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# TRANSFORMING THE WORKSHOPS DEPARTMENT INTO A PROFIT CENTER UNDER GAM

## FEASIBILITY STUDY

December 2008

This publication was produced for review by the United States Agency for International Development. It was prepared by Messrs. Ahmad Alwan, Anan Fatayer and Samer Abu Rashed, To Excel Consulting Associates, Amman, Jordan.

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FEASIBILITY STUDY

USAID JORDAN ECONOMIC DEVELOPMENT PROGRAM

CONTRACT NUMBER: 278-C-00-06-00332-00

BEARINGPOINT, INC.

USAID/JORDAN
OFFICE OF ECONOMIC GROWTH

DECEMBER 2008

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DELIVERABLE NO.: 6.1.5.A.3.33.8/9/10 DEVELOPING FEASIBILITY AND MARKET RESEARCH STUDIES FOR THE TWO PILOT SPIN-OFF COMPANIES FROM GREATER AMMAN MUNICIPALITY (GAM)

# CONTENTS

# ACKNOWLEDGEMENT

The consulting team who prepared this study would like to express gratitude to all parties involved in its preparation and development; namely, Mrs. Muntaha Barakat, the Human Resources Advisor to HE Mayor of Greater Amman, and the management and technical team of the Greater Amman Municipality's Workshops Department, led by Eng. Ghassan Al Nawaiseh, who provided the consulting team with a significant part of the required data.

# 1.0 INTRODUCTION
## 1.1 PROJECT BACKGROUND

Pursuant to Greater Amman Municipality's (GAM) endeavors to encourage public sector entrepreneurship and as it embarks on organizational restructuring, GAM has launched a project titled "Enhancing the entrepreneurial mindsets among GAM's employees" in cooperation with USAID Jordan Economic Development Program (SABEQ) and its Institutional Transformation Cross Cutting Solution. The project was divided into three phases; phase one ended in December 2007 and covered the designing of the project's parameters. This included a) identifying some of the non-core activities that GAM could move to the private sector, b) designing an incentives scheme that encourages the employees to start such endeavor, c) developing the institutional framework of this project within GAM, and d) developing the legal framework that would enable GAM to start such an initiative. The outcomes of that phase were endorsed by GAM's top management and SABEQ was asked to move ahead and start the second phase of this project which is the *pilot phase*. The third phase would be the official launch of the project as an institutionalized process within GAM.

In this context and to kick-start the pilot phase, the non-core activity of light vehicle maintenance was selected to assess the feasibility and business viability of moving this activity to the private sector via spin-off. A spin-off as a descriptive term is meant to refer to the formation of a new entity to be specialized in providing a once GAM non-core activity, by a split from GAM.

A feasibility study was conducted by the consulting team in August 2008 to evaluate the feasibility of spinning-off the light vehicle mechanical and electrical maintenance and repair activity to the private sector. The feasibility study was prepared to address the question of feasibility of such an arrangement from two aspects;

- First, analyzing the economic feasibility for GAM in the event that this non-core activity would get underway in the private sector, based on performing a cost-benefit analysis to examine and compare costs presently incurred by GAM with those that will be incurred if the spin-off was launched. The adopted approach was that the best criterion for measuring the economic feasibility for GAM was that costs incurred by GAM in terms of these services should be at least 10% less than the costs presently incurred by GAM as a result of running the same activity internally.

- Secondly, the study was concerned with analyzing the feasibility of the proposed spin-off company from a marketing and financial perspective, and anticipating its potential ability and business viability to achieve sustainable success upon its launch in the market.

Despite the fact that the outcome of the feasibility study lead to the suggestion that the proposed spin-off would be feasible from the spin-off company's marketing and financial perspective, the cost-benefit analysis performed as part of the feasibility study which examined and compared costs presently incurred by GAM with those that will be incurred if the spin-off is launched, revealed that such a spin-off arrangement will not be feasible to GAM. Therefore, the attention and effort were have been directed to examine the feasibility and business concept viability of transforming the GAM Workshops Department into a profit center operating under the management umbrella of GAM.

## 1.2 PROJECT OBJECTIVES

The significance of this study is underscored with reference to the rationale behind its preparation; that is, the need for an evaluation of the feasibility and viability of turning the Workshops Department at GAM into a profit center. Therefore, the main objectives of the study can be summarized as follows:

1. To assess the economic feasibility of transforming the Workshops Department into a profit center under GAM.

2. In the event that the feasibility is viable and sound, the second objective is to provide insight and direction to the best management practices, specifically those pertinent to Human Resources Management (HRM) practices to be adopted by the Workshops Department in order to ensure a successful transformation into a profit center.

## 1.3 APPROACH AND METHODOLOGY

The study relied on the analytical and descriptive methodological approach in light of the realities of the present "AS IS" situation of the Workshops Department at GAM. Quantitative analysis of data, and market and financial indicators were conducted to reach reasonable findings that lead to projections, which observe accuracy and objectivity as much as possible, with respect to the economic feasibility of the project. This was achieved through the following methodological procedures:

a. Gathering information from primary sources through:

   1. Conducting field visits to the Workshops Department at GAM: The divisions and branches of the Department were identified and personal interviews were conducted with the Department's officers and engineers, namely Eng. Ghassan Al Nawayseh (Executive Director of the Workshops Department), Eng. Montaser Al Hadeed (Administrative Director of the Workshops Department), Eng. Bashar Dababneh (Head of the Vehicles Unit) and Eng. Rateb Hasan (Head of the Mechanical Maintenance Unit). Technical information related to the technical work of the Department was obtained in addition to other information that was utilized in conducting a high-level institutional assessment of the Workshops Department and laying out the future outlook in the event of transforming the Department into a profit center.

b. Gathering data from secondary sources, particularly the following:

   - The previously drafted feasibility study for the spin-off of the light vehicle mechanical and electrical maintenance and repair activity at the GAM Workshops Department.

   - The Departments' Annual Plan for 208 which was prepared by the Department's management. In addition, the consulting team was handed several documents related to the current HR regulations and practices applied with GAM departments including the Workshops Department. Such regulations included the housing, retirement, employee travel, social pension fund, and GAM personnel internal regulations. All of the aforementioned documents were reviewed thoroughly by the consultants.

- Data pertinent to the overall industry indicators, using official and documented references; namely, the General Statistics Department (DoS) and the General Budget Department as well as other approved/accredited internet sources based on desk research.

c. Conducting financial analysis of the gathered data.

d. Conducting several internal brainstorming sessions by the consulting team members to report findings on the indicators concluded in light of the results of the analysis as well as with Ms. Montaha Barakat, the Human Resources Advisor to HE Mayor of Greater Amman, and Eng. Ghassan Nawayseh.

This study starts with an overview of the Workshops Department at GAM, highlighting the background of its establishment, range of services, current organizational structure and Human Resources Management (HRM) practices and historical performance. Then the study looks at the market and its main indicators and parameters to weigh up the market opportunity, and then a SWOT analysis is provided to highlight the Workshops Department's internal strengths and weaknesses pertinent to the view of transforming it into a profit center, as well as the external opportunities and threats. A financial analysis has been conducted and is provided in the latter sections of this study, then an insight and direction to transform the department into a profit center is provided. The study concludes with the main conclusions and recommended courses of action.

# 2.0 OVERVIEW OF THE WORKSHOPS DEPARTMENT AT GAM

## 2.1 BACKGROUND

- The Workshops Department at GAM was established in 1961 under the name of "The Electrical and Mechanical Division". With only 15 employees, the department relied entirely on soliciting the private sector for vehicle repair and maintenance services.
- In 1977, the department was renamed to "The Mechanics and Electricity Department" and the number of employees increased to 70.
- In 1986 the department was given its present name "The Workshops Department" and the number of employees increased to 200.
- In 2003, the Carpentry and Forgery Divisions were abstracted from the Workshops Department and added to the newly formed "Services and Building Maintenance Department".
- Currently, the department employees a total number of 361 employees.

## 2.2 PRODUCT RANGE

The department, proposed to turn into a profit center, provides maintenance and repair services for all kinds of electrical and mechanical breakdowns of petrol-engine saloon vehicles, and diesel-engine medium vehicles (pick-ups and mini-vans) as well as heavy and large vehicles. Table (1) lists the department's service range in detail.

## Table 1: Service Range of the Workshops Department at GAM

**Maintenance and Repair of Mechanical and Electrical Breakdowns of Light Vehicles**

| Mechanical Repairs | Electrical Repairs |
|---|---|
| Front axle dismantle and installation | Spark plugs cable replace |
| Front and rear brakes dismantle and repair | Alternator dismantle and replace |
| Back axle dismantle and installation | Horn dismantle and replace |
| Power steering repair | Starter dismantle and replace |
| Low gear repair | Switch dismantle and replace |
| Turbine repair | Wind screen wipes repair |
| Transmission overhaul | Fuel gauge repair |
| Valves repair | Temperature gauge repair |
| Clutch kit dismantle and installation | Oil gauge repair |
| Hand brake repair | Diesel fuel gauge repair |
| Water jet repair | RPM gauge repair |
| Wheel stud replace | Speedometer cable replace |
| Hydraulic hose replace | Reverse lamp replace |
| Spring bushing replace | Speedometer replace |
| Ball joint replace | Computer repair/replace |
| Engine misfire repair | Dashboard bulbs replace |
| Drive shaft holder replace | Electric wires overhaul |
| Cylinder head dismantle (to fix engine oil/water mix) | Front bulbs lights replace |
| Fuel accelerator repair | Rear bulbs lights replace |
| Clutch pedal adjustment | Front turn signal lights replace |
| Brake cylinder dismantle and installation | Rear turn signal lights replace |
| Power steering pump repair | Contact set and plugs replace |
| Transmission bushings replace | Thermostat repair |
| Power steering belt replace | Anti-theft warning system installation |
| Alternator belt replace | Engine glow plug replace |
| A/C belt replace | Room heater check |
| Arm replace | Radio speakers installation |
| Front axle oil seal replace | Central locking check |
| Front transmission oil seal replace | Heater switch check |
| Rear transmission oil seal replace | Short circuit check |
| Wheel oil seal replace | Plate number lights replace |
| Universal joint replace | Room lights replace |
| Fuel tank pipes replace | Fuses |
| Front drums dismantle and installation | Fog lamp |
| Engine check | Clutch fan check |
| Nozzles dismantle and replace | Coil replace |
| Fuel hose feed replace | Battery clamp replace |
| Water hose replace | Battery replace |
| Wheel stud replace | Distributor replace |
| Pulley replace | Turn signal switch replace |
| Arm shaft bushings replace | |
| Front axle boots replace | |
| Wheel stud replace | |
| Tires replace | |
| Engine check oil consumption | |
| Fuel tank dismantle and installation | |
| Fuel leak inspection | |
| Diesel fuel pump dismantle and installation | |
| Oil leak check | |
| Power steering oil leak check | |
| Transmission oil leak check | |
| Wheel oil leak check | |
| Crank shaft oil seal check | |

| | |
|---|---|
| Diesel leak | |
| Diesel fuel base dismantle and installation | |
| Water leak check | |
| Engine overheating check | |
| Heater hose replace | |
| Heavy smoke check | |
| Drive shaft check | |
| Brake pedal check | |
| Glow plug replace | |
| Oil pressure switch replace | |
| Water temperature gauge | |
| Oil pan stud replace | |
| Reverse switch replace | |
| Oil pan fixing | |
| Cylinder head fixing | |
| Check engine noise | |
| Wheel bearing noise check | |
| Steering wheel dismantle and installation | |
| Clutch pump dismantle and installation | |
| Brake pump dismantle and installation | |
| Lower clutch pump replace | |
| Upper clutch pump replace | |
| Water pump replace | |
| Stabilizer bar check | |
| Brake adjustment | |
| Valve clearance adjustment | |
| Idle adjustment | |
| Timing belt replace | |
| Engine support replace | |
| Carburetor fixing | |
| Oil pan gasket replace | |
| Fan clutch replace | |
| Radiator fan replace | |
| Fuel strainer replace | |
| Front wheel hub replace | |

## 2.3 ORGANIZATIONAL STRUCTURE

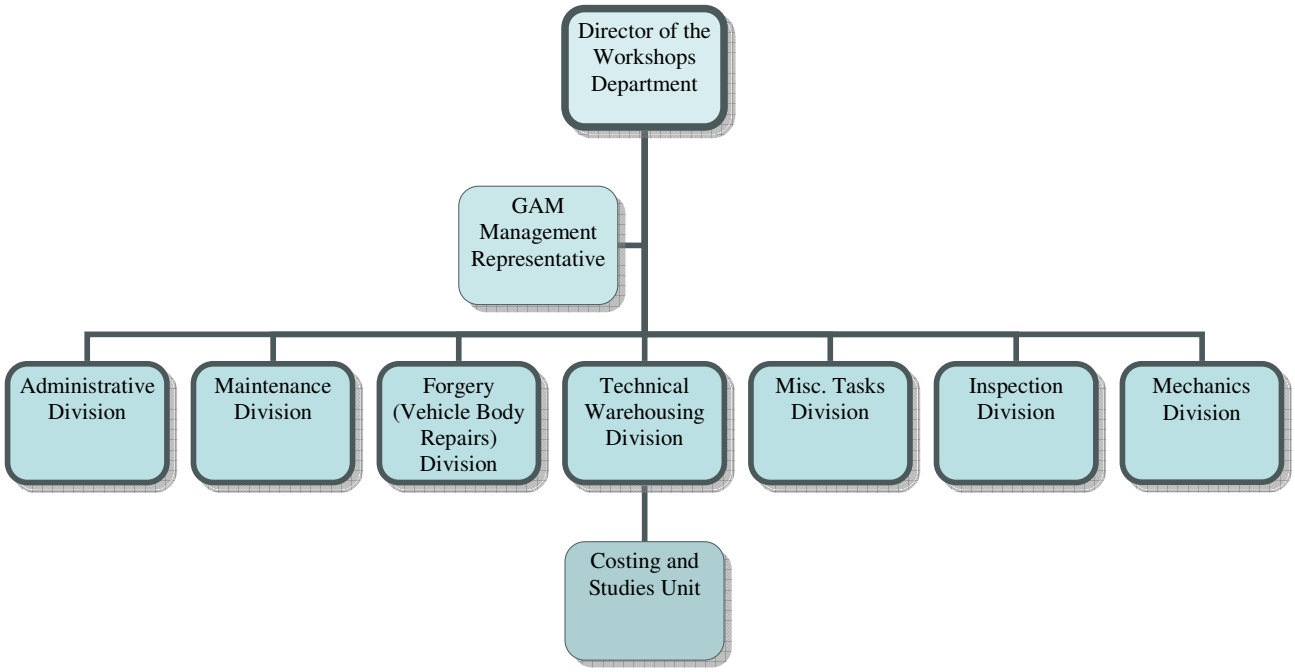



**Figure (1): Organizational Structure**

## 2.4 HUMAN RESOURCES PERSPECTIVE

This section overviews the main Human Resources Management (HRM) practices and policies that are presently in effect at the Workshops Department.

