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ROLE OF THE AUDITOR IN AUDITING OCCUPATIONAL HEALTH & SAFETY PERFORMANCE IN PUBLIC SECTOR COMPANIES - AN ANALYTICAL STUDY OF THE REPORTS OF THE FINANCIAL CONTROL BUREAU ON AL-DORA REFINERY

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Abstract:

The research aims to highlight the role of auditors at the Financial Control Bureau in assessing the extent of the company's compliance with health, safety, and environmental requirements within the refinery during its daily operations to ensure the safety of employees. Data was collected based on the information provided in the financial control bureau's reports related to Al-Dora Company for the years (2016-2019). The descriptive-analytical approach was employed in conducting the research. The study arrived at several results, the most important of which is that auditors play an active role in assessing the performance, efficiency, and effectiveness of occupational health and safety in the researched company. Additionally, a number of indicators were identified to assess the level of risks associated with this performance in the company.

Keywords: occupational health and safety; auditing; reports of the Financial Control Bureau.

1. INTRODUCTION

The Financial Control Bureau, as one of the supreme audit institutions, has played an important role in the oil sector in order to ensure compliance with the regulatory legal framework in addition to managing and securing data properly. The supreme audit institutions are mainly known for their role in supervising public financial management, i.e., government revenues and expenditures, and they review the compliance of government institutions with rules and regulations, and the performance of government programs and policies by auditing the level of performance in these institutions. These agencies also provide assurance of the use of resources wisely and efficiently for the benefit of citizens and workers.

One of the most significant challenges of the day is occupational health and safety in judging the corporate environment. The low level of safety and health at work performance one of the problems facing companies as each department must regard workers since company's most significant supplier. This issue is of great importance as in the past decades there have been changes in the various threats to workplace health and safety due to technology, society, and the economy developments, and enterprises must utilize modern techniques and instruments to manage and curb these hazards. (Darabont, et al., 2018).

Despite advances in occupational safety culture and attitudes towards improving and developing working conditions and environment, especially when companies recognize the importance of workers' safety and health status and take into account their direct relationship to costs, productivity and competition, workplace hazards continue to exist, and many industries and a huge number of people are affected by these dangers (ILO, 2002).

Thus, research problem is reflected in the fact that the Financial Control Bureau, through its financial reports, examines occupational health and safety performance levels in companies subject to its audit scope. The research aims to highlight the role of auditors at the Financial Control Bureau in disclosing

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the extent to which the company has applied the research sample to the requirements of health, safety and environment within the refinery while conducting the usual daily work to keep workers safe. The research therefore highlights a set of indicators to measure occupational health and safety performance and to ascertain how far and how they are applied by public sector auditors and how performance evaluation control reports on companies' occupational health and safety performance. The importance of the research lies in measuring the level of performance of companies in accordance with the occupational health and safety performance indexes to determine the extent to which the companies' departments include occupational health and safety in their performance and the extent to which that performance is reflected in their issued reports, as well as the importance of the work of auditors in the public sector represented by the Federal Financial Control Bureau in Iraq and its role in imposing performance evaluation controls by identifying substantive observations and making recommendations.

After addressing the introduction in the above paragraph, the research is divided into four sections, the previous studies are outlined and reviewed in section II for the purpose of building the hypothesis, while in section III the results are discussed and the hypotheses tested, section IV contains the conclusions.

LITERATURE REVIEW AND CONSTRUCTION OF HYPOTHESES

2.1 Concept of Safety and Workplace Health

The safety of working individuals and their protection is one of the most important topics and challenges facing daily competence and employers, because protecting the human members from the risks of work means protecting the national economy and society, as the industry proliferates and progresses in this century and the associated risks of industry and preserving property from damage (Friend & Kohn, 2018).

Global attention to the working environment and improving it has increased, reflected through considerable international conventions and protocols aimed at protecting the individual as a factor that must be provided with a healthy and secure workplace. Recent global trends have emerged towards the development of the managing of safety and workplace health and management systems parallel to quality and management of the environment of systems. There have also been regional and global initiatives to respond to urgent requests by customers and companies to develop the specifications of health and workplace safety systems (Izzat, 2020).

The Occupational Health and Safety Management System is designed to protect workers' health by: defining roles and responsibilities related to occupational safety and health, defining regulatory goals and objectives related to occupational health and safety, planning and establishing the maintenance of risk controls, monitoring, reviewing and improving the implementation and effectiveness of the system (Robson & Bigelow, 2010).

