

The impact of the application of the international code ISO 45001:2018 of managing the occupational safety & health on the strategic performance of DIYALA state company for electrical industries

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Abstract: Management of occupational safety & health aims to prepare an environment where appropriate work circumstances present according to the international codes so it will effect positively on the performance of the workers in the long term (strategic), therefore this research came to measure the impact of application of the international code ISO 45001:2018 on the strategic performance of (DIYALA) state company for electrical industries, so a questionnaire was used as a main tool in collecting the data, it was distributed among (50) person, the data were analyzed by means of the statistic package (SPSS), and the research came out with a set of conclusions constrained in the high level of the application of occupational health & safety managing and the high level of strategic performance in the company, in addition to the present of a moral relationship and impact of the application of the international code ISO 45001:2018 on the strategic performance leading to make a set of recommendations that we hope be useful to the specialists .

Introduction

Along the ages, human-being is the most important means in the development and progress of the societies, so he is the most important factor of the production in the organizations that are willing to achieve an appropriate, more safe and secure work environment for their human resource, and regarding the increased care in both local and international level of this resource, a concept "Managing of the occupational health & safety" was developed to preserve the workers and their skills and to protect them in order to ensure them affective in their performance. The different types of organizations attempting now to achieve the requirements of the occupational safety according to the updated and adopted international codes, and one of these codes is ISO 45001:2018. Therefore this research deals with managing the occupational health & safety according to the first edition in order to illustrate the impact of its application on the strategic performance of (DIYALA) state company for electrical industries.

First subject: Methodology of the research and previous studies

1 - The common frame and research procedures:

- The research problem:** Because of the environment and its variations, the Iraqi organizations have to measure the application of occupational health & safety according to ISO 45001:2018 in order to approve their strategic performance thus the problem of the study will be cover these questions (What is the level of the application of standards of occupational safety in the state company of (DIYALA) according to ISO 45001:2018 ?), (What is the level of the strategic performance of the company), and (Is there any relationship or impact of application of the occupational safety management standards according to ISO 45001:2018 on the strategic performance of the company) .
- Importance of the research:** This study takes its importance from the connection between the standards of the management of occupational health & safety and according to ISO 45001:2018 and the strategic performance in order to measure the relationship and impact of the first on the second one. Besides reading the basic indicators of the application of the standards of ISO 45001:2018 and strategic performance by (DIYALA) state company for electrical industries, which both achieve it's aims and visions under the variations of the Iraqi environment.
- Research objectives:** The research is seeking to measure the application of the standards of occupational safety according to ISO 45001:2018 and also to measure the level of strategic performance then to illustrate the relationship and the impact of application of the standards of occupational safety management according to ISO 45001:2018 items _ except the items (1,2 and 3) _ on the strategic performance in (DIYALA) company.
- research hypothesis:** The study aims to approve the application of (DIYALA) company of the occupational safety management ISO 45001:2018 which contain: organization context, laborers participation, planing, support, operations, performance evaluation, and continuing improvement, also it is achieving the strategic performance which appears in focus on customer, internal operations, learn and growth. In addition to the present of both a moral relationship & impact of the application of occupational safety according to ISO 45001:2018 on the strategic performance of the company.
- Research plan:** which illustrates the relationship of occupational health & safety according to ISO 45001:2018 with the strategic performance.



Figure (1): table of action plan

- Society and sample of the research:** The society of the research is the industry sector, DIYALA state company for electrical industries, and the research sample contained (50) persons from all of the administration levels in the company, besides the workers in the sector of occupational safety in order to obtain reasonable answers. And because of their good quantity and distribution in the statistical analyzes the results can be adopted for all of the society of the research.
- Methodology of the research:** This research is dealing with two dimensions, the first is a theoretical dimension of occupational safety management, the international code ISO45001:2018 and strategic performance, and the second is an analytical dimension. Where the description is for data collection and the analysis is to determine the results and the indications of proofing or denial of the

hypothesis of the research besides answering the research problem.

- **Research limits:** They are represented by (time: from 2/8/2018 to 2/10/2018), (space: DIYALA state company for electrical industries inside DIYALA governorate) and (people: engineers and laborers from all of administration levels).
- **Research tools:** The tools used in this research were (references- Arabic and foreign- that are related to the research subject), (personal interviews with the targeted sample) and the main tool (questionnaire) where (96) percentage are valid for analysis.
- **Truth test:** According to an evaluation by specialists, the questionnaire_ and it's contents_ truth measuring was done, which means that the measure content is true, accordingly the procedures of forming the questionnaire items and adopting them in judgment_ can be considered as an indicator of it's truthfulness.
- **Statistical methods:** This research uses (Alfakronbach: to measure stability of research tool), (Kolmogorov – Smirnov test: to check the normal distribution of data), (ratios and repetitions: to describe the significant characteristics of the responders), (mean value: to answer the questions), (standard deviation: to measure the scatter from the mean value), (relative significance: to represent the research variables), (level of application: to measure the application of the research variables), (correlation & descent coefficients to measure the relationship and impact between the variables).

