



اعمال البناء عالية المخاطر التي يمكن أن تؤثر على البيئة الداخلية والخارجية للمشرع. ومن الحقائق أيضًا أن أعمال البناء لها مساهمة كبيرة في الأنشطة الاقتصادية. يمكن تغطية مخاطر التأمين بمجرد بدء المشروع في المرحلة الأولية, يقوم معظم المقاولين بتغطية المشروع مستعلمة الأولية, يقوم معظم المقاولين بتغطية المشروع مستعلمة المشروع في المرحلة الأولية, يقوم معظم المقاولين بتغطية المشروع مستعلمات السلامة من أجل تحمل الحد الأدنى من الخسائر والبعض لا يفكرون في ذلك مما يتسبب في ارتفاع التكلفة والحوادث في كثير من الأحيان. الهدف من أجل تحمل الحد الأدنى من الخسائر والبعض لا يفكرون في ذلك مما يتسبب في ارتفاع التكلفة والحوادث في كثير من الأحيان. الهدف من الدراسة هو استكشاف تطبيق التأمين في صناعة البناء في العراق ولهذا اختار الباحث الطريقة النوعية لإجراء الدراسة. تشير نتائج الدراسة إلى أن المقاولين الذين يعملون في العراق ليس لديهم ما يكفي من المعرفة والخبرة ، كذلك ليس لديهم أي معيار الدراسة. تشير نتائج الدراسة إلى أن المقاولين الذين يعملون في العراق ليس لديهم ما يكفي من المعرفة والخبرة ، كذلك ليس لديهم أي معيار الدراسة. الهدف الذين يعملون في العراق ليس لديهم ما يكفي من المعرفة والخبرة ، كذلك ليس لديهم أي معيار الدراسة. تشير نتائج الدراسة إلى أن المقاولين الذين يعملون في العراق ليس لديهم ما يكفي من المعرفة والخبرة ، كذلك ليس لديهم أي معيار أو تشريع أو أي هيئة إدارية التي من الممكن ان يتخذها المقاولون كمرجع لهم لتطيق مبدا التأمين. حيث لا تقدم شركات التأمين خدمات ممكن أن تساعد المقاولين على استخدامها من أجل التغطية وتأمين مخاطرهم.

#### Abstract:

Construction industry is the highly risky business that can impact upon the environment as well which revolves around the risk and uncertainty. It is also a fact that construction industry is having high contribution in the economic activities and highly relies upon the developing countries. Insurance risk can be covered once the project is started in the initial stage the risk cannot be admissible because of the lack of complete analysis of real risk and threat that the project can encounter. The aim of the study is to explore the application of insurance in the construction industry in the context of Iraq and for that researcher has selected the qualitative method to conduct the study. The results of the study suggested that contractors that are operating in Iraq are not having enough knowledge and expertise that can help the industry in the long to contribute in the country's economy. The other feature is the government; they are not having any standard or legislation or any governing body to control and measures the steps that are being taken by the contractors to build the infrastructure for the country. Keywords: Insurance policy, construction industry, Iraq, risk, legislation, project quality

#### **Introduction:**

Internationally construction is considered as the most risky business and somehow it is correct due to the lack of protection and lack of systematic approaches can cause the whole project risky and can cause the loss of humans. However; it is also a fact that construction industry is having high contribution in the economic activities and highly relies upon the developing countries (Ryu et al, 2016). Investment in the construction industry is being increased due to the socioeconomic development features in the society. The figures of Iraq suggest that it contributes 13% in the GDP to the economy and government is focusing upon it because of lack of infrastructure and resources to develop the living resources for the people of country adequately (Keshk et al, 2018). Government is having their intentions to revive the social life and roads to link the cities and encourage people to people contact considerably. Project management is having the part of risk management in order to protect the project from any potential threat or risk that can damage the overall investment. Risk is being defined as the presumable assessment of occurrence that is not according to the project goals and that risk can be tangible or intangible as well (Gupta and Thakkur, 2018). Risk can be categorized into three features that are: genetic risk, catastrophic risk and operational risk. Genetic risk considered as the risk that is in the activities that can restrict the construction operations or diseases. Catastrophic risk can be considered as the severe situations or events or accidents such as earthquake, floods, storms and others that can disrupt the internationally. Operational risk is directly associated and impactful on the operations of the construction; that can be market value, income, goodwill of the company, people and activities, assets and others (Hwang et al, 2014). There are large number of operational risk that can impact upon the construction industry and business which considered highly risky as well.Construction industry is the highly risky business that can impact upon the environment as well which revolves around the risk and uncertainty. The most influential risk for the construction project is the operational risk (Liao and Chiang, 2015). The nature of the construction project is having characteristics that impact adversely upon the business and overall performance of the construction industry. Operational risks are directly impact upon the labors, staff of the projects and threatened for their lives that increase the cost of the project along with the social cost of the country as well. It is suggested by the statistics that in the construction the total misc cost of labors or incidents are recorded about 4% of GNP in a country (Alferado et al 2014). In the risk management is it important that transferring the risk is highly effective and beneficial to secure the project it does not associated with the industry or construction only. In order to





