The Dimensions of the Lean Management of Jawwal between Theory and Practice

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***Abstract****: The objective of the study was to identify the reality of the lean management in Jawwal from the point of view of its employees, and to indicate the availability of lean management tools (organization of the work site, continuous improvement, standard work, multi-function workers, Six Sigma) The study used the analytical descriptive method. The study was applied to Jawwal Company in Gaza Governorate - North Branch. The number of employees was (85) employees. The questionnaire was used as a tool for study. Comprehensive method and (75) questionnaire were recovery at a rate (96%). The study concluded with a number of results, the most important of which were the application of lean management dimensions at Jawwal, and the dimensions that received the least attention from the perspective of the employees of Jawwal (Six Sigma and Multifunctional Workers). There are also no differences between the opinions of employees on the availability of lean management dimensions in terms of (type, qualification, and years of service).*

*The most important recommendations were to increase interest and expand the use of lean management tools because they have a clear impact on innovation, by focusing on tools that have the greatest impact on the achievement of the elements of creativity (continuous improvement, standard work, six Sigma).*

**Keywords:** Lean Management - Jawwal Company, Gaza Strip, Palestine.

# **Introduction**

In the beginning of the nineties, the concept of manufacturing or soft production, which seeks to re-examine the whole process of production process, and to get rid of all activity does not add value to customers, and then the idea of production of the soft turned into a comprehensive thought applied in all areas and business activities such as service areas The concept of value-added culture forms the concept of lean management, a modern management philosophy based on maximizing the value of customers by reducing waste, waste and waiting (Al Shobaki et al., 2018), (El Talla et al., 2018), (Abu-Naser et al., 2018). (Al Shobaki et al., 2017), (El Talla et al., 2017), (Abu-Naser et al., 2017).

Furthermore, it shows the role of innovation in organizations through the awareness of employees and create a climate conducive to innovation and business development, and Jawwal, as a provider of mobile communication services, is in dire need of availability of creative factors, as well as the use of lean management to develop and improve its services to customers.

Therefore, the study dealt with the discussion and analysis of the dimensions of the lean management through (organization of the work site, continuous improvement, standard work, multi-function and six Sigma).

# **Problem Statement**

The service sector in Palestine in general and the telecom sector and Jawwal in particular face the emergence of modern management tools such as: lean management tools as a modern management philosophy that maximizes the value of customers by spreading the culture of waste prevention, minimizing waste and corrupting the use of resources through different activities Jawwal is one of the companies with a strong presence in the Palestinian society and is one of the companies that is always looking to target high quality standards.

However, some customers, especially in the Gaza Strip, have some observations regarding the services provided by Jawwal. The researchers have expressed a desire to examine and verify the truth and truthfulness of the complaints that spread against Jawwal, including:

* Some services need improvements.
* Ambiguity in the standards of some services provided to customers.
* Lack of multi-functional staff.

Therefore, the problem of the study is specifically to answer the main question:

**How do you apply the lean management dimensions of Jawwal from the point of view of its employees?**

**The following questions stem from the main question:**

**Question 1**: What are the dimensions of the lean management of Jawwal?

**Question 2**: Are there differences between the study society's views on the dimensions of the lean management due to the following variables: (type, qualification, years of service)?

# **Research Importance**

The importance of the study stems from addressing a number of modern topics, and the few studies that dealt with this subject, especially in the telecommunications sector, where the study will be implemented in Jawwal. The use of modern administrative tools and creating an atmosphere conducive to creativity among employees contributes to maximizing the value achieved by customers. Through the design of work activities professionally to prevent loss and waste of work, while working to find creative solutions to the problems within the organizations, which helps to expand and grow, and then leads to the development and advancement of society, and highlights the importance of study through:

1. To deal with a new subject, and to the knowledge of researchers are one of the few studies that dealt with this subject.
2. Contributing to the attention of researchers to conduct further applied studies in this important area, which constitutes an addition to administrative literature.
3. The current study highlighted the cellular communications sector represented by Jawwal, which is one of the pillars of the Palestinian economy.
4. The current study may contribute to the results and recommendations of enhancing and improving the services provided by the organizations, especially Jawwal to customers.

# **Research Objectives**

1. Knowledge of the theoretical concepts of lean management and its dimensions.
2. Demonstrating the availability of the lean management dimensions of Jawwal from the point of view of its employees.
3. To identify the differences between the study society's views on the dimensions of lean management according to the following demographic variables: (gender, qualification, and years of service).