2- previous researches and a comparison with this research:

- **Research (Hussein 2009):** “Occupational health & safety management and labor productivity_ relation and impact” where conclusion was the lack of the section of occupational health & safety in their care of the laborers and protecting them against danger, where the care was limited to simple medical services.
- **Research (AL-Kubaisi 2011):** ” Occupational safety in the state company of thermal industries” aiming to figure out the accidents of work using an accident questionnaire for years 1998-2002 in the company. Where he found that there was negligence in recording the work accidents.
- **Research (Al- Amiri 2013):** “Impact of occupational health & safety management on worker's performance_ analytical study” in order to reduce the costs in ministry of industry and to ensure healthy & low-risk work environment, where he proved the presence of strong relationship between the research variables.
- **Research (AL-Skafi and Al-Hashimi 2015):** “Practice of occupational safety management and it's rule in the improvement of production efficiency” aiming to identify the duties of safety section in AL- Najaf refinery in order to achieve the production efficiency, because of lack in the procedures in the facility.
- **Research (Al-brznjy and Al-Hawasi 2018):** ” Impact of strategy of human resources development on strategic performance” in the ministry of housing, construction and municipalities, confirming the necessity of career planing to get the performance in the highest level.
- **Research (Gorny, 2018):** “ Safety in ensuring the quality of production – the role and tasks of standards requirements” to explain impact of industrial safety on production quality according to ISO45001.
- **Research (Yahya et al, 2018):**”Analysis of OHSAS 18001:2007 standard renewal towards ISO 45001:2018” to know how far the power station is prepared to move into ISO45001:2018 with the method of gab analysis.
- **This research point of view and reasons of the choice:** This research deals with the concept of management of occupational safety according to ISO45001:2018 aiming to measure the

application of it's standards in the company of DIYALA for electrical industries and be committed to it's items, where we have to study the subject according to the international codes repeatedly in order to be aware of how they are applied in different environments and the extent of their impact on strategic performance.

Second subject: Theoretical frame of the research

1- The concept of occupational health & safety management

The occupational health & safety management has many of names due to the complex concept, names like (management of risks of occupational safety, management of health risks, management of occupational safety and management of industrial safety). And according to that there are multiple definitions for it. (Akaner 2003: 23) says that it is “ a work environment which has the necessary conditions for providing the safety and health for the workers”, others see it as “ a practice of several activities aiming to protect factors of production and at the first the human factor from being subjected to accidents during the work, by preparing physical and psychological circumstances which appropriate to the workers to be able to accomplish their jobs with high productivity” (Youssif and others 370:3009). It is known also as “ all the activities done by the organization to preserve the workers' health, safety and to protect them from accidents and work injuries and in a way they are more capable of accomplish their tasks and responsibilities efficiently and effectively avoiding the risk of stopping the work and the compensation resulting from the damages” (AL-Amery 15:2013). Based on that the management of occupational health & safety is identified as “ responsible for preparing an ideal work environment which is appropriate for the capabilities of the workers to protect them and the properties of the organization by means of a n integrated system adopting the updated work quality specification to ensure it's continuity in order to achieve maximum possible revenues” (Hogstod & pieris, 2000: 2) (Robson et al, 2007: 340) (Sullivan, 2018: 2), and it aims to:

- protecting the human production factors and encouraging control of danger causes by means of a safe and healthy environment (Appropriate).
- commitment to all of legislation of health and safety, and the appropriate guidelines to achieve the continued improvement for the system of the work.
- Establishing health organizations and prepare them so they will be suitable for the developments continually by increasing the awareness of issues of health and safety.
- Keeping the physical requirements used in the industrial operations by ensuring an appropriate physical-occupational climate in the work.
- Application of occupational health and safety to safeguard the individuals and properties, and never be tolerant with the intentional violation.
- Encouraging spirit of tranquility among the workers during doing their jobs, to achieve maximum possible revenue.
- Keeping the environment safety and application of quality control systems, by deepen a significant culture of occupational health & safety.