manage the risk insurance is the secure player that provides the relaxation and satisfaction to the owner to secure their project by insuring the project adequately (Surminski and Oramas, 2014). In the case of insurance; financial risk is being secured and managed considerably. Insurance companies offer five types of risk that can be secured through it: contractors risk insurance, liability insurance, labor compensation insurance, vehicle insurance and sea transport insurance are the main head of insurance for the business and for the construction industry. It is suggested that risk is highly prevailing in the projects so therefore; contractors are managing it and expect that owner should pay the damages or cost that incurred in the project admissibly (Sehat and Alavi, 2010). In the context of construction risk the debate is a challenge for the contractors to manage and secure the project. The main objectives of the construction process are the time, cost and quality of the project that can cause the risk and threats if they are not being met accordingly. Insurance in the construction is a lay off in which claim is being made to get a fixed amount in order to prevent the loss of cost in order to secure the interest of the involved parties in the project. Insurance risk can be covered once the project is started in the initial stage the risk cannot be admissible because of the lack of complete analysis of real risk and threat that the project can encounter (Eshteharadian et al, 2010). In the contractors all risk the compensation of the labor insurance is being achieved by the contractors in the construction operations. The benefit of the contractor all risk is that it covers the entire labor work, machinery and even the third party work associated to construction as well. Some contractors separate the insurance of equipment and machinery in order to manage the risk efficiently and for the purpose of identifying the risk to minimize it. Insurance provide help to the contractors in the construction project to transfer or minimize the risk to obtain the insurance and get the best coverage for the project (Mohammad, 2016). Most of the contractors are covering the project with the safety requirement in order to bear the minimum loss and some are not considering it which cause the high cost and incidents are more often. The purpose of the study is to make aware about the risk application in the construction industry to avoid and manage the risk adequately in the context of Iraq.

#### **Literature Review:**

This section of the study includes the illustration of the selected topics and defining the different concepts that are associated with the insurance application in the construction industry or related to the construction projects with the help of previous research work or theories.

#### **Concept of Construction Insurance Policy:**

This policy is designed in accordance with the construction project in order to secure their risk through financial means and reduce their cost burden due to any risk that can damage the reputation or the operational activities of the contractors. It is indeed necessary that contractor should obtain such insurance policy to facilitate their procurement of risk and managing the risk adequately (Awss, 2019). This includes the machinery, compensation of the labor, equipment and others to reduce the risk of the operations. The benefit of the insurance policy is to maintain the interest of the contractor's property which is duly accepted by the project owner. This policy covers the overall construction project or the cost of the decoration of the project (William et al, 1998).Construction risk insurance can be considered as the course of construction, construction all risk and contractors insurance risk as well; it is mainly associated with the overall structure of the building design that can also be the repairmen or furnishing the part of the building to reduce the cost that is being occurred due to the construction operations in the given time period. The insurance in the construction is involves or cover the machinery, equipment, fixtures and other appliances that is being used to complete the project in the construction (Liu, J. and Flanagan, 2005). The purpose of the risk insurance policy is to provide the maximum comfort to the contractor to reduce the risk in the operations and secure the property as well. Insurance coverage can be increased with the mutual consent of the contractors and the insurance providers by amending the insurance policy adequately. The additional induction of the insurance coverage can be made such as: boiler and machinery, sea transportation, construction equipment, tools of the employees, liabilities and others (Tah and Carr, 2001).