# **Research hypothesis**

**Ho 1**: There are no differences between the views of the study community on the availability of lean management dimensions (site organization, continuous improvement, standard work, multi-function, six sigma) due to the following demographic variables: (gender, qualification, years of service).

**This hypothesis is based on the following sub-assumptions:**

**Ho 1**-1: There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to gender.

**Ho 1**-2: There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to the scientific qualification.

**Ho 1**-3: There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to the years of service.

# **Research Limits and Scope**

1. **Human and spatial limits**: The study targeted all workers in Jawwal - North Gaza branch.
2. **Time limit**: The study and data collection were implemented during 2017.
3. **Objective**: This study addressed the application of lean management tools in Jawwal between reality and practice.

# **Research Definitions**

**Lean Management**: A methodology that promotes value added to customers by spreading a culture of prevention of waste, waste and damage.

**Organization of the work site:** ways to make the workplace organized and organized, in a way that keeps the flow of work.

**Continuous Improvement**: A Japanese style that makes simple improvements to activities and services on an ongoing basis.

**Standard Practice**: A guiding method in the form of instructions to standardize executive procedures.

Multifunctional Workers: A method of training employees to deal with more than one task or process within the organization itself.

**Six Sigma:** A systematic approach to improving the process and new services, using scientific and statistical methods to increase customer satisfaction with the services provided to them.

# **The Theoretical Framework of the Study**

**The concept of lean management:**

Lean management has become an important way to improve organizational performance, a philosophy of continuous improvement, requiring commitment and participation by all employees (Jurado & Fuentes, 2014: 48). Lean management has been defined as a philosophy through which the organization aims to maximize value to its customers by minimizing loss and waste (Nicholas, John, 2010). The concept of lean management has two perspectives: the first conceptual, philosophical perspective on guidelines and overall goals, the second practical perspective on a set of practices and tools, or the management techniques that are consistent with the philosophical perspective (Shaikh & Khalifeh, 2014).

The concept of lean management aims to produce products and services at the lowest cost and as quickly as possible. It focuses on efficiency, minimization of waste, damage and loss of resources. This is known as Japanese muda, to improve speed and increase productivity. Therefore, the most fundamental principles of the concept of lean management is the search for perfection in an ever-changing and rapidly changing world. Clearly, when we talk about the concept of lean management, we are talking about philosophy as an unfinished project. It requires every individual in the organization to participate fully in its principles, However, it is a simple philosophy of understanding and learning, but the challenges are to implement it, because it is difficult to see perfection in the business design process, so managers need to change their management style in terms of motivation and involve them in the use of lean management tools.

Changing the management style, behaviors, and ways of thinking of people and organizational cultures is the most difficult and important aspect of the shift to the use of lean management approach and tools, rather than change in tools, processes and systems (Nylund, 2013).

**Principles of Lean Management:**

In order to achieve this philosophy its main objectives are based on a set of basic principles that cannot be successful without it. In his book, "The Toyota Way," Liker Jeffrey gave fourteen principles underpinning the graceful management philosophy of (Ben Warth and Jabah, 2016):

**Principle 1**: Focus the decisions of the administrative institution on a long-term philosophy and acceptance of costs in the short term.

**Principle 2**: Create a continuous flow in the operations of the institution in order to face problems.

**Principle 3**: Adoption of the system of withdrawal instead of payment in order to avoid excess production.

**Principle 4**: Streamlining of activities by not obstructing operations and avoiding bureaucracy.

**Principle 5**: Emphasis in the culture of the institution on the principle of (JIT) delivery on time in order to address the problems in order to ensure a good level of quality.

**Principle 6**: Standardization and characterization of production processes and follow the rule of continuous improvement.

**Principle 7**: Visual administration: that is, all rules and administrative methods must be clear to all and known to all, which makes it possible not to stay errors hidden.

**Principle 8**: Use only the proven technology in the production process to avoid mistakes and waste of time and resources.

**Principle 9**: The formation of leading people with sufficient knowledge of the details of all operations within the institution and able to devote the culture and philosophy of the institution in their own way.

**Principle 10**: The formation of specialized teams in quality that follow the philosophy of the institution.

**Principle 11**: Respect and encourage partners and suppliers to always strive for the best and continuous improvement.

**Principle 12**: Devoting the principle of fieldwork to knowing exactly what is going on and understanding the situation correctly.

**Principle 13**: Making decisions promptly and without delay, in accordance with the actors within the institution taking into account all the surrounding factors.

**Principle 14**: The institution must always remain in the way of learning and tracking the causes of the problems of the institution and work to solve them in order to achieve the idea of ​​continuous improvement.