The concept of occupational safety and health indicates that it is a set of principles and rules whereby human resources of all kinds and the nature of their work are protected from the dangers of their occupations, whether physiological or psychological through the development, implementation and follow-up of appropriate security and protection programmes by which the number of accidents and injuries suffered by workplace workers can be reduced or prevented in the course of their work. The protection program is developed by examining each work and analyzing it to identify the risks or injuries to which an individual is exposed to besides providing the means to protect him/her (Khudhair & Al-Kharsha, 2009).

(Al-Ameri, 2013) considers that of health and workplace safety are all the actions and events conducted by the organization in order to preserve the health and safety of workers and protect them from accidents and work injuries, thereby making them better able and able to carry out the tasks and responsibilities entrusted to them efficiently and effectively, and to avoid interruption losses and the cost of compensation for damages caused.

To accomplish occupational health and safety, the (ILO) strongly advises the requirement for a management system. To keep workplace health and safety activities in a consistent manner and reaching proactive goals, workplace health and safety managing systems can be acknowledged as the best practice. In reality, it includes the concept: "*Occupational health and safety management systems differ from traditional occupational health and safety practices by incorporating permanent improvement and supervision programmes*." Generally speaking, the workplace health and safety managing system is a tool that enables the maintaining coordination between workplace health and safety actions and enterprise strategies that can be used to improve and resolve activities on a permanent basis (Çalış & Büyükakıncı, 2019).

2.2 General Characteristics of Occupational Safety and Health Management System

All occupational, safety and health systems owe something to the legacy of public systems theory as the basic and most general feature of the system is the interconnectedness of factors or components. According to systems theory, there ought to be four fundamental needs of the occupational safety and

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health management system, though there is some room for variation in how these standards are implemented. The following are the four prerequisites in general (Gallagher et al., 2001):

- System objectives: For the occupational safety and health management system, these may be ethical, economic, legal and organizational objectives, and not all systems need the same goals.
- Determine the components of the system and how they relate to one another; not all systems require the same components.
- Find out how the general administrative system, the regulatory system, the technological system, and the way that work is organized relate to the workplace safety and health system of management.
- Requirements for system maintenance, which could be either internal or connected to an outside audit or review of the phase associated with, for example, industry policies that support best occupational health and safety practices, system maintenance may vary between systems.

2.3 Auditors in the Public Sector

The main variables of public sector audit and policy around the world have created a new environment and expectations for senior financial and accounting control bodies. These changes include the adoption of the Sustainable Development Plan (2030), the data revolution, the adoption of the (INTOSAI) framework for professional directives and issuances, and the expectations of the International Standard of Higher Financial Control Agencies (12). The current phase requires new frameworks and approaches to audit and reflection on their role in government accountability processes. In view of these developments at the level of the audit and audit profession, auditors must urge the units subject to their audit to exercise social responsibility disclosure.

The main purpose of public sector control is to maintain and disseminate the principle of public accountability among public entities and democratically elected institutions. In accordance with the principles set out in the (INTOSAI) Standard (ISSAI 12), the value and benefits of the Supreme Financial Control and Accounting Bodies make the difference in citizens' lives. Control bodies must carry out control work to ensure that governments and public actors are trustworthy of public resources and are responsible for their use of public resources and show transparency in its governmental operations and ultimately contribute to maintaining financial discipline within countries.

Audit is defined as a management tool used to examine processes and activities and to measure whether they conform to standards and procedures in addition to any opportunities for improvement (Mallen & Collins, 2003). That is, audit is a systematic examination of the organization's activities and arrangements to determine whether they achieve what they determine they must achieve (audit criteria). Organizational performance against specific auditing criteria is evaluated by an internal or external auditor who usually checks documents and deals with people at all levels of the organization regarding the manner of conducting the work. To ascertain the legitimacy of the evidence, it is scrutinized and verified (Blewett & O'Keeffe, 2011).

The audit process is a systematic, independent and documented process for obtaining and objectively evaluating audit evidence to determine whether audit criteria are met. One of the key principles of the audit is evidence-based evaluation, which is the logical way to arrive at reliable and replicable audit findings in a systematic audit process (Jespersen & Hasle, 2017).

The auditor is defined as the person who audits and audits multiple enterprises that differ in the nature, size and legal form of their activity. She/he may often assign the management of the company to conduct various studies and research of certain activities with a view to assisting the administration in making some decisions based on their recommendations (Abbas and Al-Dabbas, 2020).