### 2.4.1 RECRUITMENT POLICY

There is no standard recruitment policy presently in place at the Workshops Department and the present recruitment practice does not focus on attracting quality human resources whether at management or technical areas within the department. This is evident by the fact that present recruitment practices follow the patterns of:

- Word of Mouth. References were made by GAM employees who were aware of any vacancy.

- Transferring from other government departments. Transferring from one government department to the other is usually adopted by some employees who prefer to remain in the public sector but saw (1) no improvement in their current status at their current department or (2) who would want to pursue a change in careers.

### 2.4.2 EMPLOYEE PERFORMANCE APPARAISAL SYSTEM:

The main characteristics of the current Performance Appraisal system used within the department are as follows:

- It focuses on Institutional Core competencies; clearly identified,
- It focuses on good & bad behaviors & traits,
- It is conducted biannually,
- The outcomes are to determine the employee weaknesses and how to overcome those weaknesses. In addition the determination of training needs to enhance the employee Institutional Core competencies.

### 2.4.3 INCENTIVE SCHEME

The Workshops Department uses what is known of the **individual piece-rate incentive** plan, in which it pays the employee a certain amount of money for every unit produced. Such simplistic systems fail to account for factors such as:

- Minimum wages level,
- Relying heavily on the assumptions that performance is under an individual's complete control, and
- The individual employee does a single task continuously throughout his work time,
- Work quality and cost are not considered in the current plan.

### 2.4.4 RELEVANT DEPARTMENT HR REGULATIONS

The following HR regulations; Housing, Retirement, Travel and the Social Pension Fund, are defined by the Government. All GAM Workshops Department's employees are eligible to benefit from those regulations. Those regulations may require specific amendments upon GAM approval. Such amendments will be defined on the basis of improving the HR internal regulations that will reflect the below mentioned issues.

### 2.4.5 DEPARTMENT ANNUAL PLAN (2008)

The department plan describes the followings:

1- Functional and hierarchy structure of the department,
2- Overall tasks performed, services provided and responsibility of the department,
3- List of employees numbers,
4- The department's SWOT analysis,
5- The department's Year 2008 objectives and goals extracted from the National Agenda objectives.

## 2.5 HISTORICAL PERFORMANCE

This section overviews the historical demand generated by GAM for the vehicle maintenance service at the Workshops Department during the (2005-2007) period. It is important to point out that since those maintenance and repairs were performed internally by the Workshops Department at GAM, there was no accurate track of service charges as no such charges were incurred.

However, the consulting team has collected the number of mechanical and electrical repairs that were performed on the light vehicles owned by GAM during the three year period (2005-2007), classified by type, and added the average market service charges[1] to each repair type (according to the type the mechanical or vehicle breakdown). This was conducted in order to arrive at historical figures that represent GAM's demand for the mechanical and electrical maintenance services during the last three years just as if the Workshops Department was a private sector maintenance vendor.

### 2.5.1 HISTORICAL PRODUCTION OF THE WORKSHOPS DEPARTMENT AT GAM

The following table shows the overall production value of the Workshops Department, comprising electrical and mechanical repairs and maintenance services performed on all types of GAM vehicles, including both light and heavy ones.

**Table 2: Gross Production of the Workshops Department at GAM**
**Overall Production Value of Electrical and Mechanical Repairs Performed on Light and Heavy Vehicles**
**(2005 – 2007)**

| Year | JOD |
|---|---|
| 2005 | 2,516,576 |
| 2006 | 1,891,117 |
| 2007 | 2,982,545 |

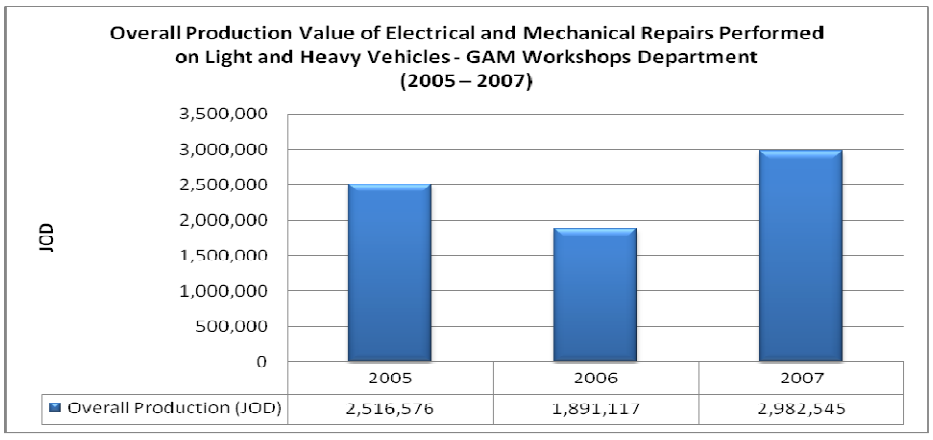



**Figure (2): Overall Production Value of Electrical and Mechanical Repairs Performed on Light and Heavy Vehicles**

[1] Only service charges were added – cost of spare part was excluded in order not to distort the figures and arrive at production figured comparable to the national market.

The above table and chart show that the overall production value of the mechanical and electrical repairs and maintenance services performed by the Workshops Department on GAM light and heavy vehicles declined from JOD 2,516,576 to JOD 1,891,117 reflecting a decline of nearly 25%. However, the overall production rose to JOD 2,982,545 in 2007 reflecting a growth rate of 57.7%. This leap in growth is mainly attributed to the increase in the number of GAM light and heavy vehicles in 2007.

A detailed analysis of the department's historical performance[2] of electrical and mechanical repairs performed on GAM's light vehicles only is provided below.

### 2.5.1.1 Summary of Light Vehicle Electrical Repairs by Number and Type of Electrical Repairs during (2005-2007)

The following table shows the total number of light vehicle electrical maintenance and repairs[3] performed on GAM light vehicles during the 2005 to 2007 period and the estimated total service charges[4] based on average market prices.

**Table 3: Number of Electrical Repairs (Light Vehicles)**
**Electrical Maintenance Units at the GAM Workshops Department (2005-2007)**

| Year | Number of Repairs (Vehicle Entries to the Electrical Unit at the Workshops Department) | Service Charges According to Average Market Price (JOD) |
|---|---|---|
| 2005 | 14,813 | 54,006 |
| 2006 | 11,824 | 44,149 |
| 2007 | 12,168 | 46,716 |

The table above shows that the total number of electrical repairs performed on GAM light vehicles declined from 14,813 to 11,824 repairs during (2005-2006), reflecting a negative growth rate of 20.2% and consequently a decline in the value of those repairs from JOD 54,006 to JOD 44,716. This reflected a negative growth rate in the value of repairs (service changes) of 18.25% during (2005-2006). However, the total number of repairs rose from 11,824 to 12,168 during (2006-2007) reflecting a positive growth rate of 2.91% and consequently an increase in the value of repairs (service charges) from JOD 44,149 in 2006 to JOD 46,716, reflecting a positive growth rate of 5.81% in 2007.

Table (4) below shows the number and value of electrical repairs performed by the Electrical Maintenance Unit at the GAM Workshops Department by repair type clusters during (2005 – 2007).

[2] This analysis is taken from the prior feasibility study when the consulting team was asked to examine the feasibility of the light vehicle maintenance activity at the Workshops Department. Therefore, the detailed analysis provided in Appendix B shows the historical performance of electrical and mechanical repairs performed on light vehicles only.

[3] Source: GAM IT Department

[4] These service charges would have been the Workshops Department's gross profit margin had the department been a private sector maintenance vendor.

## Table 4: Number and Value of Electrical Repairs by Repair Type (Light Vehicles)

**Electrical Maintenance Unit at the GAM Workshops Department (2005-2007)**

| Repair Cluster | 2005 | | 2006 | | 2007 | |
|---|---|---|---|---|---|---|
| | No. of Repairs | Value (JOD) | No. of Repairs | Value (JOD) | No. of Repairs | Value (JOD) |
| Contact Sets, Battery and Electrical Wires Related | 503 | 1693.5 | 2872 | 3412 | 1344 | 6394 |
| Ignition (Starter), Switch, Alternator & Vehicle Start Related | 2696 | 24347 | 1638 | 15404 | 1888 | 17128 |
| Lights, Bulbs and Turn Signals | 6471 | 6945.75 | 2939 | 6426 | 4968 | 5359 |
| Gauges | 792 | 2324 | 451 | 902 | 519 | 1413 |
| Speedometer | 748 | 2242.5 | 132 | 287 | 560 | 1680 |
| Heater | 978 | 9633 | 224 | 654 | 823 | 8181 |
| Accessories and Others | 2625 | 6820 | 3547 | 17025 | 2050 | 6513 |
| **Total** | **14,813** | **54,005.75** | **11,803** | **44,110** | **12,152** | **46,668** |

Table (4) above shows that the highest number (most frequent) electrical repairs in 2007, 4968, were those related to the repairs cluster which includes front and rear lights, external and internal bulbs, and turn signals replace representing 40.9% of the total number of electrical repairs. This is followed by the repairs cluster which includes accessories and other repairs[5] at 2050 repairs, representing 16.9% of the total number of electrical repairs. The repairs cluster which includes ignition (starter), switch, alternator, and vehicle start related repairs[6] closely follow at 1888 repairs, representing 15.5% of the total number of electrical repairs in 2007. The graph below shows the growth trend of the number of electrical repairs in each repair cluster.

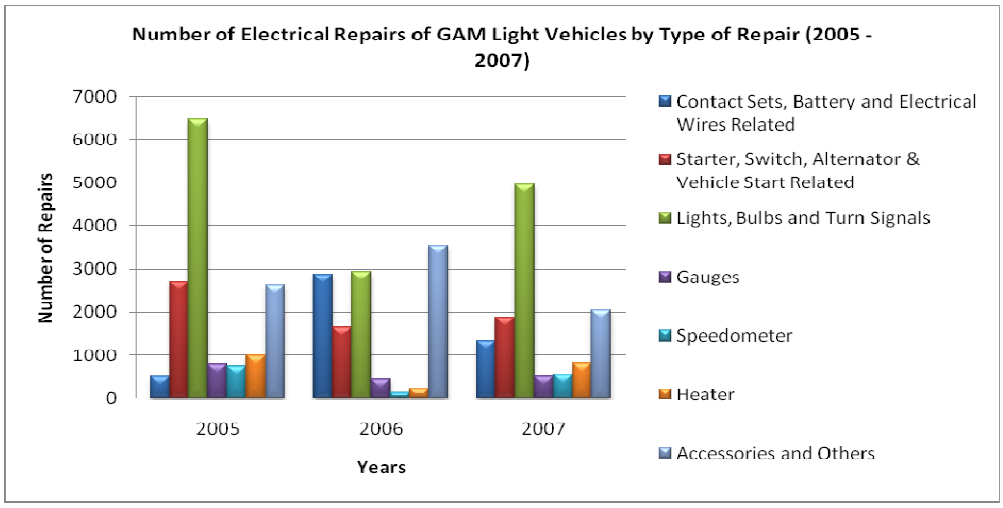



**Figure (3): Number of Electrical Repairs of GAM Light Vehicles by Type of Repair (2005-2007)**

[5] This cluster mainly includes the following electrical repairs: horn repair, widescreen wipers replace, anti-theft warning system installation, central locking system installation, radio and speakers repair and replace, and antenna replace.

[6] This cluster mainly includes the following electrical repairs: alternator repair or dismantle and replace, start repair or dismantle and replace, switch repair or dismantle and replace.

However, the values of the electrical repairs do not necessarily follow the trend of the number of repairs. This is evident by the fact that the highest value for electrical repairs in 2007 was generated from the repairs cluster which includes ignition (starter); switch, alternator, and vehicle start related repairs at a total value of JOD 17,128, representing 36.7% of the total value of all electrical repairs. The repairs cluster which includes heater repairs[7] came in second place with a total value of JOD 8,181 representing 17.5% of the total value of all electrical repairs. This is closely followed by third place repairs cluster which includes accessories and other repairs with a value of JOD 6,513 and forth place repairs cluster which includes contact sets, battery and electrical wires related repairs with a value of JOD 6,394 representing 14% and 13.7% of the total value of all electrical repairs in 2007 respectively.

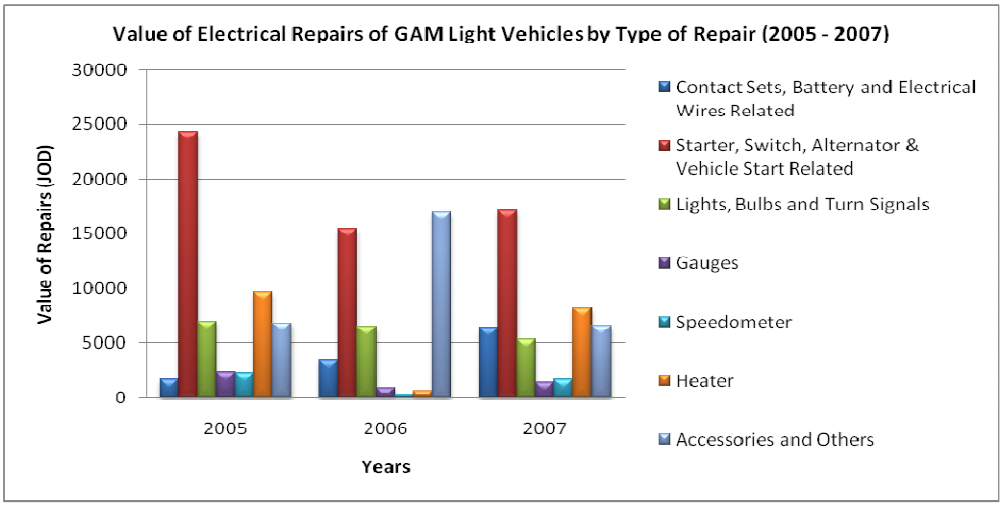



**Figure (4): Value of Electrical Repairs of GAM Light Vehicles by Type of Repair (2005 – 2007)**

The fluctuations in the number of electrical repairs and consequently the value of those repairs at an unprecedented growth rate during the last three years is due to a number of reasons; mainly (a) the increase in the number of vehicles owned by GAM in 2007 and (b) maintenance validity from year to year resulting in the same mended electrical breakdown not occurring again in the following year.