**Requirements for applying lean management method:**

Any management style that will be applied in institutions will not succeed without a set of requirements that contribute to its success. The most important requirements for applying lean management are the following (Ben Warth and Jabah, 2016):

1. The success depends on the extent to which the senior management feels the importance of this method and the availability of the possibilities and conditions for its application, and the transformation from the bureaucratic system to the democratic system to give the workers an area of ​​freedom, initiative and creativity, in addition to the full acceptance of the administration to abandon traditional methods and orientation towards philosophy Modern to lean management.
2. Cooperation between management and employees: Management must accept the proposals of the staff and provide them with the necessary means necessary for the process of change, in addition to the administration to assign new tasks to the employees create a kind of challenge, which contributes to eliminating the boredom resulting from routine tasks.
3. Interest in training and training is both qualitative and quantitative: any new method actually creates a kind of fear for employees as it creates changes in the methods of work, so any institution should take care of training employees in any new ways because it feels comfortable and reassurance and job security.
4. Change in the culture of the institution: the success of any new management method requires a change in the culture of workers, which contributes to facilitate the process of change and move to the new method, also change the culture to strengthen their affiliation and loyalty to the institution.

**Jawwal Company:**

Since its inception, the Palestinian Cellular Telecommunications Company (Jawwal) has been a cellular company that competes with four Israeli companies in the cellular communications industry which refused to sign agreements that allow Jawwal subscribers to send and receive calls with any of them in order to impose isolation. Hence, the Palestinian Cellular Telecommunications Company (Jawwal) was the first Palestinian cellular company to connect the parts of Palestine in light of the fragmentation of the country and the difficulty of communication between the parents. Despite the difficult political and economic circumstances, Jawwal has been able to achieve tangible success on the ground from the moment it started its service in 1999. It has proved to be the first mobile telecommunications company in Palestine to be chosen by more than 2.85 million subscribers in 2018.

# **Literature Review**

* Study of (El Talla et al., 2018) aimed to identify the creative environment and its relation to the graceful management of the technical colleges operating in Gaza Strip. The analytical descriptive method was used through a questionnaire which was randomly distributed to 289 employees of the technical colleges in Gaza Strip with a total number of (1168) employees and a response rate equal to (79.2%) of the sample study. The results showed a high degree of approval for the dimensions of the creative environment with a relative weight of (75.19%). It also showed a high level of creative environment where the ranking and relative weight was as follows: Fluency (76.86%), Sensation of problems (74.89%), Flexibility (74.59%) and originality (74.41%). The results showed that the technical colleges achieved a high level of lean management with a relative weight of 76.69% and a high level of lean management. (79.56%), responding to customer requirements (79.14%), reducing costs (75.68%), maximizing competitiveness and profitability (74.59%), Improve service (74.52%), and the results showed a statistically significant difference relationship between the dimensions of the creative environment and management in lean technical colleges in Gaza Strip. The researchers suggested a number of recommendations, the most important of which is the need to enhance the dimensions of the creative environment by working to improve the abilities of the faculties in fluency, flexibility, originality, sensitivity to problems and the importance of increasing attention to the dimensions of achieving the graceful management because of their role in the development of technical education departments and sustainability. Develop lean management mechanisms and applications in terms of reducing waste, reducing costs, improving service, responding to customer requirements, and maximizing competitiveness and profitability, commensurate with the capabilities of these colleges.
* Study of (Al Shobaki et al., 2018) aimed at identifying the extent of the technical colleges' commitment to the application of the lean management. The analytical descriptive method was used through a questionnaire randomly distributed to 289 of 1168 employees of the technical colleges in the Gaza Strip with return ratio of (79.2%) out of the sample study. The results of the study showed that the technical colleges achieved a high level of lean management with a relative weight of 76.69%. The results of the study showed that there is a high level of lean management (loss reduction, cost reduction, service improvement, customer satisfaction, maximization of competitiveness and profitability) in technical colleges in Gaza Strip. The field of waste reduction came first and with a relative weight of 79.56% In the second place came the field (responding to customer requirements) and a relative weight (79.14%), in the third place came the field (cost reduction) and a relative weight (75.68%), in the fourth place came the field (maximizing competitiveness and profitability) and relative weight (74.59%), in the fifth and final place came the field of (service improvement) and relative weight (74.52%). The results confirmed the existence of statistically significant differences in the application of the lean management dimensions between technical colleges. The results showed that there were no differences in the application of the lean management according to the levels of experience except after the reduction of costs, where there were differences from the point of view of those with low experience. The researchers suggested a number of recommendations, the most important of which is the need to increase the attention to the dimensions of achieving the lean management because of their role in the development and sustainability of technical education departments by enhancing and improving the operations in the technical colleges, especially in the difficult conditions experienced by Gaza Strip and the scarcity of resources. And the importance of urging decision makers in technical colleges to develop efficient management mechanisms and applications in terms of reducing waste, reducing costs, improving service, responding to customer requirements, and maximizing competitiveness and profitability, commensurate with the capabilities of these colleges
* Study of (Ben Warth and Jabah, 2016) aimed to shed light on one of the most important modern methods of production management, which is the graceful management method, and through the analytical descriptive approach adopted by it. It has been concluded that these institutions are represented by senior management and are committed to providing all the necessary resources to implement this method. The training policy adopted is in line with the basic requirements. However, the prevailing culture in these institutions, Help between management and workers remains a major obstacle to the application of this administrative philosophy.
* Study of (Mohammed and Chener, 2015) was designed to test the relationship between the quality of work life and organizational creativity in the Ministry of Planning. The data were collected from a sample of (100) directors representing the decision centers in the Ministry of Planning. The study was based on several tools: questionnaire, interviews and official reports. Research shows the existence of relationships and the impact of search variables.
* Study of (Sparrow & Otaye, 2014) The aim of the study was to identify the relationship between lean thinking and the role of human resource management in achieving lean sustainability which may lead to changes in the intellectual capital surrounding soft thinking and new core experiences. The study is based on 18 interviews with senior managers responsible for lean management and HR strategy in 12 organizations based on the case-study approach to results. The study concluded that the Organization's human resources should be engineered for the successful implementation of lean management through changes in human resource skills, behavior and competencies as well as changes in human resources practices.
* Study (Damrath, 2012) aimed to develop a general framework that could be used as a conceptual guide to implement the concept of lean management in the services sector. The methodology of the study was descriptive to describe the lean management initiatives using questionnaire as a study tool, distributed to 123 workers for 35 service companies. The study reached a number of conclusions, the most important of which is: the application of the lean administration in the service sector based on a number of lean tools.

