	1.709	3	2.564	4.08	0.92
x27	72	61.538	35	29.915	5	4.274	3	2.564	2	1.709	4.23	0.91
x28	64	54.701	39	33.333	9	7.692	2	1.709	3	2.564	4.07	0.94
x29	74	63.248	25	21.368	12	10.256	4	3.419	2	1.709	4.14	1.01
x30	71	60.684	32	27.350	10	8.547	1	0.855	3	2.564	4.17	0.95
x31	70	59.829	31	26.496	12	10.256	2	1.709	2	1.709	4.14	0.93
x32	72	61.538	31	26.496	8	6.838	4	3.419	2	1.709	4.17	0.97
x33	57	48.718	33	28.205	19	16.239	5	4.274	3	2.564	3.79	1.02
x34	57	48.718	33	28.205	19	16.239	5	4.274	3	2.564	3.79	1.02
x35	78	66.667	27	23.077	9	7.692	1	0.855	2	1.709	4.3	0.9
x36	62	52.991	40	34.188	12	10.256	1	0.855	2	1.709	4.07	0.86
x37	78	66.667	27	23.077	9	7.692	1	0.855	2	1.709	4.3	0.9
x38	61	52.137	26	22.222	17	14.530	11	9.402	2	1.709	3.75	1.11
x39	72	61.538	35	29.915	5	4.274	3	2.564	2	1.709	4.23	0.91
x40	67	57.265	35	29.915	13	11.111	1	0.855	1	0.855	4.16	0.82

APPENDIX (4)

Table (1) - The Abbreviations of the Study

CEE	Central And Eastern Europe
UOD	University of Duhok
ES	Empowerment Strategy
OE	Organizational Environment
IN	Innovation
SD	Standard Deviation
M	Mean
F	Frequencies
B	Beta
T	T-Test

APPENDIX (5)

ÖZGEÇMİŞ

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YABANCI DİL BİLGİSİ

İngilizce	KPDS (…..) ÜDS (….) TOEFL (….) EILTS (….)
…	Ingilizce Dilinde kurs

İŞ DENEYİMİ

Çalıştığı Kurum	
Görevi/Pozisyonu	
Tecrübe Süresi	

KATILDIĞI

Kurslar	
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