Auditors provide a wide range of information improvement services referred to as confirmation services assurance, which include the basic type of confirmation service provided by auditors for certification. When performing certification services, the auditor enhances the reliability of information by issuing the inspection or audit report or agreed procedures on the subject or confirmation and requires auditors to assume greater responsibility for certification processes for compliance with laws and regulations and the effectiveness of controls (Whittington & Pany, 2016).

2.4 Audit of Workplace Health and Safety Dimensions

In accordance with the norm (OHSAS 18002, 2009) the audit's goal is to evaluate the effectiveness of the workplace health and safety system of management complies with the requirements, including compliance with national occupational health and safety legislation, proper implementation of the occupational health and safety management system, and effectiveness in meeting the organization's policy and goal requirements.

Occupational health and safety is audited by ensuring that all applicable rules and regulations in the field of occupational risk prevention are properly followed, in addition to verifying the efficiency and effectiveness of the preparation, implementation and maintenance of the occupational health and safety

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management system. It is also considered as a tool by which the occupational health and safety management is consistent with the enterprise's overall strategy (Qurin, 2021).

In addition, auditing is a means of direct and comprehensive monitoring of the implementation and effectiveness of the company's occupational health and safety management system. The audit process typically includes: gathering evidence about the management system through interviews, document reviews and workplace notes, guided by the audit tool; assessing the evidence collected, and provide a summary of the evaluation's findings (Robson & Bigelow, 2010).

Auditors must collect sufficient evidentiary material to enable the formation of a judgment and to verify assurances and events with data adequately collected and interpreted. Therefore, verification and evidence are complementary concepts, and auditors verify on the basis of evidence. Based on the description of data collection and verification, auditing can be seen as a sort of scientific approach (Power, 1997).

Simple audits are sometimes used to assess the administrative and programmatic needs of organizations that have just started to develop their workplace health and safety mananging of systems. Likewise, there are companies where management systems are further developed but where audits are used only periodically in order to ensure that there are no significant gaps in the management system. In these cases, only a measurement tool is required when using audits of performance measurement applications. These include determining whether a particular criterion has been met or monitoring progress over time. Measurement characteristics may be additionally important in such applications when the results of audits determine regulatory rewards (Robson & Bigelow, 2010).

Organizations often use quantitative results of audits as performance measures. For example, they are used to monitor organizational improvement in safety management, comparing organizational units, and determining whether a particular standard has been met. Furthermore, audit results can have repercussions on institutions' remuneration or penalties. Because data from audits are used to measure performance., it is clear that their reliability and validity are important for making sound regulatory decisions. However, systematic research in the literature found surprisingly little research in this area. Moreover, in the few cases where reliability among internal auditors was officially examined, it was less than expected (Robson et al., 2012).

The main function of the occupational safety and health management system audit is to thoroughly examine the occupational health and safety management system in general and its components in order to detect any deterioration in the system's adequacy that may not be clear in performance monitoring and continuous measurement. The audit also aims to determine that the organization fulfils its social responsibilities by maintaining a healthy and safe workplace that protects workers, the public and other stakeholders. Certification of the management system must primarily reduce illnesses and injuries in the workplace and reduce the costs associated with workplace accidents (Gallagher et al., 2001).

2.5 Objectives of Auditing Occupational Health and Safety Dimensions

The Occupational Health and Safety Audit seeks to achieve a range of objectives including (Qurin, 2021):

1. Determine whether roles and responsibilities are clear in occupational health and safety management.
2. Identifying and treating the root causes of occupational accidents and diseases.
3. Avoid or minimize the impact of any potential occupational hazards that may affect workers (preventive work).
4. Avoid repeating any occupational risks that have occurred in the enterprise (corrective action).
5. Propose corrective measures for continuous improvement of occupational health and safety management.
6. Assess the efficiency and effectiveness of the Occupational Health and Safety Department, and the measures and controls put in place to support its implementation.
7. Verify that the Occupational Health and Safety Department complies with applicable legislative and regulatory rules, instructions and standards.

2.6 Obstacles to Effective Auditing of Occupational Health and Safety Dimensions

One of the operational constraints of the occupational safety and health management system associated with auditing tools (Gallagher et al., 2001):

- Audit tools encourage a "paper system" that may not be implemented, and does not reflect organizational occupational health and safety practices and concerns.
- Audit tools can facilitate an effective approach to the occupational safety and health management system.
- Audit tools encourage the view that the Occupational Safety and Health Management System model can be applied to a variety of workplaces and discourage customization according to organizational needs.