**Comment on previous studies:**

The previous studies dealt with the subject of manageability and applied to various sectors: pharmaceutical institutions, banks, universities, telecommunications companies, sectors that provide most of the services to customers, and are consistent with the current research that the application on the company Jawwal, which provides services in the telecommunications sector. There is a scarcity in the studies that dealt with the subject of the lean management, especially in the Arabic language, and this gives special importance to the current research.

# **Methodology of the study:**

**Study Methodology**: Based on the nature of the study and in order to achieve the objectives of the study, the researchers used the descriptive analytical method.

**Researchers used two main sources of information:**

1. **Secondary Sources**: The researchers aimed at addressing the theoretical framework of the study to secondary data sources, which are related Arabic and foreign books and references, periodicals, articles and reports, and previous researches and studies that dealt with the subject of the study.
2. **Preliminary Sources**: To address the analytical aspects of the study subject, the required data were obtained through the Questionnaire prepared for this purpose. The data were analyzed and the results were analyzed using the Statistical Package for Social Science (SPSS).

**Study Society:**

The survey population consisted of all employees of Jawwal in the Gaza Strip - North Branch (85). The researchers distributed the questionnaires to all members of the study community. The total number of questionnaires was (75), which is (96%) valid for analysis, and the following tables show the characteristics and characteristics of the study sample as follows:

**Part One: Personal Information:**

**Table 1**: Distribution of the society of the study

|  |  |  |
| --- | --- | --- |
|  | **Repetition** | **Percentage** |
| **Gender** | Male | 57 | 76.00% |
| Female | 18 | 18.00% |
| **Total** | 75 | 100.0 |
| **Qualification** | BA | 58 | 77.3% |
| M.A. | 17 | 22.70% |
| **Total** | 75 | 100.0 |
| **Years of Experience** | 1 to 5 years | 33 | 44.00% |
| From 6 to less than 10 years | 31 | 41.30% |
| More than 10 years | 11 | 14.70% |
| **Total** | 75 | 100.0 |

Table 1 shows that 76.00% of the study population is male and 18.00% of the study population is female. This indicates that the employees in Jawwal are mostly male and few females, and this is because male employees have ability to bear the burden of working pressure and field work more than females. And that 77.30% of the society of the study qualifies them as "bachelor", and 22.70% of the society of the study qualifies for them "Master", and this shows that most of the employees of the bachelor degree compared with employees of the graduate campaign, and this is because Jawwal need Is more technical than the need for higher qualification holders. However, the company's policy supports the continuous development of its employees. This is evident in the tendency of many of its employees to complete their higher studies and obtain higher qualifications than the bachelor's degree. And 44.00% of the study population ranged from 1 to less than 5 years. 41.30% of the study population ranged from 6 to less than 10 years. 14.70% of the study population had years of experience they have "10 years and more," it is clear that Jawwal has many experiences. It is noticeable that the lowest percentage of those with long experience and the highest percentage of the least experienced, because Jawwal is in a stage of development and growth and that the number of its employees is constantly increasing.

