ASSESSING THE EFFICIENCY AND EFFECTIVENESS OF LOCAL AUTHORITIES IN SAUDI ARABIA - A CASE STUDY OF JEDDAH MUNICIPALITY

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To my Husband and my Sons Omar & Halim

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ABSTRACT

The aim of the thesis is to assess the efficiency and effectiveness of the major services that are provided by Jeddah Municipality (JM) by using criteria which are derived from the Saudi environment. The Delphi technique was used in the first instance to obtain a consensus of opinion as to the meaning of efficiency and effectiveness among Saudi experts on local administration in Saudi Arabia. It was used, secondly, to develop criteria which then were used to assess the selected services.

With the developed consensus in mind, efficiency of the selected services was measured. However, the assessment was limited to only a few services due to insufficient data provided by JM. The results indicate a tendency towards an increase in efficiency of the assessed services. However, since the assessment was limited only to few services from the same department, and was further constrained by limited data, it therefore cannot be considered as a clear-cut measurement of the level of the efficiency of services provided by JM.

The second part of the study was based upon questionnaires designed by using the criteria for effectiveness. The questionnaires were sent to the recipients of the service, the Saudi experts on local administration in Jeddah city, and the staff of JM's departments that are responsible for delivering the selected services. The results indicate that according to beneficiaries and experts, the effectiveness of the selected services is low, while according to the staff the effectiveness of the selected services is mid-range.

Recommendations were made to improve the efficiency and effectiveness of the existing selected services and on how to measure the efficiency and effectiveness of these services. Furthermore, the study recommends JM's officials and departments to be accountable and transparent. Accountability and transparency are important elements for improvement of municipal services in particular, and the provision of public services in general.

CHAPTER 1

INTRODUCTION

> Effective organisational performance has a direct bearing on the well-being of Society since organisations both take from and return to the society certain products or services. Further, for a good quality of life, society requires effective organisations to provide goods and services... An organisation must be able to achieve its objectives or goals within its constraints of limited resources, since none of the resources provided by an organisation's environment are truly unlimited (Jackson and Morgan, 1978).

1.1 Scope of the Topic

Managers and administrators world-wide in all types of organisations are concerned to a great extent with the concepts of efficiency and effectiveness. Efficiency and effectiveness are used by many academics and administrators to assess the performance of organisations and to measure their level of failure or success. However, there are differences in the literature regarding the definitions of the two concepts and the methods that should be used to measure them. The problem of measurement becomes more complicated when it is applied to government organisations. In Saudi Arabia, no attempt has been made to assess the efficiency and effectiveness of services provided by the public sector. This study is concerned with developing standard definitions of the two concepts in the context of the Saudi environment, and will attempt to assess the efficiency and effectiveness of the Saudi government departments at the local level presented by Jeddah Municipality (JM).

1.2 Aims and Objectives

The aims and the objectives of this research are as follows:

1. To develop a set of criteria that could be used for measuring the efficiency and the effectiveness of services provided by Jeddah Municipality.
2. To test the developed criteria by application to the practice of the municipality within the Saudi context.

3. To explore incentives for municipalities to be more efficient and effective.
4. To provide the officials of Jeddah Municipality and other concerned bodies with evidence of the level of efficiency and effectiveness of services provided by the Municipality.
5. To encourage government departments, municipalities in general and JM in particular to be more transparent and accountable.
6. To encourage higher levels in government to be accountable to the people.

1.3 The Importance of the Research

In general, efficiency refers to the way in which goals are carried out economically and is measured by the ratio of the output of an activity to the resources used to produce that output. Effectiveness refers to the extent to which the objectives are achieved. Achieving efficiency requires using minimum inputs to achieve the desired outputs, while achieving effectiveness requires full achievement of set objectives. Through efficiency improvement, more services or goods can be provided using the same cost, or an equivalent or higher level of services and goods maintained at less cost. Through improvement of effectiveness, more and higher levels of objectives can be achieved.

