Environment of Car Service Centers in Iraq. Its benefits? The most important problems field study on the reality of the services they provide.

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Abstract. After a significant increase in the need of the preparation of cars in Iraq, the suffering of the owners with the faults and the services are not as acceptable by the car owners. A number of countries in the world has been established a huge number of service centers especially in large cities. This is to make the repairing and maintenance of cars easier, Statistics show that the service centers were not at the level of assessment, especially according to environmental pollution and the requirement of manpower. With regard to the high prices of spare parts and over-estimation of the repair process and lack of interest in the environment in general of the most important problems of maintenance centers, in addition to the difficulty of booking an appointment for maintenance, there are large agencies have a large share of the sale of cars in the market and have special centers in maintenance do not want In the maintenance of their cars in any unattached center and this is a big problem. There are not enough service centers to accommodate large numbers of cars. Once the customer goes to the service center to solve a simple problem, it does not need a lot of time that they are spending in today’s service centers. If want to change oil or filter of the car takes 10 minutes while needs a lot of time when trying to change it in service center. Because of this it will affect in raising the price of fixing the car for administrative expenses, dismantling, installation, and sales taxes.

Keywords. Maintenance centers, cars, spare parts, errors and labor costs. Environment

1. Introduction
Whatever the type of the car or model and whatever the year of manufacturer as well as regarding the type of maintenance, the service centers are not equipped electronically. This is results in environmental pollution while the required maintenance are not providing. Maintenance should be carried out in the car maintenance centers by specialists who are certified with honesty, confidence and experience.
In order to analyze the quality of services given in car service center we conducted a survey of 14 questions and asked a large group of respondents through a Google app called E. Survey, and then analyzed the data in the SPSS program.

Our research calls for great importance in the life of anyone who has a car and needs good service, fast and high accuracy. From this survey we found that there are some advantages in using the service centers for car maintenance which is cost affective. This is better than the service centers that available in the region which is not give you a good quality of service and the parts of genuine, that they used, are not of that high quality.

We recommend in this research interest in two aspects, namely the work environment by providing the requirements of safety for workers and waste treatment in a scientific manner. This is to not affect workers and owners of cars and the location of the service centers.

1.1. Literature review
There is some research papers related to this study:

The researchers in (pdf1) demonstrate that A car wash kiosk and the fuel dispenser service improved by appearing them to the service station controller. The request of car wash or fuel dispenser will send to the service station controller and it will control the payment process.

Another paper about car service is (pdf2) which focused on training sixty participants to learn a car service procedure. They found the differences between the result of three training experiences which are by video instruction, virtual training and trial in a CAVE, and by a portable 3D interactive table. As a result they found that the trainees can remember the virtual training more than the video training.

The third paper (pdf3) which discussed the different types of car washing system. They found that automation system for car washing and drying has more advantages as it is cost effective as well as saving time, no manpower and no more space is required and less environmental pollution.

1.2. Research problem
The research problem is formulated in the following questions:

What is the impact of car repair in car service centers? What are the quality of services provided by the maintenance centers, are they positive or negative? Do variables in the mindset of car owners have a role in the work of car maintenance centers? Do auto maintenance centers provide supplies that protect workers from work hazards? Is the environment suitable for work? Are the scientific aspects of waste treatment considered?

1.3. Importance of research
This research is of great scientific significance because it touches a number of sectors of the people, including workers and owners of cars and owners of large companies and owners of maintenance centers, except government institutions, for example: municipalities' provinces, urban development in the city.

1.4. Research Aims
Find the relationship between the service center and car owners. Find the relationship between different car service centers according to their price of repairing cars. Find the relationship between waste treatments in car service centers. Look for differences between sample members in terms of age, certificate and type of vehicle. Identify the most influential factors in car maintenance centers. Find the relationship between the materials used by workers in the car maintenance centers. Is the site of car maintenance far from the communities? Establish a relationship between waste and workers' health.

2. Research Methodology
The scientific method used in this research is the descriptive analytical method, which is done by providing sample data at present to explain and understand the future. Then, making comparisons and
determining the relationships between factors and developing conclusions with the help of existing data. Besides we analyzed the data using statistical methods by (SPSS).

3. Identification of the sample size
Because we wanted the sample to be representative of the entire community and the results to be applicable to everyone with the lowest error rate and highest reliability, we chose a random sample as the target for this research. This is to represent the different views using this feature.