**Study Tool:**

A questionnaire was prepared on the "Lean Management Dimensions of Jawwal"

1. **The questionnaire was divided into two parts:**
* **Part 1**: It consists of the personal data of the study community and consists of 3 paragraphs
* **The second part** deals with the dimensions of the lean management of Jawwal. It included five areas (the organization of the work site, continuous improvement, standard work, multi-function workers, six sigma), each of which consists of 5 paragraphs.

The answers to each paragraph were 5 answers, where the score "5" was completely agreeable and the score "1" was not fully agreeable as shown in Table (2).

**Table 2**: Answers Scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Category** | **Absolutely Agree** | **Agree** | **To Some Extent** | **Not Agree** | **Not Quite OK** |
| **Class** | 5 | 4 | 3 | 2 | 1 |

**Reliability and consistency of resolution:**

**The first method: The judges believe:**

The questionnaire was presented to a group of arbitrators consisting of (5) members of the faculty, specialists in management, economics, accounting, statistics, and technical education in universities and colleges.

1. **Validate the internal consistency of the resolution paragraphs**

The internal consistency of the questionnaire paragraphs was calculated by calculating the correlation coefficients between each paragraph and the total score of its axis as follows:

**Internal Honesty for Field Boundaries: Lean Management**

The validity of the internal consistency was determined by calculating the Pearson correlation coefficient between each of its paragraphs with the dimension to which it belongs and with the total score, in order to identify the strength of the resulting correlation coefficient.

**Table 3**: The correlation coefficients of paragraphs in their fields as a whole

|  |  |
| --- | --- |
| **The Field** | **Field Correlation Coefficient As A Whole** |
| **The Value Of R** | **Level Of Significance** |
| Organization Of The Work Site | 0.771 | 0.000 |
| Continuous Improvement | 0.800 | 0.000 |
| Standard Work | 0.838 | 0.000 |
| Multifunctional Workers | 0.773 | 0.000 |
| Six Sigma | 0.791 | 0.000 |

The r value of the table is at a significance level of 0.05 and the freedom level of "21" is 0.415

It is clear from the previous table that all correlation coefficients are statistically significant. The probability value of each paragraph is less than 0.05 and the calculated r value is greater than the tabular r value of 0.415. Thus, the paragraphs of the first axis are true to what was put to measure

**Reliability of questionnaire paragraphs:**

1. **Split-Half Coefficient:**

Pearson correlation coefficient was found between the rate of individual questions of rank and the rate of marital questions for each dimension. Correlation coefficients were corrected using the Spearman-Brown Coefficient correlation coefficient according to the following equation:

1. **Cronbach’s coefficient alpha**

The researcher used Cronbach’s coefficient alpha to measure resolution stability as a second method.

Table (4) shows that there is a relatively high coefficient of consistency of the questionnaire paragraphs, which reassures the researcher to use the questionnaire.

**Table 4**: The stability coefficient for measuring the graceful management (half-way)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Axis Content** | **Number Of Paragraphs** | **Midterm Retail** | **Correlation Lab** | **Cronbach’s Coefficient Alpha** |
| Organization Of The Work Site | 5 | 0.866 | 0.928 | 0.801 |
| Continuous Improvement | 5 | 0.888 | 0.941 | 0.821 |
| Standard Work | 5 | 0.902 | 0.948 | 0.836 |
| Multifunctional Workers | 5 | 0.745 | 0.853 | 0.741 |
| Six Sigma | 5 | 0.750 | 0.857 | 0.691 |

**Analysis of the paragraphs and hypotheses of the study.**

A single sample T test was used to analyze the questionnaire paragraphs and the following tables contain the percentage of each paragraph as well as the arithmetic mean, the relative weight, the t value and the significance level of each paragraph. The paragraph is positive, meaning that the members of the community agree with their content if the calculated t Is greater than the value of tabular t, which is equal to 1.995 at the level of freedom of 74 and the level of significance of 0.05 (or the moral level is less than 0.05 and the relative weight is greater than 60%). The paragraph is negative in the sense that the members of society do not agree with their content if calculated value of t is smaller than the tabular t value which is -1,995 at a free degree 74 with moral level is (0.05), or (the moral level is less than 0.05 and the relative weight is less than 60%.) The opinions of the sample in the paragraph are neutral if the moral level is greater than 0.05.