#### **Coverage of Construction Risk Insurance:**

The construction risk insurance policy includes the name of the owner or contractor and the name of insurance provider; the names of the parties are considered as the Named insured; the other persons can be the part of the insurance policy because the construction risk is high in the project (Keshk et al, 2018). The insurance policy is categorized as the generic or the named insurance of the project. The insurance coverage can be increased that can be included such as: supplies, material and property on the site or the overall structure of the construction project. Material can be insured only when they are in transit or





moving from one location to another. Every risk policy includes the possible risk that can be occurred during the construction operations and can be excluded with the mutual consent of both the parties (Gupta and Thakkar, 2018). The most features that are being covered in the risk insurance policy are: fire, explosion, natural hazards, theft, demolishing of structure, mobs destruction and others. Features that are no covered or excluded from the risk insurance policy are: ineffective design, defected material, imbedded defect in machinery, wear and tear in the building and others.

#### **Challenges of Construction Industry:**

In the Iraqi context the government is focusing upon the revival of construction market there is a high potential in the market to boost the economy of the country and provide some effective measures for the government to develop relations with the contractors to bring positivity and investment in the construction market (Hwang et al, 2014). The war has given ample loss which reduces the margin of the growth but derail the economic stability considerably which withdrawn the local and foreign investors their investment from the country. However; current initiatives taken by the government is for the betterment of the economy and development of the industries to make them effective and efficient to help them in building the infrastructure adequately. The lack of professionalism reduces the margin of efficiency and adequacy in developing the best infrastructure for the society and for the country as well therefore; it is also considered that construction industry is having high risk (Liao and Chiang, 2015). The lack of awareness about the risk and assessment of risk did not undertaken in the project proposal therefore; site or project cost increases considerably. In Iraq construction companies are reluctant to enter in the market because of lack of financial stability and lack of economic growth; therefore; risk become evident and high in the construction market (Jiayuan and Hongping, 2011). Most of the skilled and professionals contractors have left the country to get the better opportunity in the different parts of the world; which impact adversely on the resources of the current marketThere are few highlights or biggest challenges remain in the construction industry that is as follows:

**Knowledge:** in the construction lack of knowledge is the biggest challenge and risk for the industry because it reduces the chances of getting quality and safe infrastructure for the people of society (Tah and Carr, 2001). The management of risk is based upon the experience and professional diligence that comes through the knowledge of the related industry practices and handling the issues adequately. The contractors are not having any experience or knowledge to reduce their financial risk through the insurance coverage. Currently locals contractors are in the market and with the approach of lack of technology and behavior make the difficulty for the owners and other people for the society as well. Therefore; it is considered that insurance companies and risk management awareness should be placed on priority and it is the obligation of the government to introduce and encourage intentional insurance companies to obtain insurance coverage and secure their risk considerably (Sehat and Alavi, 2010).

Attitude: contractors are not having professional attitude towards the risk that exist in the market and operational activities. However; government is supporting the contractors for the financial resources to ensure in building the society and infrastructure adequately (Alferado et al, 2014). Government is not responsible for the project and contractors also do not own the responsibility that does not provide the luxury of accountability. Risk is not been adequate and assessment is not effective which cost them loss in the infrastructure and clients did not get satisfaction. It is also suggested that contractors are not being motivated or given opportunity to avoid or transfer the risk in the construction project (Williams et al, 1998).

**Legal System:** As it is a fact that Iraq is having issues with the legislation and its implement because government initiatives are weak in order to have good governance in the country and its every corner of economy (Jiayuan and Hongping, 2011). Lack of legal system and laws did not encounter the local contractors to be in the line of law and jurisdiction. That has the impact upon the owners that they are not able to get the desired quality in the project. The lack of legal system did not able to standardize the construction contracts and operations. There is no monitoring body that controls the activities of the contractors should be in charge to manage the construction activities and should meet the standards that are developed for them to act upon (Mohammed, 2016).

**Construction Risk Insurance Market:** there is a lack of risk insurance market in the country and lack of awareness increases the vulnerability which causes the poor quality and high cost that is a burden upon the owner (Sehat and Alavi, 2010). There are many projects that are been stopped in the past because the risk has abundant the site and high cost did not allow the owner to continue the project for the future benefit. That involves high resources of finance and contractors also require financial resources to meet the targets



or deadline of the project. Therefore; it is indeed necessary that government should take the initiatives in the context of construction industry and encourage the insurance companies to offer the products and services to the contractors so they will be able to secure the project and manage the financial risk considerably (Liu, J. and Flanagan, 2005).