### 2.5.1.2 Summary of Light Vehicle Mechanical Repairs by Number and Type of Mechanical Repairs during (2005-2007)

Table (5) below shows the total number of mechanical maintenance and repairs[8] performed on GAM light vehicles during the 2005 to 2007 period and the estimated total service charges[9] based on average market prices.

[7] This cluster mainly includes the following electrical repairs: heater repair or dismantle and replace as well as heater switch replace.

[8] Source: GAM IT Department

[9] These service charges would have been the Workshops Department's gross profit margin had the department been a private sector maintenance vendor.

## Table 5: Number of Mechanical Repairs (Light Vehicles)

**Mechanical Maintenance Units at the GAM Workshops Department (2005-2007)**

| Year | Number of Repairs (Vehicle Entries to the Mechanical Unit at the Workshops Department) | Service Charges According to Average Market Price (JOD) |
|---|---|---|
| 2005 | 30,145 | 301,647 |
| 2006 | 19,045 | 180,612 |
| 2007 | 22,397 | 229,675 |

The table above shows that the total number of mechanical repairs performed on GAM light vehicles sharply declined from 30,145 to 19,045 repairs during (2005-2006), reflecting a negative growth rate of 36.8% and consequently a sharp decline in the value of those repairs from JOD 301,647 to JOD 180,612 reflecting a negative growth rate in the value of repairs (service changes) of 40.1% during (2005-2006). However, the total number of repairs rose from 19,045 to 22,397 during (2006-2007) reflecting a positive growth rate of 17.6% and consequently an increase in the value of repair (service charges) from JOD 180,612 in 2006 to JOD 229,675, reflecting a positive growth rate of 27.16% in 2007.

Table (6) shows the number and value of mechanical repairs performed by the Mechanical Maintenance Unit at the GAM Workshops Department by repair type clusters during (2005 – 2007).

## Table 6: Number and Value of Mechanical Repairs by Repair Type (Light Vehicles)

**Mechanical Maintenance Unit at the GAM Workshops Department (2005-2007)**

| Repair Cluster | 2005 | | 2006 | | 2007 | |
|---|---|---|---|---|---|---|
| | No. of Repairs | Value (JOD) | No. of Repairs | Value (JOD) | No. of Repairs | Value (JOD) |
| Brake Systems Related Repairs | 9,448 | 85,974 | 5,403 | 47,853 | 5,639 | 51,419 |
| Engine Related Repairs | 8,282 | 52,069 | 5,469 | 41,202 | 5,169 | 47,900 |
| Transmission System Related Repairs | 4,336 | 101,452 | 2,419 | 49,410 | 4,078 | 71,129 |
| Steering Related Repairs | 1,473 | 8,108 | 1,706 | 9,656 | 2,295 | 13,339 |
| Other Mechanical Repairs | 6,615 | 54,043 | 4,048 | 32,491 | 5,216 | 45,888 |
| **Total** | **30,154** | **301,646** | **19,045** | **180,612** | **22,397** | **229,675** |

The table above shows that the highest number (most frequent) mechanical repairs in 2007 were those related to the repairs cluster which includes brake systems related repairs[10]at a number of repairs (entries to the Mechanical Maintenance Unit) at 5639 repairs, representing 25.2% of the total number of mechanical repairs. This is closely followed by the repairs cluster which includes other mechanical repairs[11] at 5216 repairs, and the repairs cluster which includes engine related repairs[12] at 5169, which represent 23.3% and 23.1% respectively of the total number of mechanical repairs in 2007. The repairs cluster which

[10] This cluster mainly includes the following mechanical repairs: front and rear brakes dismantle and replace, brake cylinder dismantle and replace, front and rear brake drums repair or dismantle and replace, handbrake repair, and other brake repairs.

[11] This cluster mainly includes the miscellaneous mechanical repairs such as hydraulic hose replace, spring bushing replace, pipes replace, and others.

[12] This cluster mainly includes repairs of engine breakdowns such as engine check and repair, engine misfire repair, engine overheating check, engine oil leak check and repair, engine overhaul and other engine related repairs.

includes transmission system related repairs[13] comes in fourth place at 4078 repairs, representing 18.2% of the total number of mechanical repairs in 2007. The graph below shows the growth trend of the number of mechanical repairs in each repair cluster. Appendix (C) provides a further detailed summary of all mechanical repairs performed by the Electrical Unit at the GAM Workshops Department during the (2005-2007) period according to each type of repair.

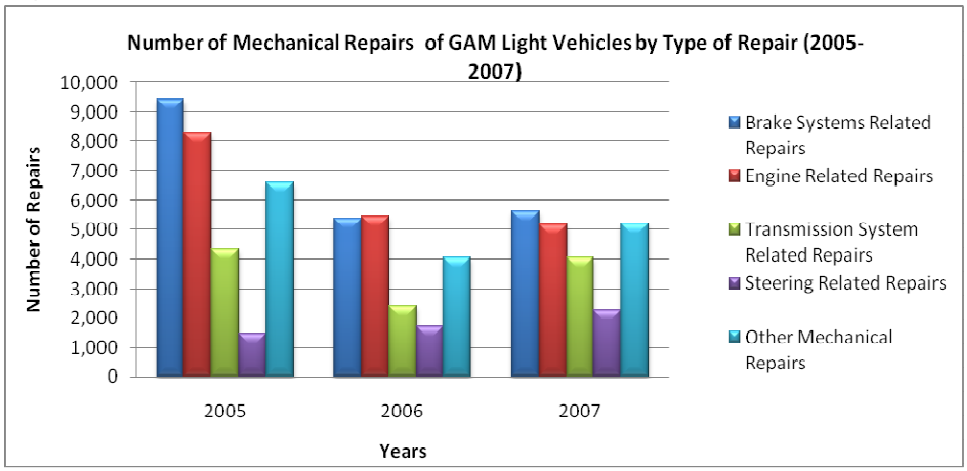



**Figure (5): Number of Mechanical Repairs of GAM Light Vehicles by Type of Repair (2005-2007)**

However, the values of the mechanical repairs do not necessarily reflect the trend of the number of repairs simultaneously. This is evident by the fact that the highest value for mechanical repairs in 2007 was generated from the repairs cluster which includes transmission system related repairs at a total value of JOD 71,129 representing 31% of the total value of all mechanical repairs in 2007. The repairs cluster which includes brake systems related repairs came in second place with a total value of JOD 51,419 representing 22.4% of the total value of all mechanical repairs in 2007. These is closely followed by third place and forth place clusters engine related repairs and other mechanical repairs which recorded maintenance values of JOD 47,900 and JOD 45,888 representing 20.9% and 20% of the total value of all mechanical repairs in 2007 respectively.

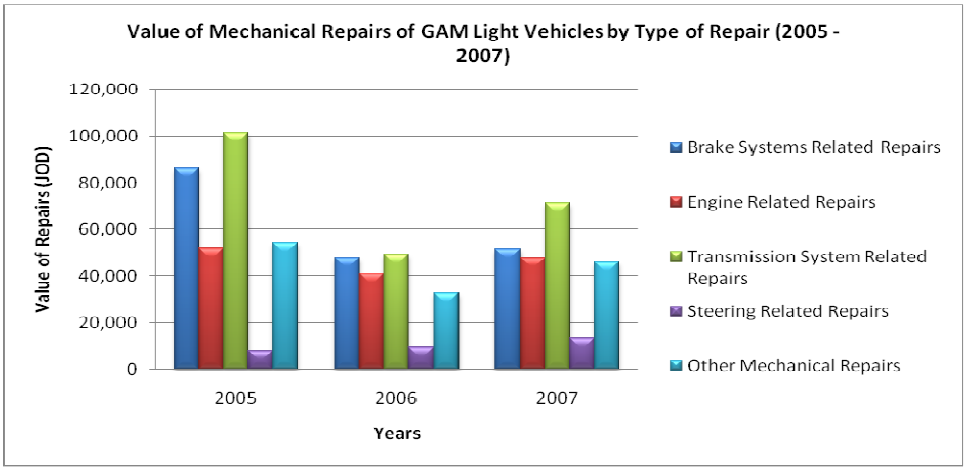



**Figure (6): Value of Mechanical Repairs of GAM Light Vehicles by Type of Repair (2005 – 2007)**

[13] This cluster mainly includes the following electrical repairs: alternator repair or dismantle and replace, start repair or dismantle and replace, switch repair or dismantle and replace.

The fluctuations in the number of mechanical repairs and consequently the value of those repairs at an unprecedented growth rate during the last three years is due to a number of reasons; (a) mainly the increase of the number of vehicles owned by GAM in 2007 and (b) maintenance validity from year to year resulting in the same mended mechanical breakdown not occurring again in the following year.

### 2.5.1.3 Summary of All Light Vehicle Electrical and Mechanical Repairs during (2005-2007)

The total number of electrical and mechanical repairs of GAM light vehicles amounted to 34,565 in 2007, of which mechanical repairs represented 64.8% whereas the remaining 35.2% of repairs were electrical.

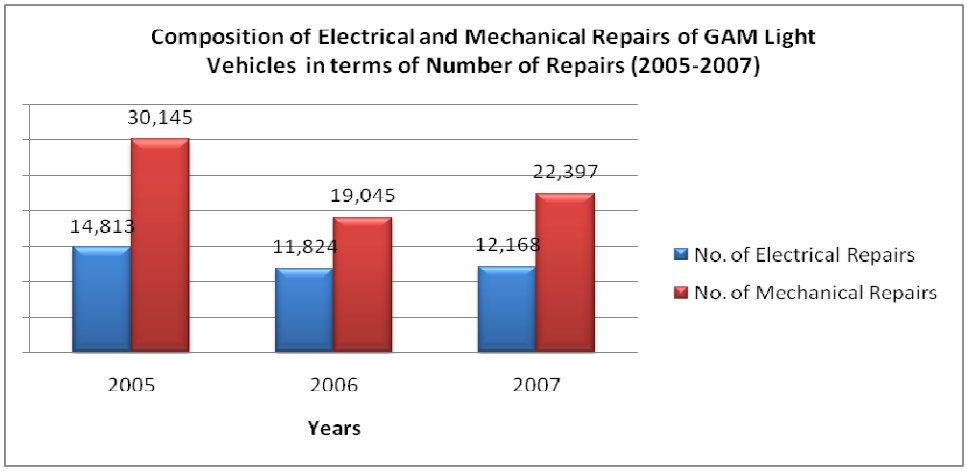



**Figure (7): Composition of Electrical and Mechanical Repairs of GAM Light Vehicles in terms of Number of Repairs (2005 – 2007)**

In terms of value, the overall value of GAM light vehicle repairs (both electrical and mechanical) tallied JOD 276,343 of which mechanical repairs represented the lion's share at 83.1% whereas the remaining 16.9% of repairs were electrical. In conclusion, mechanical repairs represent more value than electrical repairs. However, electrical repairs represent a complimentary and supporting service to mechanical maintenance as there are many cross-cutting vehicle breakdowns that need mechanical as well as electrical mending.

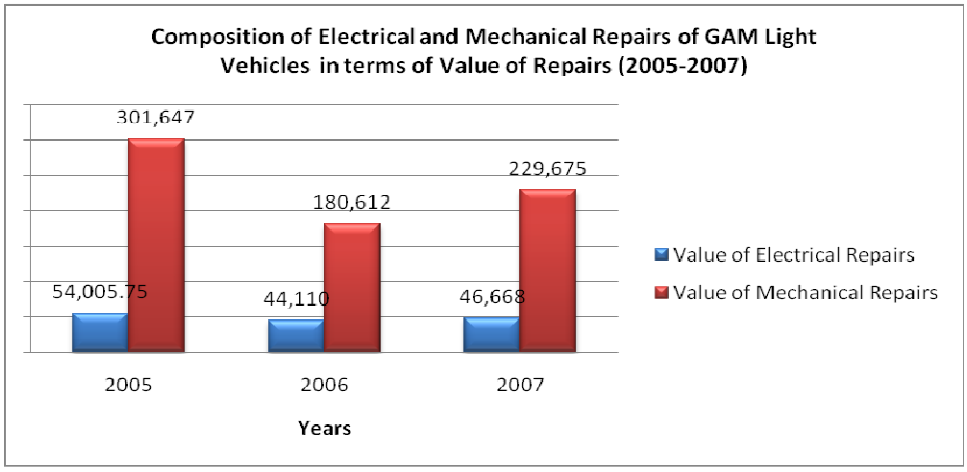



**Figure (8): Composition of Electrical and Mechanical Repairs of GAM Light Vehicles in terms of Number of Value of Repairs (2005 – 2007)**

### 2.5.2 EMPLOYEE PRODUCTIVITY IN COMPARISON WITH THE PRIVATE SECTOR

The following table illustrates the productivity of the GAM Workshops Department in comparison with the private sector.

**Table 7: Employee Productivity**

**GAM Workshops Department – Comparison with the Private Sector (2007)**

| Year | No. of Employees | Gross Annual Salary (JOD) | GAM Workshops Department's Production (JOD) | Employee Productivity (JOD) | Average Employee Productivity in the Private Sector (JOD) |
|---|---|---|---|---|---|
| 2007 | 353 | 1,491,460 | 2,982,545 | 8449 | 5790 |

The table above shows that the productivity of GAM employees at the Workshops Department was higher than the average employee productivity in the private sector by 146%. This shows that the GAM employees at the Workshops Department are very efficient in terms of productivity.

This can be also noted by comparing the average employee annual salary at the GAM Workshops Department to the average employee productivity, where the average employee productivity is almost double the average employee salary. This is one of the main reasons why the spin-off framework was not recommended in the previous spin-off feasibility. However, this productivity analysis shows that there is a chance for GAM to generate income by transforming the department into a profit center.

# 3.0 MARKET ANALYSIS

## 3.1 MARKET STRUCTURE ANALYSIS

The proposed profit center will be operating in the maintenance and repair of motor vehicles sector in Jordan, which generated a gross production output of JOD 89.876,5 Million contributing 5.3% to the wholesale and trade sector's gross output in 2006[14]. At a gross value added of JOD 64.961,8 Million, the maintenance and repair of motor vehicles in Jordan represents 0.65% of GDP (2006)[15] and it represents 5% of the total wholesale and trade sector in Jordan in terms of gross value added (2006)[16].