**Question 1**: What are the dimensions of the lean management of Jawwal?

For the answer, the researchers calculated the level of application of Lean management dimensions by calculating the arithmetic mean, standard deviation and relative weight. The t-test for each sample was used for each of the pillars of the lean management axis and the overall response of the axes. Table (5) Lean management.

**Table 5**: shows the response of community members to the lean management axis

| **No.** | **Item** | **SMA** | **Standard Deviation** | **Relative Weight** | **"T" Value** | **Probability Value** |
| --- | --- | --- | --- | --- | --- | --- |
| **First Field: Organization of the work site** |
|  | The Management follows a clear and specific methodology for regulating the workplace and its equipment in order to maintain the flow. | 4.480 | 0.577 | 89.60 | 22.17 | 0.000 |
|  | Employees are interested in arranging their work place and files and placing them in their places to facilitate their access when needed. | 4.426 | 0.700 | 88.52 | 17.82 | 0.000 |
|  | The Management focuses on following up on the cleanliness of the workplace, equipment and offices to make it suitable for business performance | 4.413 | 0.699 | 88.26 | 17.50 | 0.000 |
|  | There are measures (criteria) for the performance of previous steps to be a context followed by new employees | 4.346 | 0.687 | 86.92 | 16.96 | 0.000 |
|  | Management stimulates self-discipline of employees to keep the workplace in order. | 4.173 | 0.623 | 83.46 | 16.30 | 0.000 |
| **All Paragraphs** | 4.368 | 0.492 | 87.36 | 24.07 | 0.000 |
| **The Second Field: Continuous Improvement** |
|  | Management seeks to identify the root causes of problems for continuous improvement. | 4.080 | 0.652 | 81.60 | 14.33 | 0.000 |
|  | The Management seeks to improve the skills and knowledge of its staff. | 4.133 | 0.600 | 82.66 | 16.35 | 0.000 |
|  | Management adopts the results of employee performance appraisal mainly for continuous improvement. | 3.960 | 0.686 | 79.20 | 12.11 | 0.000 |
|  | The Management publishes among workers a culture of loss of activities and continuous improvement. | 4.00 | 0.636 | 80.00 | 13.60 | 0.000 |
|  | The Management adopts new programs and methodologies for continuous improvement of activities and processes. | 4.213 | 0.599 | 84.26 | 17.53 | 0.000 |
| **All Paragraphs** | 4.077 | 0.485 | 81.54 | 19.22 | 0.000 |
| **The Third Field: Standard Work** |
|  | Management adopts standards for work procedures to prevent repetition of quality problems. | 4.306 | 0.614 | 86.12 | 18.41 | 0.000 |
|  | The Management shall endeavor to complete the work within the standard time to avoid delaying the work. | 4.013 | 0.647 | 80.26 | 13.56 | 0.000 |
|  | The Management sets standard standards and procedures for each process that facilitates employees to perform their business. | 4.146 | 0.537 | 82.92 | 18.47 | 0.000 |
|  | The Management is concerned with arranging the work procedures in a standard way to prevent loss in the movements and operations of the employee. | 4.240 | 0.713 | 84.80 | 15.05 | 0.000 |
|  | Management seeks to establish minimum operating procedures to minimize loss resulting from redundant and unnecessary procedures. | 4.360 | 0.690 | 87.20 | 17.06 | 0.000 |
| **All Paragraphs** | 4.213 | 0.500 | 84.26 | 21.01 | 0.000 |
| **The Fourth Field: Multifunctional Workers** |
|  | Management provides staff with the ability to work in different departments. | 4.120 | 0.770 | 82.40 | 12.59 | 0.000 |
|  | The Management seeks to diversify the skills of employees by adopting a career rotation method. | 3.986 | 1.019 | 79.72 | 8.37 | 0.000 |
|  | Management seeks to provide employees with a variety of skills through training programs. | 3.946 | 0.714 | 78.92 | 11.47 | 0.000 |
|  | The performance of the employees in the organization decreases when they are transferred to other departments or units. | 3.773 | 0.798 | 75.46 | 8.39 | 0.000 |
|  | Employees respond to the functional rotation method without resistance. | 4.133 | 0.722 | 82.66 | 13.58 | 0.000 |
| **All Paragraphs** | 3.992 | 0.569 | 79.84 | 15.07 | 0.000 |
| **The Fifth Field: Six Sigma** |
|  | The organization identifies work problems accurately. | 4.080 | 0.850 | 81.60 | 10.99 | 0.000 |
|  | The organization measures the actual performance with the plans for the purpose of determining the gap between them and improvement. | 4.053 | 0.733 | 81.06 | 12.44 | 0.000 |
|  | The organization analyzes work problems and deviations accurately. | 3.866 | 0.664 | 77.32 | 11.30 | 0.000 |
|  | The organization makes continuous improvements even if there are no problems. | 3.893 | 0.745 | 77.86 | 1.38 | 0.000 |
|  | The Organization monitors and follows the implementation of solutions. | 3.946 | 0.542 | 78.92 | 15.11 | 0.000 |
| **All Paragraphs** | 3.968 | 0.477 | 79.36 | 17.55 | 0.000 |
| **Total degree of axis** | 4.123 | 0.398 | 82.46 | 24.44 | 0.000 |