**Methodology:** The aim of the study is to explore the application of insurance in the construction industry in the context of Iraq and for that researcher has selected the qualitative method to conduct the study. It has allowed the researcher to conduct interviews with the contractors and get the responses on the discussed issue because Iraq is a country that is going through the phase of rehabilitation and reconstruction for that they are required to build infrastructure from the beginning (Keshk et al, 2018). The lack of awareness and approach to implement the risk insurance policy to control the cost and secure the project is effective. The selected sample size for the interview session is five contractors that are participating in the interview session to give their responses about the risk insurance policy of the construction industry of Iraq. The presentation of the data has been presented in the form of narrative statement that is having comparison with the previous theories and studies (Gupta and Thakkar, 2018). The selection of the contractors is selected on the basis of experience that is about 7 to 10 years in the construction market. In this way; it has given the different perspective and perception regarding risk management and insurance policy in the construction industry. Conducting interview provides the quality data and different other valuable added features that increase the viability of getting the accurate and practical information that facilitate the researcher to get the solution of the problem and propose the suggested options to bring the change in the construction industry. This study is in the context of Iraq and interview opinions are provided within the context of selected country; other countries results may differ from the current study because of environmental and conditional facts and figures.

#### **Results and Discussion:**

Interviews are conducted with the five randomly selected experienced contractors that are part of the construction industry in the Iraq. The participants have given their concerns and responses against the asked question which are mentioned in the below discussion:

#### **Status of Guidelines and Acceptance:**

Participants have given their responses that in Iraq there is a lack of guidelines and regulations about the construction industry. All fives participants were fully convinced and stated positively that there is no legislation and laws regarding the construction standards. Therefore; they have suggested that rules and regulation should be developed then it will be possible for the contractors to produce quality work and develop quality infrastructure to contribute towards the developing economy. Once the policies and regulations are developed about the construction work then it will be effective to change according to the need of the work and develop a complete course of action to urge the potential contractors to come into the market and contribute their best performance (Tah and Carr, 2001).

#### **Setting Guidelines:**

Participants has asked about the inducting the experts into the project; 3 participants gave positive response while 2 participants suggested that they are having enough experience to handle the issues and provide best opinion to complete the project. The two participants suggested that they assess the requirement of the required material and place the order to meet the desired deficiency of the work while on the other hand; three participants suggested that they have planned the procurement of material with the approval of the clients and experts; that are being stored in order to reduce the cost that can be impact upon the international market of foreign exchange (Awss, 2019). It is suggested that setting the guidelines in the construction industry will be effective and efficient to bring the every contract on the same page and use the standards to hire the professionals and experts to perform certain activities.

#### **Risk Management and Risk Insurance in Construction:**

Participants are asked about the risk management team on the construction site to assess the potential risk that impacts the productivity and quality of the project. All the five participants suggested negative response that they are not focused upon the risk because they are dealing the risk on the basis of occurrence which increases their cost and time as well and they have to compromise upon the quality and lack of professionalism. Insurance is effective for the construction projects or site; participants agreed on the statement and suggested that insurance can reduce the financial losses and provide them resource to continue the projects. In response against the statement that precaution is better than the insurance all agreed that risk management is better than the insurance policy or coverage (Liu, J. and Flanagan, 2005).





Participants are asked about the inducting the insurance policy into the construction contract there was the mix opinion from participants they were partially convinced but the association of cost feature were focused by them that it will increase the cost of the project and their profitability will be reduced. Risk management can be effective where professionals or the experts of the areas are hired to conduct the construction project. Participants were agreed upon the statement that insurance is effective if the cost is not from the contractor's contract. However; all the five participants did not give their consent on the risk management and insurance coverage should be used both for the project safety (Eshteharadian et al, 2010). However; as the literature suggest that it is indeed necessary that risk management should be helpful for the project smoothness and insurance coverage control the cost of the project as well. The above results of the interviews suggested that it is important to use the experts and professionals for the project because it increases the productivity and efficiency of the project. Risk in the construction is possible because the nature of the operations includes the risk therefore; risk management is highly effective if the contractors are not able to manage the risk then it is likely possible they have to bear the high cost and time should be increased to deliver the project. Risk is being managed through the use of insurance and it is indeed important to handle the risk through the insurance coverage which reduces the feasibility of project become costly and ineffective for the client. Risk and insurance is the best way to manage the project in the long run. It is necessary for the contractor to manage the risk and assess prior to the time so it will be effective to handle the risk appropriately and if there is a possibility to transfer it to make the decision.