One of the main objectives and the strategic principles of the Fifth, Sixth and Seventh Five-year Development Plans[1] for the Kingdom of Saudi Arabia is to provide services efficiently and effectively. The budget deficit in the kingdom of Saudi Arabia since the fall in oil prices, the high rate of population growth, subsequent decline in the Gross Domestic Product (GDP) and GDP per capita, are all strong indicators for the necessity of improving the national economy. Without a real improvement in revenues, it becomes even more important to improve the efficiency and effectiveness of services provided by the public sector including the municipalities. Municipalities in Saudi Arabia execute the national objectives and policies at the local level. If we could assess their efficiency and effectiveness, we could then provide pointers to the ways of improving the provision of services. It is therefore very important to assess their efficiency and effectiveness in providing the required services to the citizens. The Saudi government is facing a great dilemma at the time when the government income is fast dwindling and the demand by the

[1] The kingdom's national plans for economic and social development

public for better services is rising fast. The government must turn its attention to looking for ways to improve the services at minimum cost. Inefficient and less effective municipalities will incur excessive expenditure, therefore providing fewer or lower quality services for a given budget, and thus a lower level of public satisfaction. This is very apparent from the perpetual complaints by the public in daily newspapers concerning the standard of the municipal services in Jeddah City. Therefore, I have chosen JM to assess the efficiency and effectiveness of services provided by municipalities.

Assessing efficiency and effectiveness of JM is a fundamental starting point for the development of good governance, which is a key issue in the world today. Such studies will provide useful information to the responsible Ministries that will enable them to hold badly performing municipalities accountable, and will encourage municipalities and government departments to be more transparent administratively and financially and to be accountable to local citizens. Furthermore, transparency and accountability are of critical importance to the well-being of any society. Government and public servants should be held accountable for their actions, or in some cases their failure to act.

Unfortunately until now, no such study has been carried out in Saudi Arabia and therefore this study will be a pioneer at the national as well as the local level.

1.4 Limitations of the research

This research has been limited to assessing the efficiency and effectiveness of major services provided by JM only. Jeddah is the second largest city in Saudi Arabia and it is believed that the conditions under which other municipalities in Saudi Arabia operate are very similar.

1.5 Potential Recipients

The results of this study will benefit the officials of JM in particular and other municipalities in Saudi Arabia in general. The Ministry of Municipal and Rural Affairs, which supervises all municipalities in Saudi Arabia, should also benefit from the recommendations. Furthermore, all providers of services, whether governmental departments or organisations in the private sector, should find this study useful.

1.6 Structure of the Thesis

The thesis is organised into seven chapters. Chapter 2 gives a summary of the historical background of Saudi Arabia and the demographic, economic, social and political context in which the local authorities in Saudi Arabia operate. It takes a historical view of the development of local authorities in Saudi Arabia and discusses their role in the context of the five-year development plans and reviews the functions of municipalities in general. It also considers, in brief, the development of Jeddah City and the objectives of Jeddah Municipality.

Chapter 3 focuses on the standard concepts and different interpretations of efficiency and effectiveness. It discusses the generation of various criteria for the assessment of efficiency and effectiveness. It reviews the international experience on pursuing efficiency and effectiveness with reference to OECD countries. It discusses the methods of public policy evaluation of efficiency and effectiveness and the relationship between efficiency and effectiveness. It considers the attempts at administrative reforms in Saudi Arabia, highlights the lack of research on the assessment of the efficiency and effectiveness of services provided by either the municipalities or the public sector in Saudi Arabia, and points out the lack of Delphi Technique method applications in Saudi studies.