The maintenance and repair of motor vehicles sector in Jordan is attributed to one main ISIC Code which is the following:

- ISIC-Cd. 5020: Maintenance and Repair of Motor Vehicles[17]

[14] Source: Department of Statistics (DOS) – www.dos.gov.jo

[15] Latest available data based on sector's value added and GDP in current prices (GDP in current market prices amounted JOD billion 9,997.4 in 2006. Source: Central Bank of Jordan (CBJ): www.cbj.gov.jo

[16] Source: Department of Statistics (DOS) – www.dos.gov.jo

[17] Source: Department of Statistics (DOS) – www.dos.gov.jo

The sector has no sub-sectors from the microeconomic/statistical perspective. However, there are related and supporting sectors within the wholesale and retail trade sector, which are primarily the following:

- ISIC-Cd. 5010: Sale of Motor Vehicles
- ISIC-Cd. 5030: Sale of Motor Vehicle Parts and Accessories

This study focuses primarily on analyzing data pertinent to the maintenance and repair of motor vehicles as this is the sector which the proposed profit center will fall into. However, looking at the two above-mentioned related sectors will also help in assessing the trends and dynamics of the motor vehicle repair and maintenance market in Jordan.

The following table shows the maintenance and repair of motor vehicles sector's contribution to GDP in 2006:

**Table 8: Maintenance and Repair of Motor Vehicles**
**Contribution to GDP (2006)**

| Sub-Sector | Contribution to GDP (%) |
|---|---|
| **Maintenance and repair of motor vehicles** | **0.65%** |
| Sale of Motor Vehicles | 1.45% |
| Sale of Motor Vehicle Parts and Accessories | 0.45% |

### 3.1.1 NUMBER OF ESTABLISHMENTS

The maintenance and repair of motor vehicles sector has a total number of 9,744 establishments[18] (2006), representing 10.9% of the total number of establishments in the wholesale and retail trade sector in 2006. These establishments are distributed geographically across the Kingdom as follows[19]:

**Table 9: Maintenance and Repair of Motor Vehicles**
**Geographic Concentration of Sector Establishments (2006)**

| Governorate | Number of Establishments |
|---|---|
| Amman | 4933 |
| Irbid | 1566 |
| Zarqa | 1358 |
| Balqa | 480 |
| Mafraq | 328 |
| Aqaba | 238 |
| Karak | 226 |
| Jerash | 156 |
| Ma'an | 149 |
| Madaba | 148 |
| Ajloun | 99 |
| Tafileh | 63 |
| **Total** | **9,744** |

[18] Source: Department of Statistics (DOS) – Employment in Establishments (2006) – www.dos.gov.jo

[19] Source: Department of Statistics (DOS) – (offline data).

The following graph illustrates the geographic concentration of sector establishments by governorate. Amman has the lion's share with around 51% of the total number of sector establishments, followed by Irbid, Zarqa and Balqa with shares of around 16%, 14% and 5% respectively.

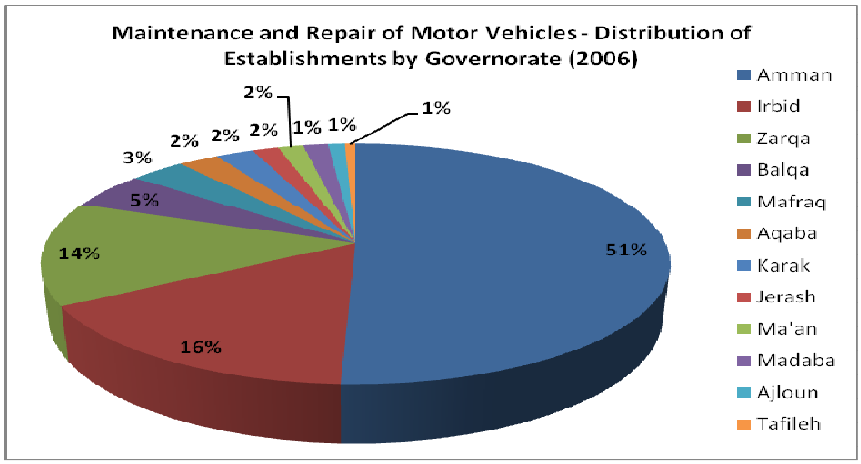



**Figure (9): Maintenance and Repair of Motor Vehicles – Distribution Establishments by Governorate (2006)**

### 3.1.2 NUMBER OF EMPLOYEES

The industry employs a total number of 17,278 employees[20] (2006), representing 9% of the total number employment in the wholesale and retail trade sector in 2006. Table (10) below shows the distribution of employment in this sector by governorate[21].

**Table 10: Maintenance and Repair of Motor Vehicles**
**Geographic Concentration of Employment (2006)**

| Governorate | Number of Employees |
|---|---|
| Amman | 9429 |
| Irbid | 2770 |
| Zarqa | 2412 |
| Balqa | 754 |
| Mafraq | 451 |
| Aqaba | 335 |
| Karak | 281 |
| Jerash | 233 |
| Madaba | 214 |
| Ajloun | 160 |
| Ma'an | 157 |
| Tafileh | 82 |
| **Total** | **17,278** |

The graph below illustrates the geographic concentration of the sector's employment by governorate. Amman has the lion's share with around 55% of the total number of sector establishments, followed by Irbid, Zarqa and Balqa with shares of around 16%, 14% and 4% respectively.

[20] Source: Department of Statistics (DOS) – Employment in Establishments (2006) – www.dos.gov.jo

[21] Source: Department of Statistics (DOS) – (offline data)

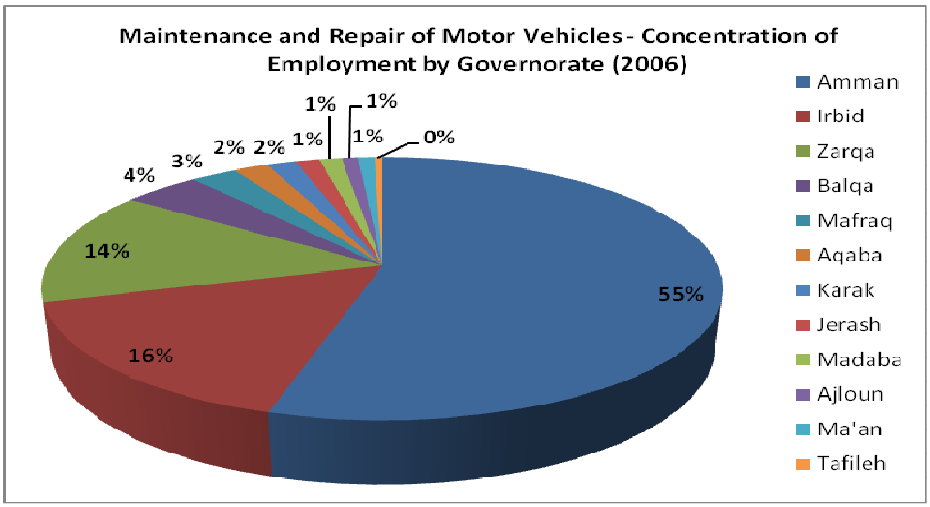



**Figure (10): Maintenance and Repair of Motor Vehicles – Concentration of Employment by Governance (2006)**

### 3.1.3 COMPENSATION OF EMPLOYEES

Table (11) below shows the private-sector's total compensation paid to employees working in the motor vehicle maintenance and repair sector over the (2002-2006) period:

**Table 11: Compensation of Employees**
**Maintenance and Repair of Motor Vehicles – Private Sector (2002 – 2006)**

| Sector | Compensation of Employees (JOD'000) | | | | | |
|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007*[22] |
| Maintenance and Repair of Motor Vehicles | 10,425.50 | 8,941.40 | 16,909.60 | 16,086.90 | 22,418.90 | 28,549.15 |
| Growth Rate (%) | N/A | -14.2% | 89.1% | -4.9% | 39.4% | 27.3% |

## 3.2 MARKET SIZE AND TRENDS ANALYSIS

### 3.2.1 GROSS PRODUCTION OUTPUT

The gross production output of the motor vehicle maintenance and repair sector in Jordan is growing at a healthy rate. This is evident by the fact that the industry's gross production output rose from JOD 70.6 Million to around JOD 89.9 Million between 2005 and 2006 reflecting a growth rate of 27.3% and representing 5.3% of the overall wholesale and retail trade sector's gross production output in 2006. The sector has been growing at an average growth rate of 19.5% over the period (2002-2006) in terms of gross production output. Table (12) below shows the evolution of gross production output of the maintenance and repair of motor vehicles sector over the (2002-2006) period.

[22] Estimated figure based on calculated average growth rate during the (2002-2006) five year period.

## Table 12: Gross Production Output

**Maintenance and Repair of Motor Vehicles – Private Sector (2002 – 2007)**

| Sector | Gross Output (JOD'000) | | | | | |
|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007*[23] |
| Maintenance and Repair of Motor Vehicles | 45,959.50 | 45,396.90 | 64,947.20 | 70,608.50 | 89,876.50 | 107,367.91 |
| Growth Rate (%) | N/A | -1.2% | 43.1% | 8.7% | 27.3% | 19.5% |

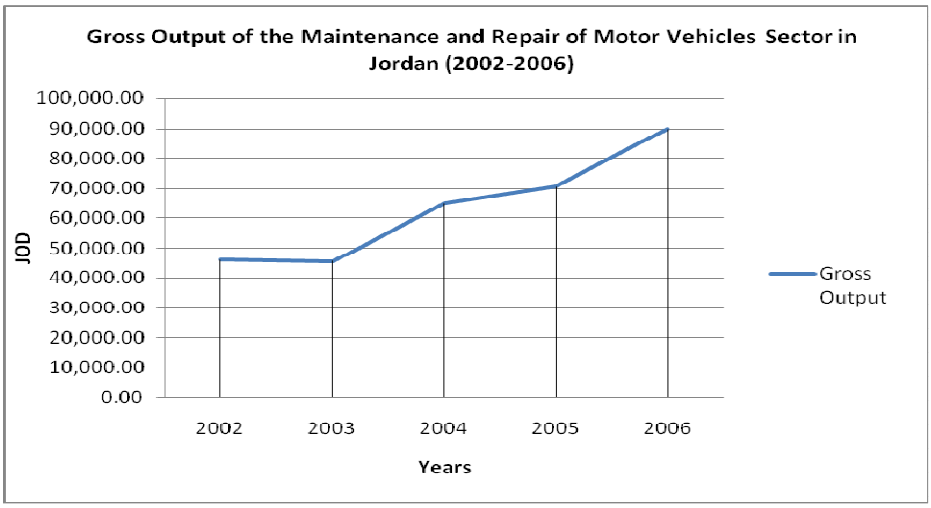



**Figure (11): Gross Output of the Maintenance and Repair of Motor Vehicles Sector in Jordan (2002 – 2006)**

The table below shows the growth trend of two directly related and supporting sectors; namely the sale of motor vehicles and the sale of motor vehicles parts and accessories sectors. Growth trend in these two sectors has been examined because both sectors are closely related and interlinked with the sector in question, the motor vehicles maintenance and repair sector. This emanates from the assumption that a positive growth of motor vehicle sales has a direct impact on increasing the market demand for the maintenance and repair services, whereas the increase in the motor vehicle parts and accessories sales necessarily means increased maintenance and repair activity.

## Table 13: Gross Production Output of Related Sectors

**Sale of Motor Vehicles and;**
**Sale of Motor Vehicles Parts and Accessories – Private Sector (2002 – 2007)**

| Sub-sector | Gross Output (JOD'000) | | | | | |
|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007*[24] |
| Sale of Motor Vehicles | 43,147.00 | 47,037.20 | 69,623.10 | 100,730.20 | 163,910.10 | 231,277.15 |
| Growth Rate (%) | N/A | 9.0% | 48.0% | 44.7% | 62.7% | 41.1% |
| Sale of Motor Vehicles Parts and Accessories | 43,192.90 | 41,563.50 | 47,274.10 | 46,123.50 | 60,098.60 | 65,807.97 |
| Growth Rate (%) | N/A | -3.8% | 13.7% | -2.4% | 30.3% | 9.5% |

Table (13) above shows that the two related and supporting sectors have been growing at steady rates. Sale of motor vehicles has been growing at an average growth rate of 41.1%

[23] Estimated figure based on calculated average growth rate during the (2002-2006) five year period.

[24] Estimated figure based on calculated average growth rate during the (2002-2006) five year period.

over the 2002 – 2006 period whereas the sale of vehicle parts and accessories has been growing at an average growth rate of 9% over the same period.

The sale of motor vehicles has been making big strides in terms of annual growth. This is evident by the significant differences in growth rates in each year starting from 2004. The table below sheds more light on the increasing number of motor vehicles in the Kingdom in recent years.[25]

**Table 14: Number of Registered Vehicles in Jordan**
**(2002 – 2007)**

| Level | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|
| **Number of Registered Vehicles in Jordan** | 542,812 | 571,498 | 612,330 | 679,731 | 755,477 | 841,933 |
| **Growth Rate (%)** | N/A | 5.3% | 7.1% | 11.0% | 11.1% | 11.4% |

Table (14) above shows that the total number of registered vehicles in Jordan reached 841,933 in 2007, rising from 755,477 vehicles in 2006 to reflect a growth rate of 11.4%. This shows that the number of registered vehicles is constantly increasing which necessarily increases the domestic market demand for maintenance and repair services.

### 3.2.2 INTERMEDIATE CONSUMPTION (PRODUCTION EXPENDITURES)

Intermediate consumption is equal to the difference between Gross Output (roughly, the total sales value) and gross value added. Thus, intermediate consumption is an accounting flow which consists of the total monetary value of goods and services consumed or used up as inputs in production by enterprises, including raw materials, services and various other operating expenses.

Table (15) below shows the intermediate consumptions by private sector motor vehicle maintenance and repair establishments during the (2002-2007) period:

**Table 15: Intermediate Consumption (Production Expenditures)**
**Maintenance and Repair of Motor Vehicles – Private Sector (2002 – 2006)**

| Sector | Intermediate Consumption (JOD'000) | | | | | |
|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007*[26] |
| **Maintenance and Repair of Motor Vehicles** | 16,561.70 | 14,302.40 | 20,863.90 | 23,249.90 | 24,914.70 | 28,080.84 |
| **Growth Rate (%)** | N/A | -13.6% | 45.9% | 11.4% | 7.2% | 12.7% |

### 3.2.3 GROSS VALUE ADDED

By looking at gross value added, which - in microeconomic terms - refers to the additional value of a commodity over the cost of commodities used to produce it from the previous stage of production, it can be seen that the sector's gross value added has also been growing at an average growth rate of 23% over the (2002-2006) period. In addition, table (16) below shows that the industry's gross value added rose from around JOD 47.36 Million to around JOD 65 Million during 2005 and 2006, reflecting a growth rate of 37.2%.

[25] Source: Public Security Directorate – Jordan Traffic Institute (Traffic Accidents in Jordan, 2007 Report).

[26] Estimated figure based on calculated average growth rate during the (2002-2006) five year period.