4. Preparation and visualization tools of the study
The tool used in this study is a questionnaire that includes the questionnaire on car service centers. With the analysis of data scientifically and identify conclusions and give a set of suggestions.

5. Data analysis

| Table 1. By Gender |
|-------------------|
| Gender | Number | The ratio |
| Male  | 218    | %89.3    |
| Female | 26     | %10.7    |
| Total | 244    | %100     |

The above table (1) shows that the percentage of participants who use the car service centers for males is higher (89.3%) compared to female and adult participants (10.7%).

| Table 2. By Age Level |
|-----------------------|
| Age group | Number | The ratio |
| 25-18     | 46     | %18.9    |
| 40-26     | 143    | %58.6    |
| 55-41     | 46     | %18.9    |
| 55        | 9      | %3.6     |
| Total     | 244    | %100     |

The above table (2) shows the highest age level for the participants is (26-40). This is to indicate that this category deals with the developments of life.

| Table 3. How to receive the customer and the car in the service centers. |
|-----------------------------|
| Type of reception | Number | The ratio |
| Excellent        | 34     | %13.9    |
| very good        | 59     | %24.2    |
| Good             | 78     | %32.0    |
| Medium           | 48     | %19.7    |
| Weak             | 25     | %10.2    |
| Total            | 244    | %100     |

The above table (3) shows that the percentage of people using maintenance centers is good, which is about (32%) and they are satisfied with the services provided to them in the service center.

| Table 4. Is the car owner notified of the failure and repair. |
|-----------------------------|
| Case Type | Number | The ratio |
| Before repairs | 164 | %67.2 |
| After repairs  | 80   | %32.8 |
| Total          | 244  | %100  |

The above table (4) shows the service centers informing the owner of the car before repairing the failure rate (67.2%) and this percentage is very good.
Table (5) Do you feel the prices are suitable compared with the free industrial zones:

| Type              | Number | The ratio |
|-------------------|--------|-----------|
| More expensive    | 171    | %70.1     |
| No difference     | 61     | %25       |
| Cheaper           | 12     | %4.9      |
| Total             | 244    | %100      |

The table above (5) shows that people using car service centers are not satisfied with the price (70.1%) which is very high.

Table (6) Type of spare materials used for your vehicle:

| Material Type     | Number | The ratio |
|-------------------|--------|-----------|
| Genuine           | 120    | %49.4     |
| not original      | 33     | %13.6     |
| I do not know     | 90     | %37       |
| Total             | 244    | %100      |

The above table (6) shows that the materials used in maintenance centers are original materials (49.4%).

Table (7): Do Maintenance Centers Revise?

| Type of review           | Number | The ratio |
|--------------------------|--------|-----------|
| Periodically             | 45     | %18.5     |
| I do not review          | 39     | %16       |
| If necessary             | 159    | %65.4     |
| Total                    | 244    | %100      |

The table above (7) shows that users do not visit service centers until needed since the ratio of using service centers when necessary (65.4%).

Table (8) User’s feeling after receiving the car:

| Type feeling                       | Number | The ratio |
|------------------------------------|--------|-----------|
| Rest assured that everything is what they see | 26     | %10.7     |
| Regular                            | 149    | %61.3     |
| not comfortable                    | 68     | %28       |
| Total                              | 244    | %100      |

The above table (8) shows that the users of the service centers feel normal (61.3%) for the services provided by the center.

Table (9) In case of faults they are contacted or not:

| Case Type                | Number | The ratio |
|--------------------------|--------|-----------|
| The connection is made   | 54     | %22.2     |
| Sometimes                | 62     | %25.5     |
| Do not connect           | 127    | %52.3     |
| Total                    | 244    | %100      |

The above table (9) shows that the failure after maintenance is not contacted is by (52.3%) for the services provided by the center.

Table (10) Is there a place to have a rest during the repair of the car:

| Type                          | Number | The ratio |
|-------------------------------|--------|-----------|
| Air-conditioned hall (coffee and internet) | 111    | %45.7     |
| Air-conditioned hall without services | 75     | %30.9     |
| Hall is comfortable           | 57     | %23.5     |
| Total                         | 244    | %100      |
The table above (10) shows the resting place for the people who deal with service centers where air-conditioned rooms are equipped with internet and coffee shop (45.7%). This is an indication that the service centers are interested in this area unlike the free centers in cities.