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- Defects in the audit process and auditor skills lead to ineffective audits, including "selection boxes only" rather than meaningful assessment, and insufficient understanding of occupational health and safety to assess the effectiveness of the occupational safety and health management system.
- Audit tools give insufficient weight to the critical role of senior management commitment, employee engagement and systems integration in the occupational safety and health management system.
- Audit tools focus on concrete risks to eliminate the most accurate long-term health risks

Based on the foregoing, the research hypothesis can be formulated as follows:

H1: The role of auditors is positive in improving occupational health and safety audit performance and improving physical working conditions to prevent the risk of accidents and injuries in public sector companies.

3 DISCUSSION OF RESULTS AND TESTING OF HYPOTHESES

3.1 Data Collection

Data collection on special reports was based on reports of the Financial Control Bureau related to Al-Dora Company and for the years (2016-2019). These reports were accessed through field visits of the Financial Control Bureau.

3.2 Discussion of Results

After consulting the reports of the Financial Control Bureau, the indicators of occupational health and safety performance at Al-Dora Company were monitored as follows:

1**- Economic Efficiency Index:** This index is concerned with evaluating the company's ability to achieve profits in the future and hence the possibility of inferring this index on the company's efficiency in using resources and achieving targets during the evaluation period (Abdel Fattah, 2019)

In which we use the rate of return on assets which is equal to net profit/total assets

Table (1)
The Company's Economic Efficiency

	2016	2017	2018	2019
Net Profit	**157060164720**	**621362362479**	**705098416413**	**529711089077**
Total Assets	**1073206420905**	**1676584714440**	**2441028760679**	**3090757644846**
The Company's Economic Efficiency	**0.146**	**0.370**	**0.288**	**0.171**

Source: Table prepared by researchers based on reports

Table (1) indicates that economic efficiency was at the highest level over the four years in (2017), with a value of (0.370%), indicating an improvement in the company's financial performance in this year. The rate was the lowest in (2016), at (0.146%), due to a decrease in this year's net profit, indicating a weak level of economic efficiency and inadequate utilization of assets for profit.

2- Environmental Efficiency Index: Calculated by dividing net profit/amount of harmful gas emissions resulting from the company's operating activity, showing that each dinar in realized profit has caused a certain amount of harmful gas emissions (Müller et al., 2012).

Table (2)
The Company's Environmental Efficiency

Details		2016	2017	2018	2019
Net Profit		**157060164720**	**621362362479**	**705098416413**	**529711089077**
Quantity of Gas Emission in Tons	**63175**	**14378**	**16364**	**17126**	
	101.18	**22.92**	**36.309**	**27.27**	
	1783.3	**405.47**	**461.43**	**483.1**	
Total Emissions		**65059.48**	**14806.39**	**16861.739**	**17636.37**
Company's Environmental Efficiency		**2414101**	**41965824**	**41816471**	**30035154**

Source: Table prepared by researchers based on reports

Table (2) shows the decline in the company's interest in environmental activities and thus its inability to reduce the impact of production operations on the surrounding environment, noting that in (2016) the environmental efficiency of the company was (2424101 dinars) was the lowest of all years of application which means good environmental performance this year. The value then rose in (2017), demonstrating a decline in the company's interest in environmental activities. The value of the index then dropped again in (2018) and (2019), showing the trend of the company's environmental performance to

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improve, but a difference from (2016) was increased, indicating that the company's environmental efficiency did not improve at the overall level.

This is due to the lack of gas measuring devices in the research sample company where it depends on the presence of (3) gases measuring devices operating out of (43) gases measuring the quantity of gas emissions and all of them of the moving type, and therefore the small number of gauges does not cover the entire area of the working units resulting in irregular readings as well as the spacing of their taking periods and for relatively long periods ranging from (2-5) annual reading and that all the refinery units operate continuously during the year in addition to the fact that the majority of the refinery units are obsolete, thereby increasing the chances of contamination surrounding the refinery's areas. In addition, there is no early warning system to detect gas pollution and no emergency closure system.