Chapter 4 is concerned with the methodology used in this research. It explores the methods used for data collection and evaluation. It gives reasons for choosing Questionnaires, Documents (both published data and data obtained from JM on request) and Delphi Technique as methods of data collection, generation of criteria and the assessment of the efficiency and effectiveness and highlights the deficiencies in the rejected methods. It explains Delphi Technique and its process and states reasons that make it a reliable method for obtaining measurements. It also discusses the selection of the panel of experts for this study. The conducted Delphi questionnaires results are analysed. The analysis concludes with the development of standard definitions of the efficiency and effectiveness among Saudi experts, and generation of the criteria for assessing the efficiency and effectiveness of services provided by JM.

Chapter 5 deals with the assessment of the efficiency of the selected municipal services by using the developed efficiency criteria. In addition, it highlights the

problems of access to data essential for the assessment of the efficiency and suggests that such data should be made available to researchers by the local authorities.

Chapter 6 examines the results and analysis of the main questionnaires sent to the beneficiaries of the services, the experts on local administration in Jeddah City and the employees of JM to obtain their opinion on the effectiveness of the services provided by JM.

Finally, Chapter 7 states the main conclusions of the empirical studies. It discusses how this research contributes to our knowledge on the study of efficiency and effectiveness. It reviews the methodological problems that this researcher encountered during this investigation and emphasises the distinctiveness of the Saudi context of this work. It presents recommendations on how to improve the efficiency and the effectiveness of JM services and how to enhance the accountability and transparency in the local authorities and other government departments in general and JM in particular. It invites the local authorities to make use of the developed criteria to assess their efficiency and effectiveness.

CHAPTER 2

DEVELOPMENT OF LOCAL AUTHORITIES IN SAUDI ARABIA

2.1 Introduction

This chapter deals in brief with the historical background and demography of Saudi Arabia. It covers economic trends and the implications for the public sector, and the influence of globalization on the Saudi economy. The effects of the social values on local authorities are discussed. The political system of Saudi Arabia and its ramifications on the accountability of the government departments and the performance management in public sector are reviewed with reference to western democracies. The development of local authorities (at regional and municipal levels) and their objectives in the context of the National Development Plan are reviewed. Moreover, special emphasis is given to the development of Jeddah City and the objectives of Jeddah Municipality (JM).

2.2 Historical Background of Saudi Arabia

Modern Saudi Arabia has its roots in the eighteenth century. In 1744, Mohammad Ibn Al-Saud, the ruler of a small emirate of Dara'yya in Najd, entered into alliance with an influential religious reformer, Mohammad Ibn Abdulwahab. The two agreed that the ruler would enforce Abdulwahab's austere and literalist interpretation of Islam in his realm, and that Abdulwahab would place his movement at the service of the expansion of that realm. This agreement enabled Al-Saud to control much of Arabian Peninsula including the two holy cities of Makkah and Madina. However, the Al-Saud family saw its fortunes rise and fall over the next 150 years. The Saudi Kingdom was lost twice during this period as the heads of the tribe clashed with Egypt, the Ottoman Empire and other Arabian clans. In 1881, the Viceroy of Egypt destroyed the Saudi Kingdom on behalf of Turks, who perceived the Saudi state in the Arabian Peninsula as a threat to their interests. The Al-Sauds

were expelled to Kuwait at the end of the 19th century, a period that saw the Rashids of Ha'il as the dominant force in the region. However, in 1902, Abdulaziz bin Abdul-Rahman Al-Saud captured Al-Riyadh. He generated loyalty among a disparate and divided tribal population and embarked on a process of state building. With few resources at his disposal, Abdulaziz managed to consolidate an area as large as Western Europe and turned it into the modern Saudi state. In 1932, he adopted the title of King of Hijaz, Najd and Dependent Colonies. He consolidated Saudi dominance over the territory's tribes through military conquests and by promoting strong ties through marriage arrangements with key tribes and influential religious figures (Bin-Baz, 2000). Saudi Arabia remains an absolute monarchy.