(Bratton & Gold, 2003: 153) thinks that the moral and social responsibility, labor unions, economic activities, labor legal rights, personal psychological aspects, interest in work quality improvement, are the motivations of the response of the organizations to requirements of occupational health & safety management, besides the annual statistics of work accidents and consequences resulting from them, which are issued by dependable international bodies like ISO organization which published in it's report issued in 2018 that (2.2 million) workers loss their lives annually in the world due to accidents and diseases related with work. And more than (4.1 million) American workers suffer from

a dangerous disease or an injury every year. The report mentioned that world loss about (4 %) of the gross national product (GNP) due to accidents related to work. These statistics confirm with no doubt the insisting necessity to improve the systems of management of occupational health & safety worldwide, and this necessity increases continually, therefore, the organizations attempt to accompany the the most important codes issued by international organizations, and the one comes at first is ISO organization which is the subject of this research.

2- The international code ISO45001:2018 and it's standards of application:

The international code ISO45001:2018 is an extent of the international code OHSAS 200718001 for systems of management of occupational health & safety which is issued due to the necessity of the evaluation or licensing the requirements of occupational health & safety for the organizations (AL-Aaraj 2010: 21) by the British standards institute (BSI) in the year 2000 in association with thirteen licensing international bodies (AL-Samman and AL- Obaidi 2012:19), but the OHSAS18001 is an independent code and do not belong to any international organization even the ISO organization, and it is applied in (127) country, however, it's edition for the year 2000 which has been updated in the year 2007 is a complementary of a series of codes _that are interested in work quality _ issued by ISO organization like: ISO 10015:2011, ISO 14001:2015, ISO 9001:2015 in order to applying (the system of integral management of occupational health & safety and environment IMSHSE) in the organizations (Yulineth et al, 2015:01). therefore the code ISO45001:2018 is the normal extension of the previous codes but it has become the substitution of OHSAS18001:2007 which the first use of it was in 2014 till it's first version in 2018.

According to ISO organization; the ISO45001:2018 is identified as “ The code responsible of the health and safety of those workers may be affected by the organization activities, that is done by consolidating and protecting their mental and physical health”, also it is known as “ empowering the different types of the facilities to be able to provide safe and healthy workplaces, this will be done by offering an integrated system of preservation of work injuries or bad health” (AL-Zawawi 2018: 1).

The main objective of this code from the issuing of it's bulletin on the web is to provide a frame of risk management, opportunities of occupational health & safe, protecting from risk of injuries, and offering safe and healthy workplaces. Then to control the risks or decreasing them by the effective preservative arrangements which the ISO,2018 encourage on. Thus there is a global insisting need to unify the systems of management of health & safety according to one international standard in order to exchange the best practises in this field. Regarding the ISO45001:2018 is represented by (10) items that we will show (7) of them which have been in the practical part as it follows: (Yahya et al, 2018: 1), (AlZawawi, 2018:3), (Barakat, 2018:3-8), (ISO, 2018)

- **The fourth item: Context of the organization:** The related to understanding the challenges of occupational health & safety inside the organization and the potential risks in the organization's scope of work, and determining the related internal & external environment.
- **The fifth item: Leadership and workers participation:** Related to policy statement, the organizing rules and determining the responsibilities and authorities and proving the capability of the high level management of leadership, commitment, and question.
- **The sixth item: Planning:** Related to consider of risks, opportunities either inside the organization or outside of it and determining the manner of dealing with those risks.
- **The seventh item: Support:** Related to whatever about resources, efficiency, enlightenment, communication, documented information where the term (documents and records) will be changed to be (documented information).
- **The eighth item: Operations:** Includes planning, control of operation and management of the change, out resource, purchases, and being prepared to contingencies.

- **The ninth item: performance evaluation:** Includes operations of observation, analyzing, evaluation, evaluation of discipline, internal verification, and management review.
- **The tenth item: Continued improvement:** Includes the correctional procedures of improvement against situations of incompatibility in the system of occupational safe management, feedback, and objective of continued improvement.

3- Strategic performance:

The performance represents an important measure to know how superior the organization is. The performance that includes the sum of its activities and outputs is called strategic performance, which is identified “ the measurement of how to use the resources by the managers efficiently and effectively to please the customers and achieve the organization's goals” (Jones & George, 2008:6). and (Wheelen & Hnger, 2010:379) think that is “ The final result of the organization's activity and a reflection of how it make use of its material and human resources to achieve its objectives”, also it is known as “ The way to achieve a sustained competitive advantage that enables the organization to get exceptional finance revenues due to high performance. And because any organization cannot achieve the competitive advantage just due to long- term strategic vision but due to the capability of make it sustained so the organization can reach a n advanced rank (Rylkova & Chobtova, 2014: 182). So the strategic performance is a set of measures used by the organizations to evaluate their abilities, using their human resources efficiently in order to achieve their objectives in response to the environment variables (Kaplan & Norton, 1992: 76). And with the present of many models to measure the performance but we shall depend on (The Balanced Scorecards) model because it focus on the common frame of organization's strategic by transforming the objectives to indicators that giving a complete form of its performance as follows:

- **Customer focus perspective:** Most of the organizations put the customer's needs in the core of their strategies because it forms a significant importance. So it is needed to transform the tasks to services offered to the customers in according to their desires (Dess et al, 2014: 141).
- **Internal operations perspective:** It means that kind of operations which the organization should precede the others, where its operations should of high efficiency following a unique performance in a hard competitive environment (Yung et al, 2014: 141).
- **Learn and growth perspective:** Includes training of the workers and forming culture that supports values of renovation and creativity to rise the level of worker's efficiency and skills, in addition to change the routine procedures so they could suitable to the present age. The perspective focus on three matters (human resources, systems & instructions, and organizing procedures) (Al-Safo, 2008:8).

Third subject: The practical analytical frame

1- Indicators of measuring questionnaire stability: We can calculate the questionnaire stability by many methods but we have chosen two methods as follows:

- **Gronbach – alpha test:** Testing of how much the questionnaire expresses the subject of the research, where the values of the axes are more than (70 %) and all of them less than the total value which gives a high stability property.

Table (1): Value of stability on axes of (occupational health & safety management) variable and axes of (strategic performance) variable.

Occup. H&S management And ISO 45001	Organization Context	Leadership & participation	Planning	support	operations	Performance evaluation	Continued improvement
Cronbach – alpha coefficient	0.799	0.872	0.825	0.846	0.870	0.885	0.891
Strategic performance	Customer focus		Internal Operations		Learn and growth		
Cronbach – alpha coefficient	0.901		0.902		0.899		
Total Cronbach – alpha coefficient	0.922						

- **Measurement of data validity in the statistical analysis:** (Kolmogorov – Smirnov) measure was used to verify that there are no unreal relationships in the data so the results will not be affected negatively and in order to prove their normal distribution which confirms the ability of the independent variable to explain the dependent one.

Table (2): The normal distribution of axes of (occupational health & safety management) variable and axes of (strategic performance) variable.

Occup. H&S management And ISO 45001	Organization Context	Leadership & participation	planing	support	operations	Performance evaluation	Continued improvement
Kolmogorov – Smirnov	2.71	2.43	2.51	2.13	1.05	2.02	1.55
0.05 < Sig	0.079	0.091	0.089	0.072	0.088	0.068	0.096
Strategic performance	Learn and growth		Internal Operations		Learn and growth		
Kolmogorov – Smirnov	2.936		1.129		2.131		
0.05 < Sig	0.090		0.103		0.830		

2- Analysis of the personal specifications and characteristics of the research sample:

The research sample characteristics and general data were represented by five categories as listed in the table below:

Table (3): Description of personal characteristics of research sample.

Personal specifications and characteristics									
Age category									
Total		51 more than		41 – 50		31 - 40		Less than 30	
percent	repeat	prcent	repeat	percent	Repeat	percent	repeat	percent	repeat
100	50	28%	14	40%	20	26%	13	6%	3

Education category									
Total		High level		High diploma		B.s.c		Diploma	
percent	repeat	percent	repeat	percent	Repeat	Percent	repeat	percent	repeat
100	50	14%	7	6%	3	54%	27	26%	13
Employment period category									
Total		16 more than		11 – 15		6 – 10		5 less than	
percent	repeat	percent	repeat	percent	Repeat	percent	repeat	percent	repeat
100	50	58%	29	22%	11	14%	7	6%	3
Task and occupation category									
Total		Division head and more		Subdivision head		Unit head		Employee	
percent	repeat	percent	repeat	percent	Repeat	percent	repeat	percent	repeat
100	50	14%	7	28%	14	26%	13	32%	16
Category of training courses in occupational health & safety management									
Total		Three and more		Twice		One		None	
percent	repeat	percent	repeat	percent	Repeat	percent	repeat	percent	repeat
100	50	0	0	8%	4	20%	10	72%	36