3- Social Efficiency Index: Calculated by dividing net profit by the number of accidents and injuries of workers during work, showing that each dinar in profit achieved has caused a certain number of accidents or injuries (Figge & Hahn, 2004):

Table (3)
The Company's Social Efficiency

	2016	2017	2018	2019
Net Profit	**157060164720**	**621362362479**	**705098416413**	**529711089077**
No. of Accidents and Injuries	**11**	**27**	**35**	**24**
Social Efficiency	**14278196792**	**23013420832**	**20145669040**	**22071295378**
Rate of Change	**-**	**61.17**	**41.09**	**54.58**

Source: Table prepared by researchers based on reports

Table (3) indicates that the company's social efficiency in (2016) was at its lowest in the number of accidents and injuries during the research years and began to increase during (2017) to reach (61.17%) which means that increased profits lead to an increase in the number of accidents and injuries and began to decline in (2018), where it reached (41.09%) and returned to increase in (2019) where the ratio was (54.58%). This refers to the weak social efficiency of the company in question and its lack of interest in the health and safety of workers as the greater the profits, i.e. social efficiency, the higher the number of accidents and injuries.

Safety Indexes

• Increase in the number of injuries

This key performance index is to measure the total number of workplace accidents or accidents reported by staff or management over a period of time. This is usually the first index to appear on the health, dashboard and clearly shows why. If the facts and incidents are constantly increasing within the workplace, there are some pressing issues that need to be addressed immediately. The actual measure of performance here is at least the number of injuries and accidents (Korkusuz et al., 2018).

$$RINI = \frac{Number\ of\ injuries\ for\ years - Number\ of Injuries\ for\ the\ year\ 2016}{Injuries\ for\ the\ year\ 2016}$$

Increase rate = Number of injuries for years - Number of injuries for (2016)

Table (4)
Increase in the Number of Injuries

Year	2017	2018	2019
Number of Total Work-Disabling Injuries	**27**	**35**	**24**
No. of Injuries in (2016)	**11**	**11**	**11**
Increase Rate	**1.45**	**2.18**	**1.18**

Source: Table prepared by researchers based on reports

Table (4) shows an increase in the number of infections in (2017) by (1.45%) from the base year (2016), and increases in (2018) by (2.18%) from the base year (2016). The increase in infections in (2019) compared to (2017) and (2018) decreased from the base year (2016) by (1.18%). By reading and surveying the auditors' reports, the majority of the (97) causes of injuries were caused by inattention and caution during work, resulting in the worker hitting a moving body or falling from a different level as well as individual handling of loads. In addition to not taking the right measures before starting work and not

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following the safety instructions of some workers and not using personal protection equipment, this exposes them to the risk of injury during work. In addition, the majority of the workers' injuries were in the arm and the head

Rate of All Recordable Accidents (TRIR)

The Rate of All Recordable Accidents (or TRIR), is a metric for workplace security. Its conclusion is reached by adding the quantity of workplace incidents and the sum of all employees' working hours in comparison to an average group of workers. Typically, (100) workers put in (40) hours per week over (50) weeks of the year, which equates to (200,000) hours a year. The purpose of recording and measuring the rate of recordable incidents (TRIR), is to understand how project operators and the safety team perform a minimum of a single aspect of occupational health and safety. Due to accidents take and cover a significant portion of the security range, they are one of those that is typical and practical key performance indexes. This rate is calculated as follows (Haas & Yorio, 2016):

Number of recordable infections and illnesses in (200,000)/total number of working hours

$$TRIR = \frac{The\ number\ of\ recorded\ injuries\ and\ diseases\ \times 200000}{Number\ of\ working\ hours}$$

Table (5)
Total Recordable Incidents in the Company

Year	2016	2017	2018	2019
No. of Recordable Injuries and Illnesses	**11**	**27**	**35**	**24**
No. of Working Hours	**14896096**	**12298395**	**13453511**	**11503133**
TRIR	**0.15**	**0.43**	**0.52**	**0.42**

Source: Table prepared by researchers based on reports

Table (5) indicates that the index of total recordable incidents began to rise during the school years. This indicates that the company is inefficient to take into account the occupational safety aspects of its workers. The index began to rise in (2017) to (0.43%) and reached its highest level in (2018) by (0.52%) and decreased slightly in (2019), reaching (0.42%).

Lost Time Injury Frequency Rate (LTIFR)

This index aims to assess the company's ability to reduce the time lost in the production process by indicating the number of lost working hours resulting from the recurrence of accidents. The increase in the value of the index annually can be explained by the negative impact on the social performance of frequent accidents and injuries during work, which means that the enterprise is not interested in safety and safety considerations for workers, calculated as follows (Abdel Fattah, 2019):

$$LTIFR = \frac{Number\ of\ working\ hours\ lost\ due\ to\ injuries\ and\ accidents}{Number\ of\ working\ hours} \times 100 = \%$$

Table (6) Lost Time

Year	2016	2017	2018	2019
Number of Working Hours Lost Due to Injuries and Accidents	6192	15168	20880	17040
No. of Working Hours	14896096	12298395	13453511	11503133
Lost Time	0.041	0.123	0.155	0.148

Source: Table prepared by researchers based on reports

Table (6) indicates the high percentage of time lost from year to year and on a continuous basis, indicating low work efficiency and lack of proper use of time supplier during the research sample years.