The tabular value t at the significance level of 0.05 and the freedom level of "74" is 1.995

**The following table shows the following:**

**First Field Analysis (Workplace Organization):**

The results show that the arithmetic average of all the clauses related to the organization of the work site is 4.37 and the relative weight equals 87.36% which is greater than the neutral relative weight of 60%. The researchers attributed this to the administration's clear methodology to regulate the workplace and its equipment in order to maintain the flow, and the attention of the workers to arrange their work place and files and put them in place to facilitate access when needed.

This helps to perform the work comfortably, and gives a positive impression in the hearts of visitors and reviewers.

1. **Field Analysis (Continuous Improvement):**

The results show that the mean of all paragraphs (continuous improvement) is 4.08 and the relative weight is 81.54%, which is greater than the neutral relative weight of 60%. The researchers attribute this to the fact that Jawwal's management is adopting new programs and methodologies for continuous improvement of activities and operations, and the Department is improving the skills and knowledge of its employees.

1. **Field Analysis (Standard Work):**

The results show that the mean of all the paragraphs (standard work) is 4.21 and the relative weight is 84.26%, which is greater than the neutral relative weight of 60%. The researchers attribute this to the fact that Jawwal's management seeks to establish minimum operating procedures to minimize loss resulting from redundant and unnecessary procedures, and the Department adopts standards for procedures to prevent the recurrence of quality problems.

1. **Field Analysis (Multifunctional Workers):**

The results show that the mean of all the paragraphs related to multi-function factors is 3.99 and the relative weight is 79.84%, which is greater than the neutral relative weight of 60%. The researchers attributed this to the fact that the management of Jawwal provides workers with the ability to work in different departments, and respond workers to the method of rotation without resistance.

1. **Field Analysis (Six Sigma):**

The results showed that the mean of all six-Sigma-related paragraphs was 3.97 and the relative weight was 79.36%, which is greater than the neutral relative weight of 60%. The researchers attribute this to the fact that Jawwal identifies the work problems accurately and compares the actual performance with the planned for the purpose of determining the gap between them and improvement.

Overall, the arithmetic mean for the whole degree of lean management is 4.12 and the relative weight is 82.46%, which is greater than the neutral relative weight of 60%.

The researchers conclude that Jawwal paid attention to the dimensions of lean management through: organization of the work site, continuous improvement, standard work, multidisciplinary workers, and six sigma. This result is consistent with the study of Ben Warth and Jabah (2016) and Damrath, 2012) and the study (Al Shobaki et al., 2018), and they differ with the study (Sparrow & Otaye, 2014).

**Question 2**: Are there differences between the study society's views on the dimensions of the lean administration due to the following variables: (type, qualification, years of service)?

**To answer this question, the researchers answered the following hypothesis:**

**Study Hypothesis:**

There are no differences between the views of the study community on the availability of lean management dimensions (site organization, continuous improvement, standard work, multi-function, six sigma) due to the following demographic variables: (gender, qualification, years of service).

**This hypothesis is based on the following sub-assumptions:**

1. **There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to Gender.**

To answer this hypothesis, the t-test of two independent samples was used to test the differences in the mean response of the study sample on Jawwal's lean management dimensions according to the gender variable. Table (6) shows the axis analysis.