## Table 16: Gross Value Added

**Maintenance and Repair of Motor Vehicles (2002 – 2006)**

| Sub-sector | Gross Value Added (JOD'000) | | | | | AVG (%) |
|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | |
| Gross Value Added (Maintenance and Repair of Motor Vehicles) | 29,397.8 | 31,094.5 | 44,083.3 | 47,358.6 | 64,961.8 | |
| Growth Rate (%) | N/A | 5.8% | 41.8% | 7.4% | 37.2% | 23.0% |

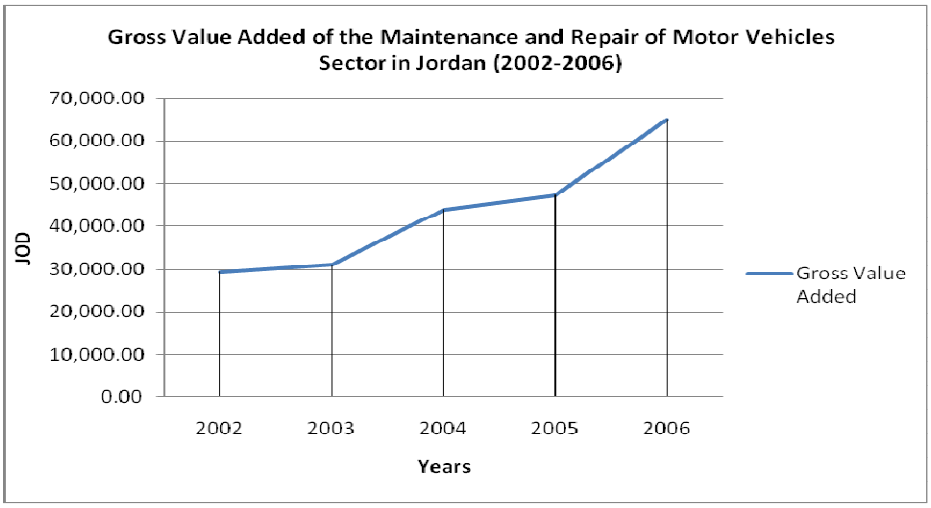



**Figure (12): Gross Value Added of the Maintenance and Repair of Motor Vehicles Sector in Jordan (2002 – 2006)**

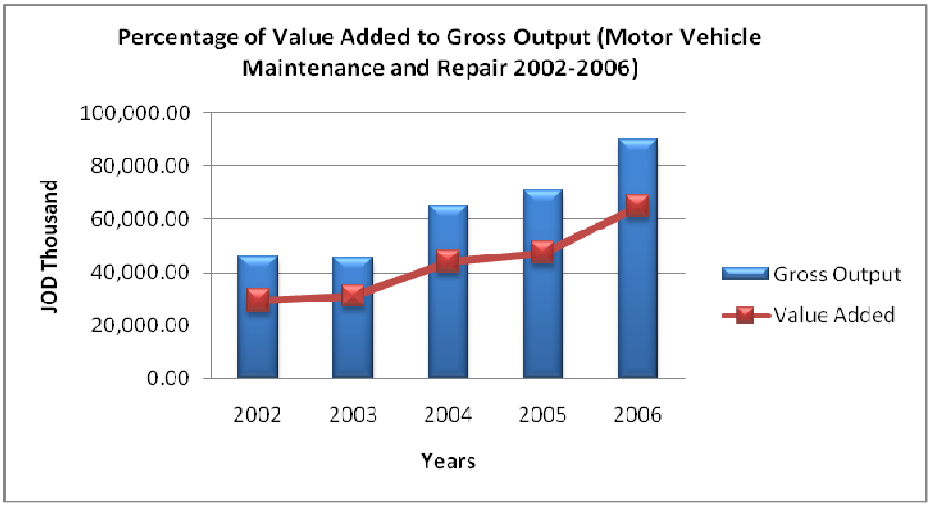



**Figure (13): Percentage of value Added to Gross Output (Motor Vehicle Maintenance and Repair) ( 2002 – 2006)**

The above graph shows the sector's value added compared to its gross production over the five year period (2002-2006). The value added to gross production output ratio for the maintenance and repair of motor vehicles sector has been slightly fluctuating around an average of 67.9% during the (2002-2006) which is a significantly high ratio. This indicates that the sector has been efficient in utilizing its production inputs of land, capital, human resources, raw materials, utilities and other factor conditions.

However, the below graph shows the value added to gross output ratio for the total wholesale and trade sector in Jordan over the same (2002-2006) period, which has been slightly fluctuating around an average of 74.3% over the same period, which means that the maintenance and repair of motor vehicles sector, a part of the wholesale and trade sector according to the ISIC statistical system adopted by the Department of Statistics, is not as efficient in utilizing its production inputs as efficiently as the rest of the wholesale and retail trade sub-sectors. However, the sector's percentage of value added to gross production output remains high since it is in actual fact a service rather than a wholesale or a retail trade.


**Figure (14): Percentage of value Added to Gross Output (Total Wholesale and Retail Trade Sector ( 2002 – 2006)**

### 3.2.4 SIZE OF THE PUBLIC SECTOR MARKET

The following table shows estimates of the demand for motor vehicle electrical and mechanical maintenance generated by the public sector institutions. The table shows the actual demand for 2006 and estimated figures for the following four years based on general budget allocations:

**Table 17: The Public Sector Market Size**
**Maintenance and Repair of Motor Vehicles (2006 – 2010)**

| Year | Values (JOD'000) | | | | | |
|---|---|---|---|---|---|---|
| | 2006 | 2007 (est.) | 2007 (actual) | 2008 (est.) | 2009 (est.) | 2010 (est.) |
| | 2,962,237 | 3,949,401 | 3,675,990 | 5,210,752 | 4,763,138 | 5,016,746 |

### 3.2.5 GROSS MARKET REVENUES

Domestic sales (or domestic market revenues) of the motor vehicle maintenance and repair sector can be represented by gross production output. The rational of this assumption is that the maintenance and repair activity is classified as a trading activity under the wholesale and retail trade sector according to the ISIC-Cd. System at the Department of Statistics, and since the activity in reality, and to a large extent of its nature, entails providing a service –

which is the motor vehicle maintenance and repair service, gross production output reflects the sector's revenues.

The graph below illustrates the growth in gross production output and shows that the domestic market has been growing at a very positive average growth rate of 19.5% over the 2002 – 2006 periods in terms of both gross production output and domestic market sales.

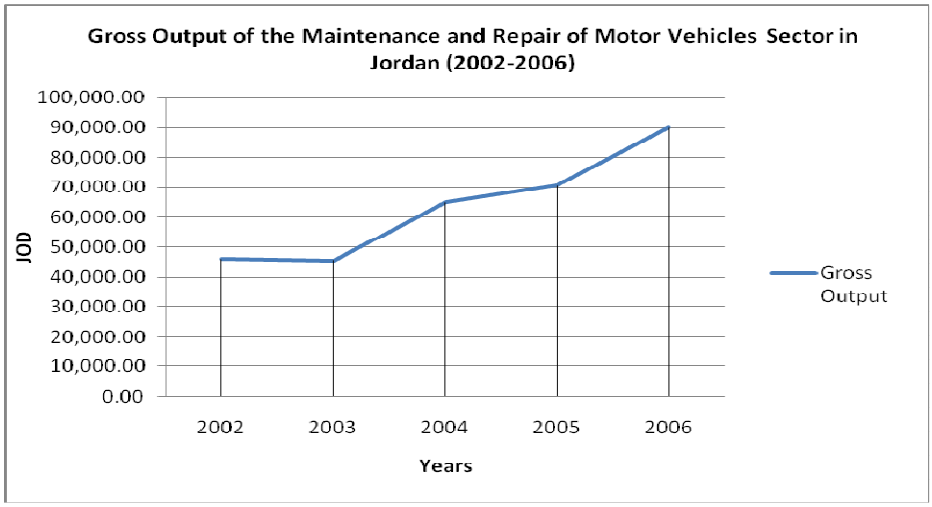



**Figure (15): Gross Output of the Maintenance and Repair of Motor Vehicles Sector in Jordan ( 2002 – 2006)**

## 3.3 CUSTOMER ANALYSIS

A simplified field research has been conducted on a small sample consisted of individual customers who own Japanese, Korean and EU-made light vehicles the models of which ranges between (1997-2005)[27], in order to touch base with the individual customers preferences and try to identify the relative importance of the main motives and factors influencing the individual customers' decision for a specific vehicle maintenance vendor.

Individual customers were asked to rank the qualities that were most important to them in selecting a maintenance vendor for their vehicles. Turnaround time and quality of service were listed as the most important attributes. Trust and customer service were next. While price is a concern, only 13.2% of respondents listed it as their primary concern in selecting a maintenance vendor.

[27] The simplified field survey did not include individual customers who own newer vehicle models as such vehicles are usually covered by maintenance warranties by the selling vehicle dealerships/agencies.

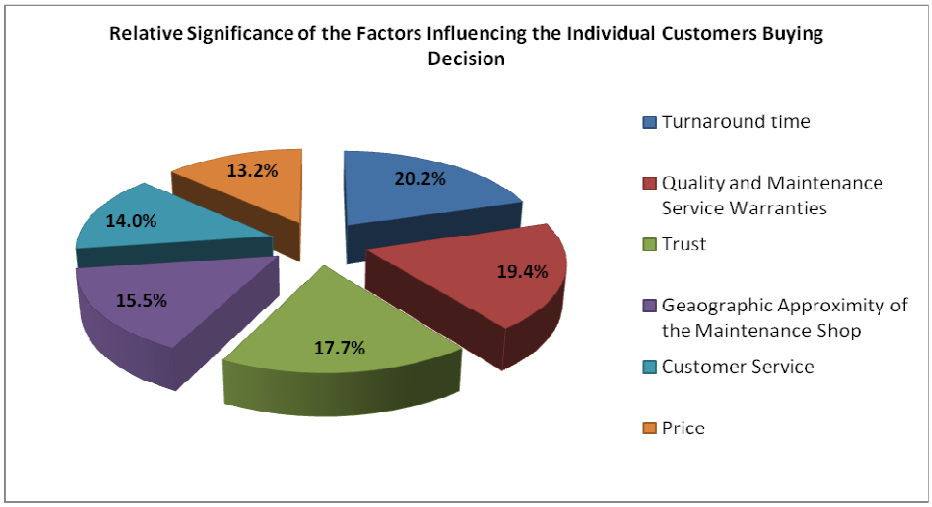



**Figure (16): Relative Significance of the Factors influencing the Individual Customer Buying Decision (2002 – 2006)**

The field and desk research results validate the view that vehicle maintenance and repair is ultimately more than maintaining and repairing vehicles. It's building relationships and establishing trust. Jordanian customers, whether corporate or individual, are becoming busier and time-conscious, which makes their transportation via their own vehicles an increasingly immense day-to-day necessity, which is evident by the maintenance turnaround time ranking first among the factors influencing the customer's vendor selection and service purchase decision.

Often a new customer, whether an individual, a private company or a public sector institution, will try the proposed profit center's maintenance service because a specific problem wasn't resolved elsewhere. The Workshops Department, once transformed into a profit center, will repair the vehicle to their satisfaction and they will often use its services again for another specific vehicle repair. The proposed profit center should focus on building a relationship with the customer that encourages preventive maintenance as well as specialized repairs.

## 3.4 COMPETITION ANALYSIS

Competition is generally manifested in private sector vehicle maintenance shops and repair centers which amount to (9,744) maintenance centers in the Kingdom, particularly in Amman which include (4,933) maintenance centers, most of which are concentrated in the following areas:

- Industrial area in Bayader Wadi Al Seir.
- Al Wihdat and Wadi Al Rimam area (Al Yarmouk Street).
- Industrial area in Sweileh.
- Al Mogabelain and Abu Alanda areas.
- Marka.

Individual customers were asked to rank their preferred geographic locations areas where their preferred for maintenance vendors are located. Vehicle maintenance vendors located in Bayader Wadi Al Seir Industrial Area ranked first with a market share of 36.9%, followed by vehicle maintenance vendors located in Al Wihdat and Wadi Al Rimam area with a share of 27.3%. The below graph shows the distribution of market shares of private sector's vehicle maintenance and repair centers according to their geographic concentration in Amman.

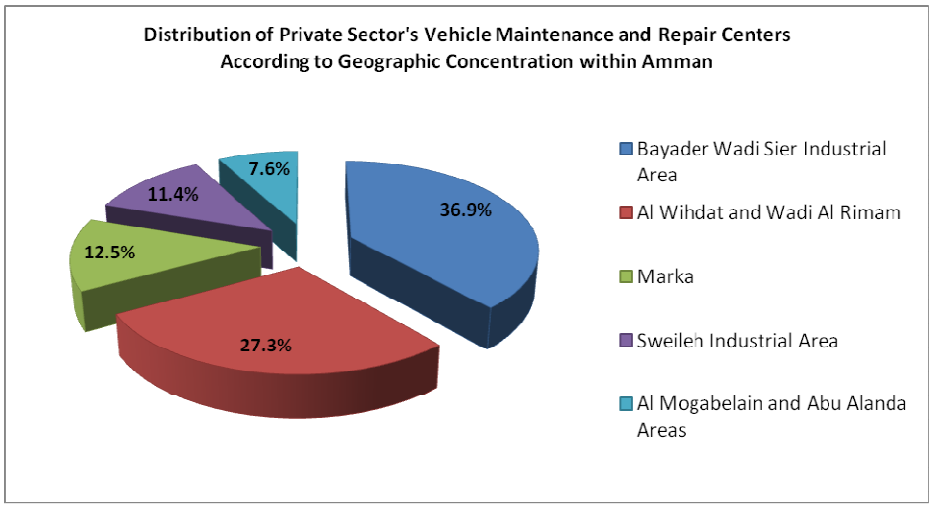



**Figure (17): Distribution of Private Sector's Vehicle Maintenance and Repair Centers According to Geographic Concentration within Amman**

The competition analysis, in which the consulting team relied on quantitative data, notes and personal observations collected from the field research, interviewing some of the owners and staff of selected vehicle maintenance shops, as well as individual customers, in addition to the empirical evidence and the logical conclusions from the market data collected from the desk research, shows the following characteristics of the competitors in the market:

- Mechanical and electrical vehicle maintenance centers perform activities that are mostly separated; which means that most of these centers are specialized in either mending vehicle mechanical or electrical breakdowns. Being specialized in both areas, mechanical and electrical maintenance is confined to large-sized shops and centers.

- It has emerged that the competitor segment that is most likely to directly compete with the proposed profit center will be that which comprises relatively large vehicle maintenance and repair centers, located in Amman, which specialize in both mechanical and electrical vehicle maintenance, and employ more than 5 employees.

- The factors of turnover time, quality of service, service quality guarantees (maintenance warranties), trust (which is resultant from a maintenance and repair center's goodwill, positive word of mouth, referrals, and good personal relationships with the customer) are key factors to meeting customers' needs and hence ensuring their loyalty which leads to repurchasing a service from a certain maintenance center. Other important factors include geographical proximity (location of the maintenance center), customer service and price.