- **Risk Ratio Index**

The Risk Ratio Index is a safety measure used to measure the severity or seriousness of injuries and illnesses that occurred in a time period utilizing the days' number (on an average) wasted per incident as an indicator of intensity. Calculating and comprehending the severity of injuries at work complements other common safety KPIs, that record the frequency of incidents and accidents by providing businesses and managers with a better grasp of how bad incidents can be are at their business

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headquarters. It is calculated by the following formula (https://constructionsafetyprof.com): Number of lost working days × (200,000)/Total number of working hours

Table (7) Risk Ratio

	2016	2017	2018	2019
No. of Lost Work Days	**258**	**632**	**870**	**710**
Total Working Hours	**14896096**	**12298395**	**13453511**	**11503133**
Risk Ratio	**3.46**	**10.27**	**12.93**	**12.34**

Source: Table prepared by researchers based on reports

Table No. (7) notes from (2016) to (2019) that there has been a significant jump in the risk level at the company in question. It also notes that the proportion of this risk is increasing from year to year, indicating a lower level of occupational safety procedures for workers and lower awareness and guidance of this safety.

- **Accident Frequency Rate (AFR)**

The total number of injuries caused by the loss of time per million working hours is intended to determine the number of injuries disrupted for working hours and calculated by the following formula (Vranješ et al., 2020):

$$SFR = \frac{Number\ of\ injuries\ with\ lost\ time\ \times 1000000}{Number\ of\ working\ hours}$$

Table (8) Accidents' Frequency Rate

	2016	2017	2018	2019
Number of Injuries	**11**	**27**	**35**	**24**
Number of Working Hours	**14896096**	**12298395**	**13453511**	**11503133**
Frequency Rate	**0.738**	**2.195**	**2.601**	**2.086**

Source: Table prepared by researchers based on reports

Table (8) shows an increase in the values of this index over the years of application, indicating an increase in the number of accidents per year. The index started in (2016) with (11) incidents and with a repetition rate (0.738%) and increased in (2017) with a number of (27) incidents during the year with a repetition rate (2.195%) and then increased to (35) incidents in (2018) with a repetition rate (2.601%) and a decrease in (2019) to (24) incidents with a repetition rate (2.086%). This shows poor social performance in terms of workers' safety, inadequate procedures and safety considerations to protect workers from injuries during work.

Incident Severity Rate

The incident intensity metric is the number of working days wasted of per (200,000) working times. It is a very significant index as it includes each death, disabilities and wasted working days that have been normalized with (200,000) hours of work. Risk measurement index may be used to monitor security versus operating performing. Next is the metric hazard measurement formula (Nieto et al., 2014):

$$ISR = \frac{Number\ of\ lost\ working\ day \times 1000000}{Number\ of\ working\ hours}$$

Severity Rate = number of working days lost as a result of work injuries × (1,000,000)/number of working hours for all employees per year.

Table (9) Incident Severity Rate

	2016	2017	2018	2019
No. of Lost Days Due to Injury	**258**	**632**	**870**	**710**
No. of Working Hours	**14896096**	**12298395**	**13453511**	**11503133**
Severity Rate	**17.319**	**51.388**	**64.667**	**61.722**

Source: Table prepared by researchers based on reports

Table (9) shows that the intensity coefficient began to rise during the years of the research, rising by (632) originals in (2017) by as much as (197%) compared to (2016) base year, and appeared to rise by (870) infections during (2018) by (273%) compared to the base year (2016), a decrease during (2019), with (710) infections compared to (2017) and (2018), but increased for the base year (2016) by an estimated (265%). In addition, the decrease in the number of working hours in (2017), (2018) and (2019) from the base year (2016) indicates that the decrease in the number of working hours has an impact on the number of days lost. This shows that the company is not taking appropriate methods to lower the incidence of injuries and its lack of interest in the occupational health and safety standards of the employees.