#### **Discussion on Findings:**

Construction industry of Iraq is having difficulty because there is not professional or experienced individual that can bring the innovation or differentiation by taking the measures of securing the risk and manage the project adequately. Insurance coverage eases the issues in a different way that equipment, machinery, material whether it is through the air or sea transit insurance secures the investment adequately. Therefore; it is effective that contractors of Iraq should undertake the necessary preventions to get the project smooth and deliver quality through the activities or operations. Government is required to play an important role by bringing legislations and laws that standardized the overall construction approach of the contactors (Awss, 2019). Develop the proper reports prior to the initiation of the construction site is necessary and assessing the potential risk and their plan to manage or transfer the risk to maintain the efficiency of the construction project. Experts are required to assess the risk and conduct the complete assessment of the project to identify the risk and manage it adequately (Keshk et al, 2018). In view of the responses of the participants it is evident that current market is having lack of professionalism and systematic approach towards the completion of construction project. Government intake into the industry is low which has reduces the efficiency and quality in the industry. Policies and procedures or the construction industry governing body is not there which has impact upon the quality of the construction project and there is no standardized effort that can help or bound the contractor to meet the required obligations (Ryu et al, 2018). Therefore; contracts are having lack of professionals and experts to help them in their construction projects. Every contractor is focusing upon completing the projects and concern about the risk that occur concurrently rather than assessing the potential risk of the overall projects prior to the initiation of project. Insurance companies are not having attractive products to secure the contractors risk financially (Eshteharadian et al, 2010). The combination of risk management and insurance can secure the contractor position on conduct the effective operations on the construction project or site. It is necessary to focus upon people, equipment, machinery and other features that are the part of the operations in the construction industry. However; current market contractor in the construction industry are not aware because of lack of knowledge, lack attitude, lack of government interest and lack of insurance companies awareness; which causes the damage to the owner and compromise on the quality of the construction project. Therefore; government initiatives can bring the change and bring standardization in the construction industry so the infrastructure will be quality based and owners will be satisfied with it.

#### **Conclusion and Recommendations:**

The purpose of the study was to analyze the application of the risk insurance in the construction industry in Iraq. The results of the study suggested that contractors that are operating in Iraq are not having enough knowledge and expertise that can help the industry in the long to contribute in the country's economy. The other feature is the government; they are not having any standard or legislation or any governing body to control and measures the steps that are being taken by the contractors to build the infrastructure for the





country. The old methods and assessment are being made by the contractors to satisfy the owner and having compromise upon the quality of the project. Insurance companies are not offering services or products that can help the contractors to use for the sake of coverage and secure their risk effectively. However; the lack of professional behavior and attitude is also lacking among the contractors. It is recommended that government should bring the legislation or governing body that look into the issues and govern the industry adequately to make standards and improve quality of the country's infrastructure. Contractors should have the appropriate knowledge about the project and all its aspect including the assessment of risk and managing it. The lack of professional behavior and attitude causes the delays and increases cost which is a high concern for the owners. Risk can be control through the insurance coverage; this feature should be addressed to the contractors so they will be able to manage the risk and reduces the cost by using the insurance option into the construction project.

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#### Appendix – A:

#### **Interview Protocol:**

This interview guide has divided into four sections according to the research requirement. Every section contains its questions that are asked from the participants of the study.

#### Status of Guidelines and Acceptance:

- What is the status of government legislation about construction industry?
- What is the effectiveness of rules and regulation in the construction industry implemented by the government?
- If the rules and regulation become effective; policies should be amended according to the requirement?

#### **Setting Guidelines:**

• Is there any possibility to hire the experts into the project? Or contractor handles every critical area of the project?

• Is the contractor plan the procurement or it is being ordered when it is required?



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• What is the role of experts in approving the planned procurement?

#### **Risk Management and Risk Insurance in Construction:**

- Is there any chance of using the insurance as a tool to reduce the cost of the project?
- What is the effectiveness of insurance coverage in the construction project?
- Is there any involvement of risk assessor into the project?

#### **Inducting Insurance Policy In the Construction Contract:**

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- How insurance policy is effective in managing the risk into the project?
- What is your perception of insurance cost that it should be from the contractor or from the owner?
- How effective if the risk management and insurance policy become the part of safety for the project?