2.3 Demography

According to the 1992 census, the total population of Saudi Arabia was 16.9 million. By the end of 1999, the total population had increased to 21.4 million, of whom 15.7 million are Saudis and 5.7 million are expatriates. The Saudis are expected to increase from 15.7 million in 1999 to 29.7 million in 2020, an increase of 89.2%. The total population is expected to increase by 56.6% during this period. The rapid increase in the population will impose great demands on essential services such as education, health, transport, telecommunications, municipal services, electricity and water (Ministry of planning, 2000).

2.4 Economic Trends

Saudi Arabia is rich in natural resources, particularly oil, which is the most important source of national income. The massive oil revenues in the seventies and early eighties allowed the government to make rapid development. There have been impressive improvements in infrastructure, education, health, and services. Most of the growth in the country in 1996 was, in fact, due to the rise in oil prices, which boosted the oil sector's GDP[1] and allowed more room for manoeuvre by the government in its spending plans (Azzam, 1997; Al-Tigarah Wal Sina'ah, 1997; Selway, 1997).

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[1] GDP is the abbreviation of Gross Domestic Product, and is defined as the market value of goods and services produced by a country (QuickMBA, 2004)

The turning point in the Saudi economy began with the issuing of the First Five-Year Development Plan in 1970 (Al-Tigarah Wal Sina'ah, 1997). The First Five-Year Development Plan emphasised the development of the Kingdom's infrastructure, whereas the later plans focussed increasingly on human resource and private sector development. The Sixth Development Plan (1995-2000) and the Seventh Development Plan (2000-2005), called for broadening the technical skills of the Saudi population, and an even stronger emphasis on economic diversification of industrial and agricultural sectors by increasing the private sector's role in the economy (Ministry of planning, 1995 & 2000).

The economic resources and other variables determine the nature and organizational structure of local bodies, the way they operate, the role they play and their ability to execute this role. The economic wealth mainly due to oil revenues enabled the government to establish and complete administrative institutions at the local levels. It accelerated the establishment of the infrastructure for local development such as water, electricity, transport, schools and hospitals. Rapid economic and urban growth brought about demographic changes in local authorities and communities. This necessitated the expansion of the local authorities' activities from just performing the traditional services, to playing an active part in the economic well-being of the society. The diversification of the activities and expertise forced them to develop the skills and abilities of their employees (Kashoggy, 1994).

In 1998, the oil price dropped by 38% with negative affect on the government budget and expenditure. Consequently, some of the principal objectives of the national plan could not be implemented. GDP growth slowed down by almost 10.8 % in current prices in 1998, compared to the 3.7% growth in 1997 and phenomenal growth rate of 10.6% in 1996. Saudi Arabia's GDP was US $ 128.4 billion in 1998 compared to US $144 billion in 1997 and US $ 139 billion in 1996 (Ministry of Planning, 1998; The Saudi Network, 2000). However the, GDP rose to US $ 139 billion in 1999 (Okaz, 2000) (Table 2.1)

Table 2. 1 Saudi GDP from 1996 – 1999

Year	1996	1997	1998	1999
Nominal GDP (Billion US $)	139	144	128.4	139

According to statistics provided by the World Bank, the GDP in current prices and the GDP growth rate for Saudi Arabia and some other countries of the world for the financial years 1996 and 1999, are as follows (Table 2.2):

Table 2. 2 GDP of Saudi Arabia and Other Countries for the Years 1996 & 1999[2]

Country	GDP US $ bn		GDP Growth (Annual %)	
	1996	1999	1996	1999
Saudi Arabia	141.3	139.4	1.4	0.4
Kuwait	31.1	29.7	-3.3	-----
Egypt	67.7	89.1	5.0	6.0
USA	7800	9200	3.6	3.6
UK	1200	1400	2.6	2.1
France	1600	1400	1.1	2.9
Japan	4600	4300	5.1	0.2

Table 2.2 shows that the Saudi GDP in current prices for the financial years 1996 and 1999 was high compared to other Arab countries such as Kuwait and Egypt but very low compared to US, UK, France and Japan. In 1996, The GDP growth rate of Saudi Arabia compared to Kuwait and France was somewhat higher, while compared to Egypt, UK, Japan, and US was very low. In 1999, The GDP growth rate of Saudi Arabia compared to Egypt, US, UK, and France was very low while it was higher than that of Japan.