Lost Days Rate

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Missing days rate = intensity rate/frequency rate

Table (10) Lost Days Rate

Details	2016	2017	2018	2019
Intensity Rate	**17.319**	**51.388**	**64.667**	**61.722**
Frequency Rate	***0.738***	***2.195***	***2.601***	***2.086***
Lost Days Rate	**23.467**	**23.411**	**24.862**	**29.588**

Source: Table prepared by researchers based on reports

Table (10) shows that the rate of lost days began to decrease slightly during (2017) and began to rise slightly during (2018), but increased significantly during (2019). This means that the frequency of workplace accidents causes
the absence of one or more weekdays of scheduled work for the employee or the total number of prohibited or restricted activity days on the job (Nieto et al., 2014). The reason for the increase in the rate of missing days was the failure to take the right measures before the start of the work of not cleaning the place of petroleum and construction materials, as well as the failure to stabilize the stairs well as the lack of assurance of the integrity of hose connections in addition to the lack of experience or skill of some employees before assigning them to work. This is due to lack of training and appropriate action.

Cost Coefficient

This index aims to measure the amounts incurred by the company as a result of its lack of interest in safety and security considerations resulting in injuries during work. This index is calculated by the following formula: ([ANSI] Standard No. Z16.1):

Cost Coefficient = Total cost of treatment and compensation divided by total working hours of X 100

Table (11) Cost Coefficient

Details	2016	2017	2018	2019
Complete Cost of Treatment and Compensation	**11255500**	**19187000**	**10651000**	**2848250**
Total Working Hours	**14896096**	**12298395**	**13453511**	**11503133**
Cost Coefficient	**75.56**	**156.01**	**79**	**24.76**

Source: Table prepared by researchers based on reports

Table (11) shows that the index value fluctuated from year to year, reaching the cost coefficient in (2016) to (75.56%) and increased in (2017) and reached its highest level (156.01%) where total working hours decreased and the overall cost of treatment and compensation increased, which means that increased working hours lead to more injuries and accidents. In (2018) it decreased to a (79%) and the operating hours increased and the overall cost of treatment and compensation decreased, meaning that the company took appropriate action to avoid accidents and injuries into consideration, and then returned to its lowest level in (2019) by (24.76%) where operating hours decreased to their lowest levels in addition to the overall cost of treatment and compensation. This shows that expenditure costs are spent randomly or formalistically, not commensurate with the needs of the working environment and the necessary security workers during the production process.

Therefore, workplace health and safety audits have a positive and strong role to play in improving physical working conditions to prevent the risk of accidents and injuries in public sector companies, which confirms the validity of the main hypothesis

4. CONCLUSIONS

Research on its theoretical and practical aspects has reached a set of conclusions, the most important of which is that workplace health and safety audit is an effective tool to reduce workplace diseases and accidents, by identifying and evaluating occupational risks to workers and making the necessary recommendations to be addressed in a timely manner in addition to the weak interest in occupational health and safety procedures in the company in question. The role of auditors in the Financial Control Bureau is important in determining the extent to which the company has applied the research sample of occupational health and safety performance standards and indicators during daily working procedures to maintain workers' safety. The research also found that the company had poor access to modern concepts of workplace health and safety systems and managing (OHSAS 10082, 2009), as well as poor interest in techniques for continuous improvement of occupational safety.

The research recommends that the company should rely on the recommendations of the reports of Financial Control Bureau as it contributes to the operationalization of the Workplace Health and Safety Directorate and grants it the necessary priority and not

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preference to speed of completion besides the need to apply workplace health and safety instructions based on the criterion (OHSAS 10082, 2009).