**Table 6**: shows the results of the t-test on Jawwal's lean management dimensions for the gender variable

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **The Hub** | **Gender** | **The Number** | **SMA** | **Standard Deviation** | **"T" Value** | **Level Of Significance** |
| **The Lean Management Dimensions Of Jawwal** | **Male** | 57 | 4.0351 | 0.412 | -0.901 | 0.371 |
| **Female** | 18 | 4.1259 | 0.192 |

The tabular t value at the degree of freedom of "74" and the significance level of 0.05 is 1.995

It is clear from the previous table that the calculated t value for all axes is -0.901, which is less than the tabular value of 1.995, and the value of the mean level is 0.371, which is greater than 0.05, indicating no differences in the responses of the study community attributed to the gender variable. The researchers attribute this to the fact that the procedures adopted in the company apply to both genders without discrimination.

1. **There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to the scientific qualification.**

To answer this hypothesis, the t-test of two independent samples was used to test the differences in the average response of the study community on the size of the lean management of Jawwal according to the qualification variable.

**Table 7**: shows the results of t-test on the dimensions of the lean management in Jawwal for the variable of scientific qualification

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **The Hub** | **Qualification** | **The Number** | **SMA** | **Standard Deviation** | **"T" Value** | **Level Of Significance** |
| **The Lean Management Dimensions Of Jawwal** | **M.A.** | 17 | 3.989 | 0.459 | -0.846 | 0.400 |
| **BA** | 58 | 4.076 | 0.345 |

The tabular t value at the degree of freedom of "74" and the significance level of 0.05 is 1.995

It is clear from the previous table that the calculated t value of all axes is -0.846, which is less than the tabular t value of 1.995, and the value of the significance level is 0.400 which is greater than 0.05 indicating that there are no differences in the responses of the study community about the lean management dimensions of Jawwal due to the variable of scientific qualification, the researchers attributed this to the interest of the company all employees, whether holders of higher degrees or bachelor's degree in addition to being all subject to the same laws.

1. **There were no statistically significant differences at the level of significance (α ≤0.05) between the views of the study community on the variables of the study attributed to the years of service.**

To answer this hypothesis, the One Way ANOVA test was used to test the differences in the average response of the study sample on the dimensions of lean management in Jawwal according to the variable of years of service. Table 13 illustrates the analysis of the axis.

**Table 8**: shows the results of t-test on the dimensions of the lean management of Jawwal for the variable years of service

| **The Hub** | **Source Of Contrast** | **Total Squares** | **Degree Of Freedom** | **Average Squares** | **"F" Values** | **Probability Value** |
| --- | --- | --- | --- | --- | --- | --- |
| **The Lean Management Dimensions Of Jawwal** | Between groups | 0.497 | 2 | 0.248 | 1.829 | 0.168 |
| Within groups | 9.777 | 72 | 0.136 |
| **Total** | 10.274 | 74 |  |

The value of the tabular F at the degree of freedom of "2, 72" and the level of significance 0.05 is 3.12

It is clear from the previous table that the calculated F value of the axes is equal to 1.829 and is less than the value of tabular F 3.12 and the probability value of 0.168 is greater than 0.05, which indicates that there are no differences in the responses of the study community on the dimensions of the lean management in Jawwal due to the variable years of service.

The researchers conclude that there are no differences between employees' views on the availability of lean management dimensions in terms of gender, qualifications and years of service. This result is consistent with the study of Al Shobaki et al. (2018), while it differs with Glouley (2013).

# **Results**

* The results of the analysis confirmed Jawwal's willingness and willingness to apply and enhance the lean management methodology through the dimensions discussed in the research, which include (organization of the site, continuous improvement, standard work, multi-function and six Sigma).
* The attractive management tools that received the least attention from Jawwal (Six Sigma, Multifunctional Workers).
* There are no differences between the opinions of staff on the availability of lean management dimensions in terms of (type, qualification, and years of service).

# **Recommendations**

* Increased attention and expansion in the use of lean management tools because they have a clear impact on the achievement of elements of creativity, focusing on the tools that have the greatest impact on the achievement of elements of creativity (continuous improvement, standard work, Six Sigma).
* The culture of reducing waste, waste and damage among employees should be disseminated through continuous improvement activities of the company, even if there are no problems, to maximize the value of services provided to customers.
* Greater attention has been given to the implementation of the Six Sigma tool for prevention and avoidance of deviations, as well as the availability of more multi-skilled workers with multiple skills, allowing the staff member to fill the place of his or her colleague when he or she is out of work. The shift from one job to another breaks boredom and routine and provides an environment Creative employee.
* Promote standard work by developing clear procedures and setting appropriate and clear standards for customer services to eliminate any unnecessary actions or activities that allow timely delivery of services to customers.

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