- Age category: The category of (30 and less) formed the lowest value (6 %) but the largest two categories (41-50) and (51 and more) formed the highest percentages (40% and 28% respectively) and it refers to the ability of measuring the research phenomenon.
- Education category: The largest percentage belongs to baccalaureate degree – more than the half, but the highest levels formed (20 %) together. They are considered to be normal for all of the categories and strengthen the measurement of the research phenomenon.
- Employment period: The two categories (5 and less) and (6-10) formed the lowest percentage (20 % for both). The highest percentage was for (16 and more) (it was 58 %). that suggests the present of personals who have enough experience and who they are in need of it to recognize the research phenomenon.
- Occupation category: The category of administrative tasks didn't reflect significant varying percentages regarding the employees, units heads and administration units heads but regarding a division head highest levels, however they are considered to be normal somehow in recognizing the research phenomenon.
- Training category: The training related to occupational health & safety management formed (28 %) for (one) and (two) categories, and the rest (72 %) of the sample didn't participate in any training. This suggests the necessity to pay attention to occupational safety management and it's effect on the strategic performance of the company.

3- Analysis of the findings, explanation, and hypothesis test:

- **Response to questions- indicator: (First hypothesis test):** The arrangement of arithmetic means and standard deviations was adopted to determine the level of occupational safety management application according to items of ISO45001:2018 and the strategic performance of the company, as follows:

- Proportional importance = [balanced mean ÷ max. importance] (1)

- The max. importance = 5 (highest mean in the measure).

And regarding the level of “ Application “ is found as follows:

- Category long = [max. limit – min. limit] ÷ [No. of levels] (2)

- levels = 3, meaning that (high level, low level).

- Category long = $[(5-1) \div 3]=1.33$, meaning that the levels: (1 to 2.33 are low)

(2.34 to 3.66 are medium), (3.67 to 5 are high).

Table (4): Arithmetic mean, application, and importance of answers of the sample for management of occupational safety and ISO45001:2018

	Standards of occupational safety management and items of ISO45001:2018	Mean ave.	Standard deviation	Application level	Relative importance
Organization Context	The company believes in the necessity of the present of a unit that is specialized in the management of occupational health and safety	4.36	0.741	High	0.87
	The company preserves the workers and properties by adopting the management of occupational health and safety	3.98	0.989	High	0.79
	The company administration sets standards of work to take care of it's workers' health and safety	3.84	1.12	High	0.76
	The company encouraging awareness that to deepen the culture of occupational health and safety	3.72	1.096	High	0.74
	Total mean of organization context	3.97	0.897	High	0.79
Leadership And participation	The company administration emphasizes on the commitment to the steted standards.	3.84	0.945	High	0.76
	The company is committed to the legislation of occupational safety management	4.06	0.834	High	0.81
	The company is interested in the training courses of occupational health and safety	3.96	0.978	High	0.79
	There is a documentation of the implied standards of occupational safety	3.7	1.153	High	0.74
Total ave. of leadership and participation		3.89	0.870	High	0.77
Planing	The company deals with the standards of occupational safety as part of it's plan	3.22	1.269	Medium	0.64
	The sets clear objectives of occupational safety and it's policy.	3.76	0.928	High	0.75
	The company is committed to previously steted programs of occupational safety management	3.8	0.871	High	0.76
	The company is committed to legal requirements of occupational safety management and prepares needed plans accordingly	3.84	1.007	High	0.76
Total ave. of planing		3.66	0.83	Medium	0.73
Support	The company studies the balance between risks of work and costs to get rid of them.	3.95	0.924	High	0.79
	The administration has many methods to obtain information about the health and safety of the workers.	3.82	0.931	High	0.76
	The administration is committed to check and correct it's records of occupational health and safety.	3.72	1.040	High	0.74
	The administration depends on scientific, statistical, and mathematical methods to measure and observe the accidents.	3.72	0.980	High	0.74
Total ave. of support		3.8	0.876	High	0.76
Opera	The company has a clear structure with specified responsibilities to manage occupational health and	4	0.871	High	0.80

	safety.				
	The company trains continually it's workers on standards of occupational health and safety.	3.74	0.795	High	0.74
	The company has it's own procedures regarding emergency situations of occupational health and safety.	3.70	1.063	High	0.74
	The company controls the documentation of standards of occupational health and safety.	3.42	1.060	Medium	0.68
Total ave. of operations		3.72	0.750	High	0.74
Performance Evaluation	The administration measures performance of the occupational health & safety in all of the divisions.	3.84	0.795	High	0.76
	The administration encourages the workers to improve the standards of occupational health & safety.	3.64	1.063	Medium	0.72
	The administration reviews the standards of occupational health & safety to correct any fault.	3.50	1.060	Medium	0.70
	The administration has the ability to make decisions to improve the occupational health & safety.	3.85	0.880	High	0.77
Total ave. of performance evaluation		3.7	0.83	High	0.74
Continuous Improvement	The company adopts programs to decrease potential risks and accidents when performing works.	3.6	0.979	Medium	0.72
	The company emphasizes on the continued improvement of the work procedures to decrease accidents and risks.	3.74	1.035	High	0.748
	The company is keeping to work on getting prevention methods against work accidents.	3.62	1.033	Medium	0.72
	The company has it's own systems and procedures to know causes of the accidents and how to prevent them.	3.62	1.027	Medium	0.72
Total ave. of continuous improvement		3.65	.932	Medium	0.73
Total mean of the variable of occupational health & safety management and ISO45001:2018		3.770	0.831	High	0.750