REFERENCES

1. Abbas, Osama Tariq Waldbas, Wafaa Abdul Amir (2020), The Role of the Auditor in Measuring Social and Environmental Performance Indexes under the Global Reporting Initiative (GRI), **Journal of Accounting and Financial Studies**, vol. 15, No. 51, 59-76.
2. Al-Ameri, Amer Abdul Latif Kadhim (2013), Impact of the Occupational Health and Safety Administration (OHS) on the Performance of Workers - Analytical Study of the Sectors of the Ministry of Industry and Minerals of Iraq, **Ma'amun College Journal**, No. 21, 144-169.
3. Blewett, V., & O'Keeffe, V. (2011). Weighing the pig never made it heavier: Auditing OHS, social auditing as verification of process in Australia. Safety science, 49(7), 1014-1021, DOI: 10.1016/j.ssci.2010.12.010
4. Çalış, S., & Büyükakıncı, B. Y. (2019). Occupational health and safety management systems applications and a system planning model**. Procedia Computer Science**, 158, 1058-1066 ,https://doi.org/10.1016/j.procs.2019.09.147
5. Darabont, D. C., Bejinariu, C., Ionita, I., Bernevig-Sava, M. A., Baciu, C., & Baciu, E. R. (2018). Considerations On Improving Occupational Health and Safety Performance In Companies Using Iso 45001 Standard. Environmental Engineering & Management Journal (Eemj), 17(11). https://doi.org/10.1051/matecconf/202030500002
6. Khan, I., & Shah, S. M. (2022). Hazards in Pharmaceutical Industry. In Essentials of Industrial Pharmacy (pp. 203-216). Cham: Springer International Publishing.
7. Gallagher, C., Underhill, E., & Rimmer, M. (2001), Occupational Health and Safety Management Systems: A Review of Their Effectiveness in Securing Healthy and Safe Workplaces [Review]; National Occupational Health and Safety Commission: Sydney, Australia.
8. Haas, E. J., & Yorio, P. (2016). Exploring the state of health and safety management system performance measurement in mining organizations. **Safety science**, 83, 48-58.https://doi.org/10.1016/j.ssci.2015.11.009
9. Izzat, Hussein Nwaldin (2020), applying the occupational health and safety management system in accordance with OHSAS 18001: 2007 to the laboratories of the Technical College/Kirkuk, **Journal of Rafidain Development**, vol. 39, No. 125, 9-42.
10. Jespersen, A. H., & Hasle, P. (2017). Developing a concept for external audits of psychosocial risks in certified occupational health and safety management systems. **Safety Science**, 99,227-234 .https://doi.org/10.1016/j.ssci.2016.11.023
11. Khudhair, Kazim Khudhair and Al-Kharsha, Yassin Katib (2009), Organizational Conduct Human Resources Management, First Edition, Al Masir Publishing and Distribution House, Jordan, 225.
12. Korkusuz, A. Y., Inan, U. H., ÖZDEMİR, Y., & BAŞLIGİL, H. (2018). Evaluation of occupational health and safety key performance indicators using in healthcare sector. Sigma Journal of Engineering and Natural Sciences, 36(3), 705-715.
13. Mallen, D., & Collins, C. (2003). The Audit Skills Handbook: A Basic Introduction to Planning and Performing Business Management System Audits. Consensus Books.
14. Nieto, A., Gao, Y., Grayson, L., & Fu, G. (2014). A comparative study of coal mine safety performance indicators in China and the USA. International Journal of Mining and Mineral Engineering, 5(4), 299-314, https://doi.org/10.1504/IJMME.2014.066578
15. Qurin, Souad, (2021), the role of occupational health and safety audit in improving the performance of medical and paramedical wires in Algerian hospital institutions, doctoral thesis, Department of Management Sciences, Faculty of Economic, Commercial and Management Sciences, Farhat Abbas University/Setif 1
16. Qurin, Suad and Mourad Skak (2021), The Role of Health and Occupational Safety Audit in Protecting Doctors from the Coronavirus Pandemic - Case Study of the University Hospital Center in Setif, Human Resource Development Research Unit Journal, vol. 16, Special Issue 3, Part 2, 5-32.
17. Robson, L. S., & Bigelow, P. L. (2010). Measurement properties of occupational health and safety management audits: a systematic literature search and traditional literature synthesis. Canadian journal of public health, 101(1), S34-S40.

World Economics & Finance Bulletin (WEFB)
Available Online at: https://www.scholarexpress.net
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ISSN: 2749-3628,

18. Robson, L. S., Macdonald, S., Gray, G. C., Van Eerd, D. L., & Bigelow, P. L. (2012). A descriptive study of the OHS management auditing methods used by public sector organizations conducting audits of workplaces: Implications for audit reliability and validity. Safety science, 50(2), 181-189. DOI: 10.1016/j.ssci.2011.08.006
19. Slobodianyk, Y., Shymon, S., & Adam, V. (2018). Compliance auditing in public administration: Ukrainian perspectives. *Baltic Journal of Economic Studies*, *4*(5), 320-331. https://doi.org/10.30525/2256-0742/2018-4-5-320-331
20. Vranješ, B., Todić, M., & Golubović-Bugarski, V. (2020). Optimizing the Management of the Occupational Safety and Health System in" ArcelorMittal" Prijedor on the Basis of Performance Indicators. *Tehnički vjesnik*, *27*(3), 744-750. https://doi.org/10.17559/TV-20190320154104
21. Whittington O. Ray, Pany, Kurt, (2016), Principles Of Auditing & Other Assurance Services, Twentieth Edition, Published By Mcgraw - Hill Education, 2 Penn Plaza, New York, Ny 1012.