- Most of the aforementioned factors are not met by a large number of vehicle maintenance and repair centers. The most prominent reasons for this conclusion are:

    - Granting a warranty on the maintenance provided is not a common practice by most maintenance and repair centers. However, it is important to note that there is a growing trend in this respect especially by the relatively well-known, large-sized maintenance and repair centers in the private sector, which are starting to offer

maintenance warranties up to three to six months or up to kms 5,000 of the date of the maintenance service.

- Lack of clean waiting areas for customers in common with the vehicle maintenance and repair centers of the car trading agencies.

- Poor time management practices by most vehicle maintenance and repair centers in the private sector as evident by the frustration of some of the interviewed individual customers who voiced their concern that their maintenance vendors are not completing the maintenance service at the earliest time possible.

The table below provides a breakdown of the total number of (4,933) vehicle maintenance and repair centers that are located in Amman by size (number of employees).

**Table 18: Private Sector's Vehicle Maintenance and Repair Centers**

**Level: Amman – Year: 2006**

| Size | Share in total number of centers in Amman | Number |
|---|---|---|
| (1 - 5) employees | 84.4% | 4163 |
| (6 - 10) employees | 9.6% | 474 |
| More than 10 employees | 6.0% | 296 |
| **Total** | 100% | 4933 |

Based on the breakdown provided in the above table, the proposed profit center is expected to compete with those vehicle maintenance and repair shops in Amman which employ more than five employees. This competitor segment is made up of 770 centers representing 15.6% of the total number of vehicle maintenance and repair centers in Amman (2006). These centers are scattered across the main five key areas of concentration in Amman including the industrial area in Bayader Wadi Al Seir, Al Wihdat and Wadi Al Rimam, the industrial area in Sweileh, Marka, Abu Alanda and Al Mugabelain.

# 4.0 SWOT ANALYSIS

The following SWOT analysis has been conducted to outline the strengths and weaknesses that envisaged to be associated within the internal environment of the proposed profit center, as well as to outline the opportunities and threats (challenges) that are associated with the external environment.

## 4.1 STRENGTHS

1. The proposed profit center will have the exclusive right to implement GAM maintenance projects. This will secure a fixed revenue stream for the proposed profit center during the inception phase of its operation. It will also alleviate the burden usually experienced by new ventures in attempting to outmatch competition in the market to secure a market share.

2. The management team is comprised of electrical and mechanical engineers who are skilled and experienced in maintaining GAM vehicles, and who have proven practical experience in dealing with GAM demands and expectations.

3. The department's location is well-suited to serve different potential clients at different areas of Greater Amman in terms of geographical location, facilities and infrastructure to build on.

4. Since the facilities are already in place and the technical staff has various technical backgrounds, the proposed profit center can start modifying and diversifying the services offered to meet the demands of public sector institutions.

5. The existing track record of motor vehicle maintenance and the proposed profit center operating under the umbrella of GAM will make it easier to attract interest from public sector institutions.

## 4.2 WEAKNESSES

1. Relative weakness in entrepreneurship capabilities and skills. It was noted that although the management staff enjoys good management skills, working in the private sector; moving out from the public service framework; and adopting a more profit oriented approach, require certain entrepreneurship capabilities, skills, mindset, and spirit, which the members of the management and technical team seem to lack. The management of the proposed profit center ability to deal with the realities and variables of work as a revenue generating center is untested and that is an area which GAM should work on.

1. The present procurement policy that is adopted by the GAM Workshops Department relies on tenders rather than annual contracts with prequalified vendors. This results in the Department having to purchase vehicle spare parts and maintenance supplies at high prices and creating a stock management problem.

2. Rather high employee turnover especially at the high management levels which can generate both direct and indirect costs. Direct cost relate to leaving costs, replacement costs and transition costs, while indirect costs relate to loss of production, reduced performance levels, unnecessary overtime and sometimes low morale.

3. Unclear jobs' duties and responsibilities which sometimes may lead to unfair distribution of work responsibility.

4. Unclear criteria of hiring policies.

5. Lack of effective employee performance appraisal systems.

6. Ineffective incentive system which causes a sense of lack of recognition and lowering morale.

7. Lack of marketing skills and resources that would enable the department to enter the market as a profit center.

### 4.3 OPPORTUNITIES

1. The main opportunity relates to the large fleet of GAM light and heavy vehicles. The proposed profit center will be exclusively responsible for the electrical and mechanical maintenance of this fleet.

2. Increased opportunities available in the local private and public sector markets as evident by: (1) the increased number of vehicles in Jordan, Amman in particular, over the recent years, which leads to inevitable increased demand for vehicle maintenance services (2) the positive signs of growth in the gross production output and revenues of the motor vehicles maintenance and repair sector in the recent years. However, in order to avoid any production capacity problems and until it builds up its marketing and production capacities, the proposed profit center is advised to focus primarily on attracting the demand of the public sector during the inception phase of its operation and then move gradually into the private business sector. This should be examined further while conducting a full-fledged business plan for the profit center once the concept is approved by GAM.

3. Availability of a large fleet of heavy vehicles which can generate a new revenue stream by offering rental services to other public sector institutions.

4. The opportunity would be the GAM employees themselves who own private vehicles – a good marketing within GAM may attract those employees to use the profit center's services.

5. The opportunities which lie in adding niche services such as heavy vehicle leasing and transportation services. Although the feasibility of such ventures is yet to be examined, there is a room of adding innovative ideas which can generate new revenue streams to the profit center.

### 4.4 THREATS (CHALLENGES)

1. The possibility of being over dependent on the GAM demand rather than building new clientele base other than GAM and/or considering adding new niche services.
2. If public sector institutions opt for other service providers, the proposed profit center may struggle to secure a fixed revenue stream other than the internal GAM demand.

# 5.0 FINANCIAL ANALYSIS

## 5.1 MAIN ASSUMPTIONS

The financial analysis and projections have been conducted based on the following assumptions:

- Anticipated revenues have been estimated based on the current price lists for all vehicle maintenance and repair services delivered by the Workshops Department at GAM during the last three years.
- Growth of forecasted revenues generated by the internal GAM demand has been forecasted at a fixed rate of 5% for the next five years. This growth rate reflects the historical annual growth (during the last three years).
- The proposed profit center's share in the public sector institutions' segment will be as follows:

**Table 19: Forecasted Share in the Public Sector's Segment**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Maintenance Revenues - Gov. Growth % | 5% | 10% | 15% | 20% | 20% |

- The annual increment rate for the employees is assumed to be 9% over the projected years.
- The profit center will allocate 3% of total revenues for marketing activities.
- Expenses were calculated based on DOS data for motor vehicle maintenance sector in Jordan during the last three years, using the number of employees as a base.
- Production costs and administrative costs represent 80% and 20% respectively of the total running costs.
- Variable costs will follow the revenue stream and will be increased by the same percentages of increases in revenues.
- Fixed costs will be subject to an annual increase of 5%.
- The center will maintain a collection period for accounts receivable of 120 days over the next five years.

- The center will maintain a payment period for accounts payable of 45 days over the next five years.

- Other debit balance and other credit balances are estimated at 3% of total sales and 2% of total expenses respectively.

- The following shows the expected additions to fixed assets and estimated costs:

**Table 20: Expected Additions to Fixed Assets**

| | # of | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Equipment and Tools | | 1,000 | 1,000 | 1,000 | 500 | 500 |
| Vehicles | 2 | 20,000 | - | - | - | - |
| **Total** | | **21,000** | **1,000** | **1,000** | **500** | **500** |

- Fixed assets are depreciated by 15% annually using the Straight Line Method.

## 5.2 IRR CALCULATION AND PAYBACK PERIOD

The Internal Rate of Return (IRR) is the compound annual rate of return that the profit center will earn if it invests in the project and receives the given cash inflows. The IRR assumes that intermediate cash flows get reinvested at the "IRR".

The estimated IRR of the investment is expected to be very high and the payback period will be very short. IRR and Payback period could not be calculated in this case due to the very low size and amount of investment.

## 5.3 BREAKEVEN POINT

The breakeven point is a level of sales at which the center's profit is zero. The consulting team calculated the breakeven point based on the Contribution Margin Method. The breakeven point to sales will be stable over the projected years between 48% and 51%.The following table shows the breakeven point calculation:

**Table 21: The Breakeven Point Calculation**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Sales | 3,526,413 | 3,928,983 | 4,339,773 | 4,759,195 | 4,949,523 |
| Less: Variable expenses | 253,151 | 282,050 | 311,540 | 341,649 | 355,312 |
| **Contribution Margin (CM)** | **3,273,262** | **3,646,933** | **4,028,233** | **4,417,546** | **4,594,211** |
| *CM%* | 93% | 93% | 93% | 93% | 93% |
| Less: Fixed expenses | 1,678,379 | 1,831,682 | 1,927,043 | 2,100,918 | 2,282,423 |
| | | | | | |
| **Net Operating Income** | **1,594,883** | **1,815,250** | **2,101,190** | **2,316,628** | **2,311,788** |
| | | | | | |
| **Break-even point in total (JD)** | **1,808,183** | **1,973,343** | **2,076,079** | **2,263,401** | **2,458,943** |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| *% of fixed costs to sales* | *48%* | *47%* | *44%* | *44%* | *46%* |
| *% of variable costs to sales* | *7%* | *7%* | *7%* | *7%* | *7%* |
| *% of breakeven point to sales* | *51%* | *50%* | *48%* | *48%* | *50%* |

## 5.4 FINANCIAL RATIOS AND FREE CASH FLOW

The following table shows the financial ratios for the projected years:

**Table 22: Financial Ratios for the Projected Years**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| **Liquidity Ratios:** | | | | | |
| Working Capital | 1,573,074 | 3,391,323 | 5,495,661 | 7,816,013 | 10,131,600 |
| Current Ratio | 4.28 | 7.36 | 10.36 | 13.14 | 16.09 |
| Quick Ratio | 4.28 | 7.36 | 10.36 | 13.14 | 16.09 |
| Free Cash Flow | 771,243 | 1,725,947 | 2,008,931 | 2,224,469 | 2,274,129 |
| **Profitability Ratios:** | | | | | |
| Return on Investment (ROI) | 77% | 46% | 34% | 27% | 21% |
| Net Profit Ratio (EBT) | 45% | 46% | 48% | 49% | 47% |
| Net Profit Ratio% | 45% | 46% | 48% | 49% | 47% |
| Gross Margin Ratio | 56% | 57% | 59% | 59% | 57% |
| Revenues - GAM Growth % | | 5% | 5% | 5% | 5% |
| Revenues – Gov. Growth % | | 100% | 50% | 33% | 0% |
| Total Revenues Growth % | | 11% | 10% | 10% | 4% |
| **Solvency Ratios:** | | | | | |
| Debt Ratio | 23% | 14% | 10% | 8% | 6% |

- The Center will recognize positive and high liquidity indicators over the next five years.
- The free cash flow will be high and positive over the projected years, which means that the center will be able to cover its running costs and its investment plan
- The ROI is very high.
- The debt ratio is very low.

## 5.5 FINANCIAL PERFORMANCE ANALYSIS

- Revenues generated by the internal GAM demand will increase over the projected years
- The variable costs will follow the revenues streams and it will be increased by the same percentages of increases in revenues over the coming years
- Salaries and wages item will be increased by the annual increments

- The gross margin and net profit margin will be stable over the projected years

- The following table represents the total administrative and production expenses over the next five years:

## Table 23: Total Administrative and Production Expenses
**Over the Coming Years**

| | 2009 | 2010 | 2011 | 2012 | 2013 | Fixed/ Variable |
|---|---|---|---|---|---|---|
| Salaries and wages | 1,491,460 | 1,625,691 | 1,772,004 | 1,931,484 | 2,105,318 | Fixed |
| Training | 74,573 | 81,285 | 17,720 | 19,315 | 21,053 | Fixed |
| Depreciation | 3,849 | 3,999 | 4,149 | 4,224 | 4,299 | Fixed |
| Water | 28,540 | 31,798 | 35,123 | 38,517 | 40,058 | Variable |
| Electricity | 33,376 | 37,186 | 41,074 | 45,044 | 46,845 | Variable |
| Professional fees | 2,500 | 2,625 | 2,756 | 2,894 | 3,039 | Fixed |
| Advertising | 105,792 | 117,869 | 130,193 | 142,776 | 148,486 | Fixed |
| Maintenance | 14,914 | 16,617 | 18,354 | 20,128 | 20,933 | Variable |
| Insurance | 205 | 213 | 221 | 225 | 229 | Fixed |
| Others | 176,321 | 196,449 | 216,989 | 237,960 | 247,476 | Variable |
| **Total** | **1,931,530** | **2,113,733** | **2,238,583** | **2,442,567** | **2,637,735** | |

- The following table represents projected income statements for the next five years:

## Table 24: Projected Income Statements
**For the Coming Five Years**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected |
| Electrical and Mechanical Revenues - GAM | 3,288,256 | 3,452,669 | 3,625,302 | 3,806,567 | 3,996,896 |
| Electrical and Mechanical Revenues – Gov. | 238,157 | 476,314 | 714,471 | 952,628 | 952,628 |
| **Total Revenues** | **3,526,413** | **3,928,983** | **4,339,773** | **4,759,195** | **4,949,523** |
| | | | | | |
| Cost of Revenues | (1,545,224) | (1,690,986) | (1,790,866) | (1,954,053) | (2,110,188) |
| | | | | | |
| **Gross Margin** | **1,981,189** | **2,237,996** | **2,548,907** | **2,805,142** | **2,839,335** |
| | | | | | |
| General and Administrative Expenses | (386,306) | (422,747) | (447,717) | (488,513) | (527,547) |
| | | | | | |
| **Net Profit** | **1,594,883** | **1,815,250** | **2,101,190** | **2,316,628** | **2,311,788** |
| | | | | | |
| Retained Earnings, beginning balance | - | 1,594,883 | 3,410,133 | 5,511,323 | 7,827,951 |
| **Retained Earnings, ending balance** | **1,594,883** | **3,410,133** | **5,511,323** | **7,827,951** | **10,139,739** |

## 5.6 FINANCIAL POSITION ANALYSIS

- The total assets will be increased over the projected years due to the high increases in cash and accounts receivable balances
- The equity will be increased over the years due to the high recognition of profits
- The following table shows the projected balance sheets over the coming five years:

**Table 25: Projected Balance Sheets**
**Over the Coming Five Years**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected |
| **ASSETS** | | | | | |
| **Current Assets** | | | | | |
| Cash on hand and at banks | 771,243 | 2,497,190 | 4,506,120 | 6,730,590 | 9,004,718 |
| Accounts receivable | 1,175,471 | 1,309,661 | 1,446,591 | 1,586,398 | 1,649,841 |
| Other debit balances | 105,792 | 117,869 | 130,193 | 142,776 | 148,486 |
| **Total Current Assets** | **2,052,506** | **3,924,720** | **6,082,905** | **8,459,764** | **10,803,045** |
| | | | | | |
| **Fixed Assets** | | | | | |
| Cost | 25,657 | 26,657 | 27,657 | 28,157 | 28,657 |
| Accumulated Depreciation | (3,849) | (7,847) | (11,996) | (16,219) | (20,518) |
| **Net Book Value** | **21,808** | **18,810** | **15,661** | **11,938** | **8,139** |
| | | | | | |
| **Total Assets** | **2,074,315** | **3,943,530** | **6,098,566** | **8,471,702** | **10,811,184** |
| | | | | | |
| **LIABILITIES** | | | | | |
| **Current Liabilities** | | | | | |
| Accounts payable | 440,802 | 491,123 | 542,472 | 594,899 | 618,690 |
| Other credit balances | 38,631 | 42,275 | 44,772 | 48,851 | 52,755 |
| **Total Current Liabilities** | **479,432** | **533,397** | **587,243** | **643,751** | **671,445** |
| | | | | | |
| Long term Liabilities | | | | | |
| **Total Liabilities** | **479,432** | **533,397** | **587,243** | **643,751** | **671,445** |
| | | | | | |
| **EQUITY** | | | | | |
| Retained Earnings | 1,594,883 | 3,410,133 | 5,511,323 | 7,827,951 | 10,139,739 |
| **Total Equity** | **1,594,883** | **3,410,133** | **5,511,323** | **7,827,951** | **10,139,739** |
| **Total Liabilities and Equity** | **2,074,315** | **3,943,530** | **6,098,566** | **8,471,702** | **10,811,184** |

## 5.7 CASH FLOW ANALYSIS

- The cash flow generated from the operations will be sufficient to cover the center's running costs and investment plan over the years
- The following table shows the projected cash flow on the coming five years:

## Table 26: Projected Cash Flow
**On the Coming Five Years**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| | Projected | Projected | Projected | Projected | Projected |
| Net profit for the year | 1,594,883 | 1,815,250 | 2,101,190 | 2,316,628 | 2,311,788 |
| Adjusted by not cash transactions: | | | | | |
| Depreciation | 3,849 | 3,999 | 4,149 | 4,224 | 4,299 |
| | | | | | |
| Accounts receivable | (1,175,471) | (134,190) | (136,930) | (139,807) | (63,443) |
| Other debit balances | (105,792) | (12,077) | (12,324) | (12,583) | (5,710) |
| Accounts payable | 440,802 | 50,321 | 51,349 | 52,428 | 23,791 |
| Other credit balances | 38,631 | 3,644 | 2,497 | 4,080 | 3,903 |
| **Net Cash Flow from (used in) Operating Activities** | **796,900** | **1,726,947** | **2,009,931** | **2,224,969** | **2,274,629** |
| | | | | | |
| Net additions on fixed assets | (25,657) | (1,000) | (1,000) | (500) | (500) |
| **Net Cash Flow from (used in) Investing Activities** | **(25,657)** | **(1,000)** | **(1,000)** | **(500)** | **(500)** |
| | | | | | |
| **Net Change in Cash** | **771,243** | **1,725,947** | **2,008,931** | **2,224,469** | **2,274,129** |
| | | | | | |
| Cash, beginning balance | - | 771,243 | 2,497,190 | 4,506,120 | 6,730,590 |
| **Cash , ending balance** | **771,243** | **2,497,190** | **4,506,120** | **6,730,590** | **9,004,718** |

## 5.8 SENSITIVITY ANALYSIS

The financial analysis and projections is heavily based on a number of assumptions relevant to anticipated revenues, costs, and other variables over the projected years. This would clearly imply that the extent to which these assumptions are right will affect the correctness and accuracy of the decision made on this project.

One way to gain confidence on the general conclusion and on the decision made is to check how sensitive the decision measure in case of a change in key assumptions.

The IRR sensitivity analysis was conducted to test the following cases:

- If there is a deviation on the estimated cash inflow by - 10% of the standard case
- If there is a deviation on the estimated cash outflow by + 10% of the standard case
- If there is a deviation on the estimated cash inflow by - 10% and estimated cash outflow by + 10% of the standard case

We noted that any deviation on the estimated cash inflow or out flow will not be sensitive to the maintenance activities.

The following table represents the sensitivity analysis for the projected income statements:

## Table 27: Sensitivity Analysis for the Projected Income Statements

| Year | Revenues | | |
|---|---|---|---|
| | Expected Balance | 110% | 90% |
| 2009 | 3,526,413 | 3,879,054 | 3,173,772 |
| 2010 | 3,928,983 | 4,321,881 | 3,536,084 |
| 2011 | 4,339,773 | 4,773,750 | 3,905,796 |
| 2012 | 4,759,195 | 5,235,114 | 4,283,275 |
| 2013 | 4,949,523 | 5,444,476 | 4,454,571 |
| **Year** | **Cost of Revenues** | | |
| | **Expected Balance** | **110%** | **90%** |
| 2009 | (1,545,224) | (1,699,747) | (1,390,702) |
| 2010 | (1,690,986) | (1,860,085) | (1,521,888) |
| 2011 | (1,790,866) | (1,969,953) | (1,611,780) |
| 2012 | (1,954,053) | (2,149,459) | (1,758,648) |
| 2013 | (2,110,188) | (2,321,207) | (1,899,169) |
| **Year** | **Gross Margin** | | |
| | **Expected Balance** | **110%** | **90%** |
| 2009 | 1,981,189 | 2,179,308 | 1,783,070 |
| 2010 | 2,237,996 | 2,461,796 | 2,014,197 |
| 2011 | 2,548,907 | 2,803,797 | 2,294,016 |
| 2012 | 2,805,142 | 3,085,656 | 2,524,628 |
| 2013 | 2,839,335 | 3,123,269 | 2,555,402 |
| **Year** | **GandA Expenses** | | |
| | **Expected Balance** | **110%** | **90%** |
| 2009 | (386,306) | (424,937) | (347,675) |
| 2010 | (422,747) | (465,021) | (380,472) |
| 2011 | (447,717) | (492,488) | (402,945) |
| 2012 | (488,513) | (537,365) | (439,662) |
| 2013 | (527,547) | (580,302) | (474,792) |
| **Year** | **Net Profit** | | |
| | **Expected Balance** | **110%** | **90%** |
| 2009 | 1,594,883 | 1,754,371 | 1,435,394 |
| 2010 | 1,815,250 | 1,996,775 | 1,633,725 |
| 2011 | 2,101,190 | 2,311,309 | 1,891,071 |
| 2012 | 2,316,628 | 2,548,291 | 2,084,966 |
| 2013 | 2,311,788 | 2,542,967 | 2,080,609 |

# 6.0 INSIGHT AND DIRECTION TO TRANSFORMING THE DEPARTMENT INTO A PROFIT CENTER

Since the transforming the Workshops Department into a profit center under GAM has proven to be a feasible arrangement from marketing and financial perspective, this section provides insight and direction to undertaking such transformation successfully. This insight can also be utilized and implemented as general courses of action should the profit center concept gets GAM's approval.

## 6.1 CONCEPT OF THE PROFIT CENTER

Profit centers constitute the branch or division of an organization that generates revenues individually and separately from the main organization. The profit center's revenues and expenses are held separately from the main organization in order to determine their profitability.

The main characteristics of a profit center include:

- **Generating revenues:** through the sale of services to customers, the new center will turn profit. Hence, the center would generate revenue in access of its expenses. This is done as GAM allows the newly transformed department into a profit center with the freedom to sell its services to outside customers. Thus the department would still operate as a cost center in its dealings with the GAM internal demand, but it would operate as a profit center when it provides services to outside customers.

- **Business Model:** The proposed profit center will be a unit of GAM that generates revenue in access of its expenses. It is expected that, as illustrated in the financial projections of this study, through the sale of the vehicle maintenance and other related services, the unit will turn a profit. Beyond this simple definition, the term "profit center" has also come to represent a form of management accounting that is organized around the profit center concept.

  All private sector companies, no matter what size, have both cost and profit centers. For example, in most companies, units such as human resources and purchasing are strictly cost centers. The company has to spend money to operate those units, and neither has any means of producing a profit to offset those expenses. They exist solely to make it possible for other areas of the company to make money. However, without those two departments, the company could not survive. Examples of profit centers would be the manufacturing units that produce products for sale to consumers or other businesses. The sale of those products generates a profit that offsets the expense of creating the products.

  All companies have profit centers and cost centers, but not all companies organize their accounting practices around the profit center concept. In fact, most companies do things the time-honored way, producing overall profit and loss statements for the company as a whole, without making each business unit accountable for generating a profit.

The recommended business model in order to transform the Workshops Department into a profit center under GAM is to allow the department the freedom to sell its services to outside customers, with primary focus on the public sector institutions' market segment. Thus, the department would still operate as a cost center in its dealings with other units inside GAM, but it would operate as a profit center when it provides services to outside companies and public sector institutions. This method of operation has become far more common in the 1990s and beyond at both public and private organizations and companies, as companies and organizations alike seek new revenue streams that have low start-up and running costs.

In order to successfully launch such business model for the proposed profit center, it is important to establish a profit center accounting mechanism, which requires a certain level of sophistication to establish and maintain. It also requires commitment and discipline to make the results meaningful. This should be carefully designed within the context of a full-fledged business plan for the profit center once the concept has been approved by GAM.

- **Corporate Culture and Change Management:** the new profit center would require a radical shift into a corporate philosophy and business culture. The profit center would entail a change in the mindset of management to be organized more around the profit-oriented concept. This would also be of utmost importance at the beginning as the change resulting from such transformation must be carefully and efficiently managed.

  For the individual change management the consultant recommends GAM to adopt the ADKAR model. This model describes five required building blocks for change to be realized successfully on an individual level:

| | |
|---|---|
| **A** | Awareness of the need for change |
| **D** | Desire to participate and support the change |
| **K** | Knowledge on how to change |
| **A** | Ability to implement required skills and behaviors |
| **R** | Reinforcement to sustain the change |

The ADKAR model is a results-oriented change management tool that is simple and easy to understand, yet very effective for managers and change management teams. It is used as a resistance management tool, an assessment device and to help change management teams organize their work.

For the Organizational change management which includes processes and tools for managing the people side of the change at an organizational level. As a structured approach to be used to effectively transition groups or organizations through change the consultant recommends the following techniques:

1- Readiness Assessments – creating a change management strategy. The strategy to be based on :

   a. GAM management is to identify the reasons for transforming the two departments into profit centers and the need for such transformation.

   b. Setting a clear vision, mission and values.

c. Estimate what impact a change will likely have on employee behavior patterns, work processes, technological requirements, and motivation.

d. Assess what employee reactions will be.

2- Sponsorship – engaging senior managers as change leaders.

3- Communications – building awareness of the need for change.

4- Education and Training – developing skills and knowledge to support the change.

5- Coaching by Managers and Supervisors – helping employees move through the transition.

6- Measurement Systems, rewards and Reinforcement – methods to sustain the change.

- **Entrepreneurial spirit:** the new profit center would entail a change in employee mindset to have more of an entrepreneurial shift in their mentality and approach to carrying out work. This would enable employees to be more proactive and operate as a private sector company.

## 6.2 BENEFITS TO GAM

The new profit center arrangement and the courses of action that will be taken to achieve such departmental transformation is expected to benefit GAM in the following ways:

- Generate revenues,
- Enhance the quality of the department's services,
- Become a pilot for other departments within GAM and other government institutions,
- Decrease cost on GAM budget.
- The results of the job review which should be conducted as part of the transformation process will help GAM in identifying the number of staff needed for such activities and processes.

## 6.3 RECOMMENDED COURSES OF ACTION

To ensure the successful transformation of the Workshops Department into a profit center, the following managerial courses of action have to be adopted:

### 6.3.1 THOROUGH JOB AND FUNCTION REVIEW

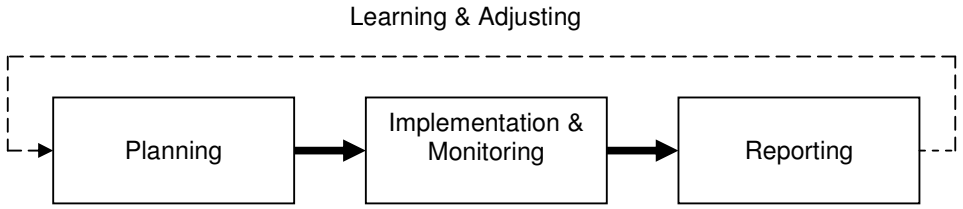
In this context, services, functions and jobs should be reviewed as per the following guidelines:

| Table 28: Main Recommended Action Items for the Job and Function Review | | |
|---|---|---|
| **Issue** | **Outcome** | **Priority** |
| 1- The department should review the jobs required for each function and align them to corresponding hierarchy levels. The review to be based on each activity and service provision process. The review results will help GAM in identifying the number of staff needed for such activities and processes. | - Defined Job Matrix and Job cards. | High-Immediate |
| 2- Each job shall be analyzed and defined in terms of required:<br>a. Required knowledge, skills and competences,<br>b. Tasks & duties,<br>c. Responsibilities and authorities, | The analysis will help GAM in defining the value of each job. It will be used in defining salaries and compensation system. In addition to be used in the performance appraisal process. | High-Immediate |
| 3- Designing and building a "Competency Model" for the departments' jobs. | A tool used in developing staff, identifying training needs, succession planning & recruitment | Moderate-long term |

### 6.3.2 RESULT-BASED MANAGEMENT

This would entail a shift in the manner by which work is conducted from a language of action into that of change. Hence, activities would be aligned with the ultimate objective of the center to ensure its desired impact is realized.

Results-based management is a comprehensive, life-cycle approach to management that integrates strategy, people, resources, processes and measurements to improve decision-making, transparency, and accountability. The approach focuses on achieving outcomes, implementing performance measurement, learning and changing, and reporting performance.




### 6.3.3 MONITORING AND EVALUATION SYSTEM

A performance based system should be adopted to ensure a work flow that is governed by Key Performance Indicators (KPIs) to measure performance. This monitoring and evaluation should be utilized through deploying a sound performance appraisal system.

### 6.3.4 PERFORMANCE APPRAISAL SYSTEM

Performance appraisal is the specific and formal evaluation of an employee conducted to determine the degree to which the employee is performing his or her job effectively. The current performance appraisal practice is limited to simply completing a rating form that evaluates the employee's performance.