In table (4) is clear that in general the company is applies the management of occupational health & safety according to ISO45001:2018 items with a high percentage for all of the requirements which relates to the (7) items, with a total relative importance (75%), an arithmetic mean (3.77), and a standard deviation of (8.31). And with these results; the first part of the hypothesis is accepted. The first hypothesis shows that (Diyala) state company for electrical industries applies the management of occupational health & safety according to ISO45001:2018 which are: organization context, leadership & workers participation, planning, support, operations, performance evaluation, continuous improvement.

And it is noted from table (5) that the total arithmetic mean of “strategic performance “ variable is also (3.77), which is higher than the assumed one (3) but with a standard deviation of (1.06), with a high total application percentage, and with a relative importance of (75 %) which shows the workers do care of the strategic performance as it is assumed in the second hypothesis about the application and achievement of the company of strategic performance regarding the customer focus, internal operations, and learn & growth. According to these results; the second part of the first hypothesis is accepted; and accordingly the first hypothesis is totally accepted.

Table (5): Mean value, standard deviation, application, and relative importance of the sample answers regarding the strategic performance variable.

	Strategic performance variable	Mean ave.	Stand. deviation	Application level	Relative importance
Customer focus	The company uses survey and workshops to get information about customer's satisfaction about it's products.	3.8	1.039	High	0.76
	The company satisfies it's customers by high quality products.	4.12	0.908	high	0.82
	The company responds to customer's demands quickly and provide them appropriately .	4.16	0.783	high	0.82
	The company provides work procedures and publications that helps achieving customer's satisfaction.	3.76	1.049	high	0.75
Total mean of customer focus		3.96	0.954	high	0.79
Internal operations	The company adopts specific standards to provide the best production or to maintain the quality of it's productions.	4.06	1.138	high	0.81
	The company desires to use modern technologies in it's work.	3.74	1.145	high	0.74
	The company records work procedures as one of the requirements of quality and control systems.	3.78	1.136	high	0.75
	The company take care of regular maintenance for the equipments to decrease breakdowns.	3.8	1.131	high	0.76
Total mean of internal operations		3.84	1.101	high	0.76
Learn and growth	The company adopts training programs leading the workers to improve their performance.	3.4	1.264	medium	0.68
	The company invests part of it's budget to qualify and develop it's human resources.	3.52	1.135	medium	0.70
	The administration take care of providing the appropriate environment to work and produce.	3.7	1.135	medium	0.74
	The company make use of the up to date techniques conforming to modern information age.	3.5	1.252	medium	0.70
Total mean of learn and growth		3.53	1.011	medium	0.70
Total mean of strategic performance variable		3.77	1.066	high	0.75

- **Second hypothesis test:** Which states “ There are a relationship and an impact of the application of occupational safety management standards according ISO45001:2018 on strategic performance of the company “ as indicated in table (7) where the findings suggests that:
 - The item (organization context) in the code ISO45001:2018 shows moral relationships with all of the three axes of strategic performance and suggests that the company believe in the necessity of existence of a specialized unit to preserve the properties and workers, and encourages this culture and deepen it. Besides the item (3) shows modules of moral impact on strategic performance dimensions suggesting the company policy helps rising the strategic performance by (33.8 %) and explains (18.2 %) of the changes in it's performance .
 - The item of leadership and participation in the code ISO45001:2018 shows moral relationships with all of the three axes of strategic performance suggesting that the company applies standards of occupational health & safety management by means of the obligatory legislation, recording them via a unit which is responsible of that. In addition, this item shows two patterns of impact on strategic performance dimensions which means that the administration helps increasing the strategic performance by (24.2 %) and explains (21.5 %) of the changes of it's performance.

- The item of “Planning” of the specification ISO45001:2018 for management of occupational safety shows (3) moral relationships with axes of strategic performance and suggests that the company has to deal with the standard of occupational considering it as part of it's plan and putting for that clear legal objectives. In addition to that, it shows (3) patterns of moral impact on strategic performance which leads to that the planning do helps increasing the strategic performance by (26.4 %) and explains (19 %) of the performance changes.