Table (11): Do you feel that the service center environment is suitable for work?

| Type of review     | Number | The ratio |
|--------------------|--------|-----------|
| Yes                | 185    | %75       |
| No                 | 59     | %25       |

The table above (11) shows that the environment of the service centers is suitable so that the response rate (75%) appeared and this is a good percentage compared to the start of work in this area.

Table (12): How Is done Dealing With Remaining Waste of the Center?

| Type of review                      | Number | The ratio |
|-------------------------------------|--------|-----------|
| Scientifically dealing with waste   | 83     | %35       |
| Handles waste randomly              | 161    | %65       |
| Total                               | 244    | %100      |

The table above (12) shows that the car service centers unfortunately do not treat waste in a scientific way, but rather random treatment, which leads to the environmental pollution in the community which leads to the increase of chronic diseases.

So that the proportion of the statistics showed (65%) treated waste randomly

Table (13): The impact of the location of car service centers on the environment?

| Type of review     | Number | The ratio |
|--------------------|--------|-----------|
| Yes                | 190    | %77       |
| No                 | 54     | %23       |
| Total              | 244    | %100      |

The table above (13) Statistics shows that the location of the car service centers has a negative impact on the surrounded environment in the region.

Table (14) Are the means of personal protection for workers in the service centers are available?

| Type of review     | Number | The ratio |
|--------------------|--------|-----------|
| Available abundantly| 100    | %41       |
| Available           | 92     | %38       |
| Not available       | 52     | %21       |
| Total               | 244    | %100      |

The table above (14) shows that the personal protection of workers is well available to reduce the risk to the life of workers. This is point out that the owners of car service centers are interested in their field of work.

6. Conclusions

1. Time Factor: A large group of car owners do not prefer the traditional centers. This is specifically because of the duration of time needed to spend for repairing the car.
2. Professionalism: Engineers working in maintenance centers are professionals in the repairing the cars and thus maintain the quality and professionalism in the global maintenance. To overcome the technical constraints of the existence of their association with the factories of international car companies, especially modern.
3. Car safety: From the first moment of receipt of the vehicles, the workforce in the maintenance centers gives special priority to how to complete the maintenance work in a timely manner and demolish the waste of time.
4. Periodic Reports: Due to the lack of a wide range of male or female car owners, the mechanical culture required for maintenance and replacement of spare parts remains at the mercy of mistakes
made by private shop mechanics, which usually leads to an increased financial cost compared to periodic reports. Car owners receive this from the service centers that follow their cars and give them a clear idea of the quality and the exact date of replacement of each piece of auto parts at a cost of money.

5. Genuine spare parts: In the case of service centers deal with the original spare parts, which led many large companies to put stickers to help car owners in distinguishing between genuine and counterfeit parts.

6. Linking with computers: With the presence of specialized programs in this area has become easy to link between the car and computers to find errors and problems easily and in less time.

7. Financial return: In dealing with the maintenance center, expenses are much lower than repairing the car in unlicensed places, due to lack of workers.

8. Waste treatment: There is a large group of owners of car maintenance working to treat waste in a practical way that does not affect the health of workers as well as does not results in environmental pollution.

7. Suggestions
The car service center should be close to the main roads and highways. It should be strategically located for a large customer base. The garage needs a wide entrance to allow customers to drive, a high ceiling of at least 15 feet to accommodate car lifts and the minimum length is 6 cm to install its equipment Special. It is best to find a site with good natural lighting, in which helps mechanics to check the cars in a good way.

Attention to the health of workers and the provision of all modern work supplies designed by private companies in this area. This is to reduce the risk of work through the use of modern and scientific methods in the treatment of waste on a daily basis in a private place far from citizens.

General specifications must be available in all workplaces in general which are:

- The workplace is suitable for the type of work in terms of area and the number of employees.
- Good ventilation in the center so as not to expose workers to respiratory diseases.
- Existence of means of expelling gases of any kind as products of different industrial processes.
- The existence of appropriate lighting.
- The presence safety and first aid.
- Existence of adequate emergency exits and explanatory signs.
- Electrical wiring suitable for electrical loads and places of separation at risk.
- Proper planning of workshops and workflows.

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