First there should be a clear job description for each job that corresponds to a particular function, the employee should put down their career goals so as to formulate a career path within the context of a career development plan for each employee. Then appraisal should be conducted by evaluating employee performance against the clear duties and responsibilities outlined in their job description and career development plan.

Employee performance appraisal should follow a structured formal interaction between the employee and their management that usually takes the form of a periodic interview (annual or semi-annual), in which the work performance of the subordinate is examined and discussed, with a view to identifying weaknesses and strengths as well as opportunities for improvement and skills development.

Appraisal systems should always be designed so that they have the greatest likelihood of improving individual and organizational performance. There are many alternative methods for the actual design of an appraisal system, and no advantage to any of those methods with the exception of goal-based appraisals.

The consultant recommends the appraisal system to provide a valid and reliable measure of employee performance. That is, the appraisal results should reflect the TRUE picture of who is performing well and who is not.

Since it is extremely difficult to assess the extent to which an appraisal system achieves those goals, GAM should not forget the importance of the perceptions of accuracy and fairness.

Accordingly, the recommended performance appraisal system has to include the following:

1- A statement of outcomes that defines of SMART objectives for each employee,
2- A performance criteria to include the managerial and job levels competencies,
3- A clear definition and outline of the ranking/ rating results method,
4- A list of recognized employee strengths, and areas to target for improvement,
5- Employee comments and acceptance.

Furthermore, review the whole system to ensure that:

- Recruiting and selection processes are adequate,
- It plays an important role in training,
- It helps linking performance with rewards,

- It demonstrates that important employment-related decisions are based on performance, and
- It can promote employee motivation and development.

Effective performance management typically involves both monetary and non-monetary incentives to employees who meet goals or improve their performance. Such incentives include:

**Suggested Monetary Incentives:**

- Annual salary allowances and increments.
- Performance and achievement related bonuses.

**Suggested Non-monetary Incentives:**

- Plaques,
- Extra time off,
- Training Courses,
- Improve work space; new desk, private office, office equipment, ……,
- Giving more work responsibilities,
- Attending top management meeting,

The below chart is a proposed Performance Management Process to be adopted by GAM:

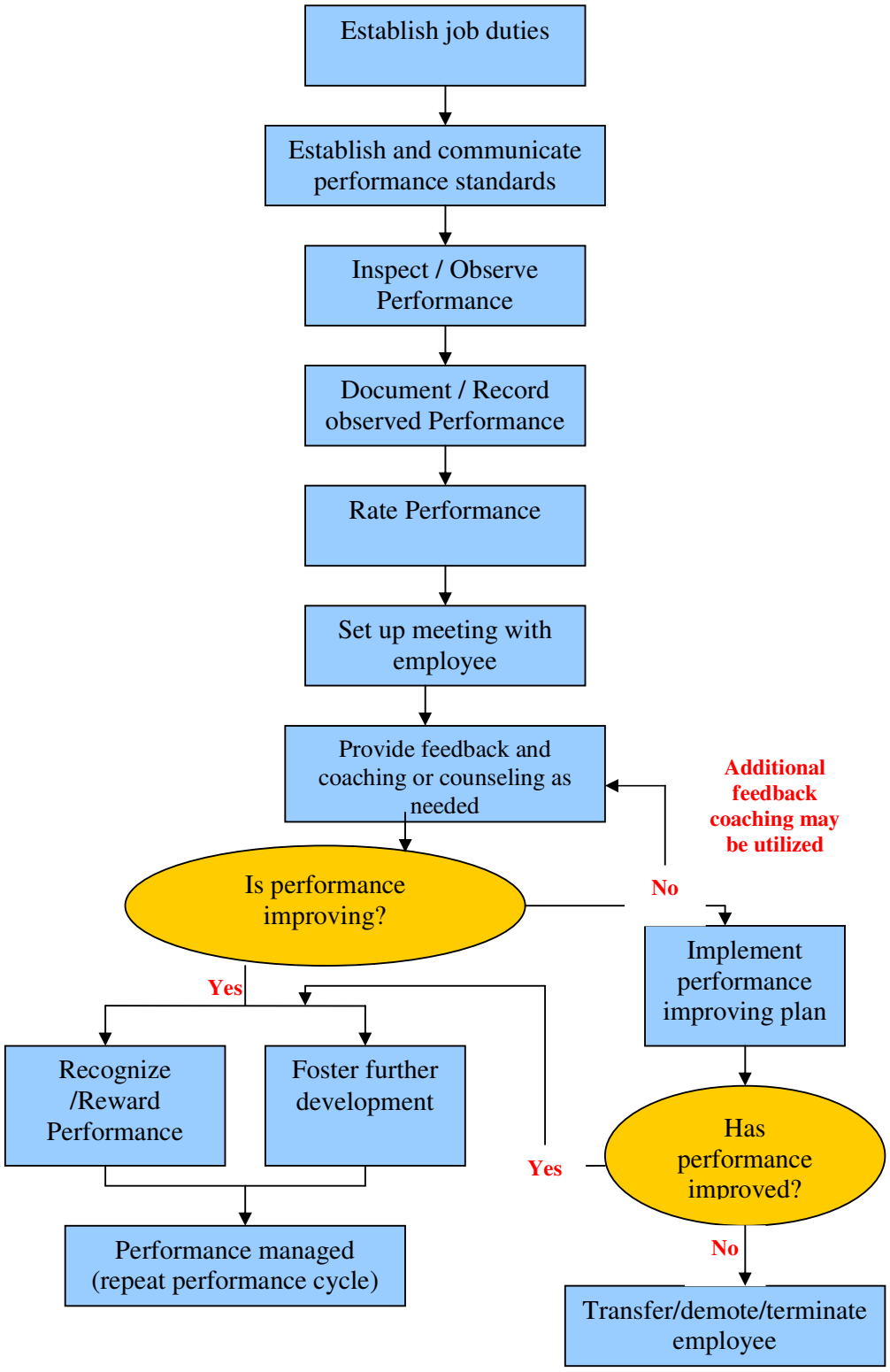



**Figure (18): Performance Management Process**

### 6.3.5 INCENTIVE SYSTEM

The consulting team recommends an overall assessment of the present "individual piece-rate incentive system" in terms of cost feasibility. It is essential to determine each product cost and how much profit it produces. After such identification, improving the current system is recommended to include the following:

1. Determining the percentage of profit to be distributed for each extra piece produced. The percentage to be distributed via certain formula calculating quantity and quality of production.
2. The formula should be reviewed in terms of achieving the proposed profit center's goals and regularly updated upon any changes in the profit center's goals.

**Group Incentives**

The individual based incentive system alone is not sufficient if the department moves towards more systematic team work under the profit center arrangement. Therefore, adopting different set of performance-based reward programs that are tailored for teams and groups will be necessary. The followings are some types of suggested team and group incentives plans:

1. Gain Sharing Program:

A group reward system that is designed to share the cost savings from productivity improvements with employees. It starts by measuring team or group productivity. The team or work group itself is charged with attempting to lower costs and otherwise improve productivity through any measures that its members develop and that its manager approves. Resulting cost savings or productivity gains that the team or group is able to achieve are quantified and translated into JOD value. A predetermined formula is used to allocate these JOD savings between the department and the employees themselves. A typical formula for distributing gain savings is to provide 25% of the savings to the employees and 75% to the profit center.

2. Scanlon Plan

This approach has the same basic strategy as gain sharing in which teams or groups of employees are encouraged to suggest strategies for reducing cost. However, the distribution of these gains is titled much more heavily toward employees. Employees receive between two-thirds and three-fourths of the total cost savings that the plan achieves. The cost savings resulting from the plan are not given just to the team or group that suggested and developed the ideas, but are instead distributed to the entire organization.

The consulting team recommends conducting an in-depth study the applicability of adopting other types of team and group rewards; Profit sharing and the Employee stock ownership plans.

Any type of incentive plan is only effective if it is produces the behaviors and outcomes that are needed by the organization. Thus, different situations require much different types of plans. It is critical that GAM's Workshops Department examine, on continual basis, the results of their incentive plans very closely to make sure that they are getting what they need from those plans after it has been transformed into a profit center.

### 6.3.6 EFFECTIVE OPERATIONAL SYSTEM

An operational system that is effectively managed can be the driving force behind meeting competition for the new profit center. Operational systems have to be clearly structured and efficiently managed to reflect integrity and eventually lead to achieving sustainability and performance improvement.

In order to build such effective operational system, a full-fledged business plan should be developed. Such detailed business plan should clearly outline the core business of the profit center, identify target market segments in light of market parameters and anticipated demand, the forecasted size of the service volume -that to be the primary objective of the department-, the required resources for the service provision to be realized and the department budget, and provide a breakdown of SMART objectives[28] and plans per sections, subsections and staff levels. Each employee at the department should know and understand what is required from them to achieve. Such breakdown enhances the employees' involvement and participation in achieving the department objectives.

### 6.3.7 PROPOER COMMUNICATION CHANNELS

Direct and continuous communications between management and the employees especially at the outset is of grave importance. Proper communication channels should be highlighted to provide the platform by which employees can provide feedback.

### 6.3.8 SOLID MARKETING MECHANISM

As the Workshops Department is switching into a profit center, work on enhancing the entrepreneurial spirit of the employees should go hand in hand with adopting a marketing driven approach. This approach has to take into consideration that up until now, services were offered within GAM and hence the absence of competition entailed the lack of any marketing activities. A solid marketing plan should be included in the future full-fledged business plan for the profit center examining the market and target market segments, and laying out marketing mix strategies and action plan.

[28] SMART Objectives are ones that are: Specific, Measurable, Achievable, Relevant and Time-bound.

## 6.4 CASE STUDY: THE CASE OF THE JORDANIAN ARMED FORCES (JAF) - TRANSFORMING A FURNITURE MANUFACTURING WORKSHOP INTO A PROFIT CENTER

The consulting team met with General Manager Eng. Hashim Momani who is a retired officer from the Jordanian Armed Forces (JAF). The objective of the meeting was to benefit from Mr. Momani's personal experience as a manager of a furniture factory that was transformed into a profit center under the management of JAF.

According to Mr. Momani, the main ideas and procedures which were implemented in the JAF's furniture profit center were the following:

- Identify qualified specialists through evaluating expertise available at the factory and re-defining them as experts, assistant, etc. In other words, a thorough review of human resources was conducted and accordingly job descriptions were drafted. Consequently, determine the required number of human resources required to operate the production lines and reallocate those with less technical capacity to other units within JAF.

- Solicit consulting experts from the private sector to categorize the products manufactured and study the processes conducted in manufacturing in order to make better utilization of resources and increase productivity, and enhance efficiency.

- Link productivity with an incentive scheme that covers monetary and non-monetary incentives.

- Divide the workers into groups to achieve work that was assigned to each group within a specific time frame. If a group manages to finish its work within the specified time frame, it receives an "award", otherwise, members of the group will have to receive salary deductions. The same would be applied in case there is any compromise in the quality of the delivered work after an investigation has been undertaken. Also, a fee would be imposed in case it was clear after an investigation that assets or materials used have been damaged.

- Communicate directly and continuously between the management and the workers, to listen to their complaints and to use their feedback to improve work.

- Commit to upgrading production processes through enhancing machinery and equipment used in production and collaborating with the private sector to train workers on the use of the new equipment.

- Change procurement policies so as to make it more flexible in dealing with changes in the market (for example, take advantage of seasonal discounts on prices of raw materials).

- Pay attention to marketing and appoint qualified and well-trained marketing personnel.

- Pay attention to the fact that raw materials are similar in form but differ in quality and hence comes the importance of studying consumer preferences.

- Accommodate changes in the market in the areas of design so as to commensurate with market trends.

# 7.0 CONCLUSION AND RECOMMENDATIONS

## 7.1 CONCLUSION

Based on the results of the feasibility study and all projected market and financial indicators, and in light of the insight and direction for organizational development provided in this study, the consulting team concludes that transforming the Workshops Department into a profit center under GAM should be a feasible and a viable arrangement from marketing and financial perspectives.

This conclusion was arrived at after taking into account the following main findings:

1. Market data pertinent to gross production output, market revenues and other indicators show that the sector is on the ascendency, which reflects a considerable market opportunity.
2. The financial study shows that the profit center for the maintenance activities will be feasible from a financial perspective. This is evident by the positive profitability and liquidity indicators which show that the proposed profit center should able to recognize high profits and generate cash flows from its operations which will be sufficient to cover the running costs and investment plan.
3. The sensitivity analysis for the project will still be positive in case of any deviation by 10% of the expected results.

However, there are limitations and challenges that can be summarized by the following:

1. The Workshop's Department ability to manage and utilize its human resources to cope with external demand; especially that employee productivity is already high compared to the private sector. The proposed profit center must pay attention to the production management in order to utilize and manage production capacity efficiently.
2. The challenge of changing employees' mindsets and drive them to become more profit oriented in their work approach.
3. The challenge of managing change that accompanies the profit center transformation process effectively.

## 7.2 RECOMMENDATIONS

In light of the above conclusion, the consulting team recommends transforming the Workshops Department into a profit center under GAM.

However, in order to ensure that such transformation achieves its sought objectives, the main recommendations detailed in section 6.2 of this study (Recommended Courses of Action) should be taken into careful consideration. These recommendations can be summarized as follows:

1. Conduct a thorough job and function review and mapping resulting in a defined job matrix and job cards.

2. Adopt result-based management practices.

3. Establish a monitoring and evaluation mechanism that is based on well-defined KPIs.

4. Develop a full-fledged business plan for the proposed profit center that outlines the following in detail:
    - An operational system that lays out the details of the profit center's day-t-day operations including: production management (service delivery process) and capacity measures, productivity, quality assurance, inventory and procurement management, as well as facility and location upgrading requirements and possible additions to fixed assets.
    - Communication channels.
    - Thorough marketing plan that includes a detailed marketing mix strategy. It is recommended that focus of the marketing plan and future marketing efforts should be centered on the public sector market segment during the inception phase of the profit center.
    - Training needs.
    - Legal framework and regulatory implications.
    - Accounting practices and budgetary issues with GAM.
    - Revised financial projections.

5. The said business plan should provide a clear and concise action plan that is bound to an implementation schedule. The action plan should include a summary implementation matrix that lists each recommendation/action item, identifies the party responsible for leading completion of that recommendation/action item, and sets a suggested time line for completion in agreement with respective stakeholders within GAM.

6. Conduct an overall assessment of the present "individual piece-rate incentive system" in terms of cost feasibility.
7. Conduct an in-depth study the applicability of adopting either one of the suggested Gain Sharing or Scanlon incentive schemes, or other types of team and group rewards; such as profit sharing and the employee stock ownership plans.

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