Table (6) Impact of application of occupational safety management according to ISO45001:2018 on the strategic performance (N=50).

Variables		Variable of occupational safety and ISO45001:2018 for Diyala company						Impact	Percent.	
		Organization context	Leadership and participate.	Planning	Support	operations	Performance evaluation			Continue. Improve
Variable Of strategic performance of Diyala state company for electrical industries	Customer focus	$r = **.545$	$r = **.626$	$r = **.528$	$r = **.533$	$r = *.397$	$r = **.592$	$r = *.484$	7	100
		$\beta = .545$ $F = **20.2$ $R^2 = .297$ $Sig = .000$	$\beta = .626$ $F = **30.9$ $R^2 = .392$ $Sig = .000$	$\beta = .528$ $F = *18.5$ $R^2 = .279$ $Sig = .000$	$\beta = .533$ $F = **19.0$ $R^2 = .284$ $Sig = .000$	$\beta = .397$ $F = *8.97$ $R^2 = .158$ $Sig = .004$	$\beta = .592$ $F = **25.8$ $R^2 = .350$ $Sig = .000$	$\beta = .484$ $F = *14.65$ $R^2 = .234$ $Sig = .000$	7	100
	Internal operate.	$r = **.566$	$r = **.502$	$r = *.446$	$r = **.575$	$r = *.511$	$r = **.554$	$r = .335$	6	85.7
		$\beta = .566$ $F = **22.6$ $R^2 = .320$ $Sig = .000$	$\beta = .502$ $F = **16.1$ $R^2 = .252$ $Sig = .003$	$\beta = .446$ $F = *11.89$ $R^2 = .199$ $Sig = .001$	$\beta = .575$ $F = **23.6$ $R^2 = .330$ $Sig = .016$	$\beta = .511$ $F = **16.9$ $R^2 = .261$ $Sig = .005$	$\beta = .554$ $F = **21.2$ $R^2 = .307$ $Sig = .015$	$\beta = .335$ $F = *6.08$ $R^2 = .112$ $Sig = .017$	7	100
	Learn & growth	$r = **.716$	$r = **.568$	$r = **.519$	$r = **.507$	$r = .314$	$r = **.595$	$r = **.653$	6	66.6
		$\beta = .716$ $F = **50.5$ $R^2 = .513$ $Sig = .000$	$\beta = .568$ $F = 2.826$ $R^2 = .322$ $Sig = .140$	$\beta = .519$ $F = *17.66$ $R^2 = .269$ $Sig = .044$	$\beta = .507$ $F = 16.6$ $R^2 = .257$ $Sig = .084$	$\beta = .414$ $F = *9.95$ $R^2 = .172$ $Sig = .020$	$\beta = .595$ $F = **26.3$ $R^2 = .354$ $Sig = .000$	$\beta = .653$ $F = **35.6$ $R^2 = .426$ $Sig = .000$	5	71.5
	Total of variable of occup. Safety & manag. & ISO45001:2018	$r = **.687$	$r = **.573$	$r = **.621$	$r = **.611$	$r = **.593$	$r = **.659$	$r = .339$	6	66.6
		$\beta = 0.338$ $F = **9.05$ $R^2 = 0.182$ $Sig = .033$	$\beta = 0.242$ $F = **18.13$ $R^2 = 0.215$ $Sig = .029$	$\beta = 0.264$ $F = *15.04$ $R^2 = 0.190$ $Sig = .026$	$\beta = 0.315$ $F = **7.730$ $R^2 = 0.169$ $Sig = .001$	$\beta = 0.481$ $F = **21.1$ $R^2 = 0.232$ $Sig = .007$	$\beta = 0.251$ $F = *4.721$ $R^2 = 0.163$ $Sig = .016$	$\beta = 0.418$ $F = **17.6$ $R^2 = 0.203$ $Sig = .015$	7	100
	Relation.	3	3	3	3	2	3	2	19	90.5
	Percent	100 %	100 %	100 %	100 %	66.6 %	100 %	66.6 %		
	Impact	3	2	3	2	3	3	3	19	90.5
	Percent	100 %	66.6 %	100 %	66.6 %	100 %	100 %	100 %		

- The item of “support” in the specification ISO45001:2018 for occupational safety management shows (3) moral relationships with axes of strategic performance and suggests that the company has to balance between work risks and costs of getting rid of them, adopting practical methods related to workers' safety and accidents surveillance, the administration should be committed to that. Also it has shown that two patterns of impact on strategic performance dimensions which indicates that the company support helps increasing strategic performance by (31.5 %) and explains (16.9 %) of it's performance changes.

- The item of “operations “ of ISO45001:2018 for occupational safety management shows (2) moral relationships with axes of strategic performance and suggests that the company has a clear structure, specified responsibilities, emergency procedures and document control but there is lack of worker

training. The item also shows (3) patterns of moral impact on strategic performance which indicates that the “operations” help increasing the strategic performance dimensions by (48.1 %) and explains (23.2 %) of it's performance changes.

- The item of (performance evaluation) in ISO45001:2018 for occupational safety management shows moral relationships with all of the strategic performance axes suggesting that the company has to measure the performance of occupational safety program in it's divisions and to improve and review the requirements in order to correct and develop them. The item also shows (3) patterns of moral impact on strategic performance dimensions which indicates that performance evaluation helps increasing the strategic performance by (25.1 %) and explains (16.3 %) of it's changes.

- The item of (continuous improvement) in ISO45001:2018 for occupational safety management shows two moral relationships with the axes of strategic performance suggesting that the company has to adopt and emphasize on programs of accidents reducing during the performing of work. However the company experiences from lack of protection instruments. The item also shows (3) patterns of moral impact on strategic performance dimensions which indicates that the continuous improvement helps increasing the strategic performance by (41.8 %) and explains (20.3 %) of it's changes.

- **Findings of the research:** depending on testing both of hypothesis of the research ; it is clear that:

- When they have been applied over the company; the items of ISO45001:2018 have obtained a high percentage in application except the items of (Planning and Continuous improvement) where their percentages were medium.
- The indications of strategic performance materialization has a high percentage except for indication of (learn and growth) where it was medium.
- The answers of the research sample reflected a high scatter with respect to strategic performance opposite to occupational health & safety management.
- The matrix of relationships has shown (19) moral relationship out of (21), with a percentage of (90.5 %), which confirms the validity of the second part of the second hypothesis with respect to the nature of the correlation relationship between the two variables.

Forth Subject: Ending frame of the research:

This subject introduces the conclusions of the research, the recommendations maybe used as a guide by others, and the list of references as follows:

First: conclusions: Depending upon the induction of literature and practical findings of the research, we conclude the following:

- Diyala state company for electrical industries in general is applying management of occupational health & safety according to the international specification ISO45001:2018 including all of it's items with high percentage which means the validity of the first part of the first hypothesis.
- Diyala company in general is applying and achieving the strategic performance with high percentage for the indications stated in this research, and that confirms the validity of the second part of the first hypothesis.
- The high scatter in the answers of the sample regarding the variable of strategic performance is consistent with the item (five) of the personal specifications and characteristics and the item (b) of the findings which indicates the shortage of training in occupational safety management and if it has an impact on the strategic performance of the company.
- The findings referred to the existence of moral correctional relationships between the

requirements of the international specification ISO45001:2018 for occupational safety management with the indications of strategic performance, and this leads to the acceptance of the first part of the second hypothesis.

- The findings referred to the existence of a moral impact of the requirements of the international specification ISO45001:2018 for occupational safety management on the indicators of the strategic performance, which leads to the acceptance of the second part of the second hypothesis.
- The existence of the requirements of the international specification ISO45001:2018 and its items that are related to management of occupational safety; helps increasing the strategic performance of (Diyala) company and vice versa.

Second : Recommendation: In order to ensure the success of application of ISO45001:2018 in the company; we recommend that:

- Adopting the findings of the research by Diyala state company for electrical industries, besides it is possible that they can be generalized for the rest of the organizations of the research society to make use of the findings and to begin with new horizons that could be applied specifically for the industrial sector.
- The administration of the company need to focus on the training courses and let the workers to participate in those courses in an intensive and continuous manner.
- Adopting the occupational health & safety management in all of the company divisions by applying it, encouraging its culture and demonstrating its requirements, besides education of the workers about items of the specification ISO45001:2018 especially the last edition in 2018.
- It is necessary for the company _ especially with existence of the capacity to achieve that_ to measure the real application of occupational health & safety management and its requirements according to the latest editions continually in all of its divisions in order to recognize the points of weakness and acting on correct them, and to find the points of strength; acting on emphasize them.
- Depending on that the company has the requirements of occupational health & safety management according to items of the international specification ISO45001 with a high percentage; we recommend to focus on that fields weaken the real application of them, like the aspects of (planing & continuous improvement); because of their impact on the increasing of its application, and on the other hand, their impact on the increasing of strategic performance.

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