According to statistics provided by the World Bank, the population of Saudi Arabia and comparator countries for the years 1996 and 1999 is shown in Table 2.3.

Table 2. 3 Population of Saudi Arabia and Other Countries for the Years 1996 & 1999[3]

Country	Population (millions)	
	1996	1999
Saudi Arabia	18.7	20.2
Kuwait	1.7	1.9
Egypt	59.3	62.7
USA	268.2	278.2
UK	58.8	59.5
France	58.0	58.6
Japan	125.8	126.6

The GDP of a country is divided by its population to obtain GDP per capita in that country (Table 2.4).

[2]The World Bank Group, 2001
[3]The World Bank Group, 2001

Table 2. 4 GDP Per Capita of Saudi Arabia and Other Countries for the Years 1996 & 1999

Country	GDP per capita (US $)	
	1996	1999
Saudi Arabia	7,556	6,901
Kuwait	18,294	15,632
Egypt	1,142	1,421
USA	29,083	33,070
UK	20,408	23,529
France	27,586	23,891
Japan	36,566	33,965

As shown above, the Saudi GDP per capita declined in 1999 compared to 1996. However, the Saudi GDP per capita was higher than the Egyptian GDP per capita in both 1996 and 1999, but it was lower than the GDP per capita of all other comparator countries. In general, the Size of the Saudi economy (GDP) and the living standards (GDP per capita) both declined in 1999 compared to 1996 and compared to the GDP and the GDP per capita of other comparator countries in both 1996 and 1999. Furthermore, the Saudi budget has shown a deficit since 1998 (Oil & Gas Journal, 1999) mainly because of reduced oil revenues.

There is a close correlation between the efficiency and effectiveness of government bodies and the national economy. Without real improvement in oil revenues or alternative sources of capital, the Kingdom must resort to cuts in public spending. It should be noted that public spending in SA is financed from oil revenues, not taxation. Thus the government is faced with the challenge of improving its economy by improving the efficiency and effectiveness of its public organisations. The government must recognise the urgent need for structural reforms and introduce new laws and regulatory bodies to enable transparency and accountability, which will enhance the performance management, efficiency and effectiveness of public and local sectors. Currently, there are significant changes taking place in the spheres of economy and government administrative system. The pattern is toward privatisation, the government taking the regulatory role instead of being a direct player in the running of businesses. The privatisation of the public sector cuts the government's spending commitments.

There is a fast growing domestic demand for reforms. The people want more democratisation and are pressing for it. The government is beginning to respond to such demands. There are signs that the King appreciates the reform process and this

is significant as the King is the driving force behind political and economic reform processes in Saudi Arabia. We are seeing the beginning of a transition to where constitutional government and global private enterprise start to become more important.

As for other countries, globalization of economy will compel the Saudi government to become more competitive. This will in turn push the government to dismantle its trade barriers, abolish its legal monopolies in utilities, privatize its state-owned enterprises and reduce the number of civil servants where necessary. Globalisation has already influenced Saudi Arabia to make economic reforms. The keystone of the Saudi Arabian economic reform programme is its pending membership in the World Trade Organisation (WTO). Membership of the WTO will bring a wide range of benefits to the country and will result in an open, transparent and ruled-based trade regime. The result will be an enhanced competition that will introduce new efficiencies and growth prospects to the Saudi economy. The membership will also provide protection against arbitrary exclusion of Saudi exports to other WTO member nations and allow Saudi Arabia to influence WTO policies (Sato *et al.*, 2000).

2.5 Social Trends

The various social factors such as values, tradition and beliefs have a clear effect on any organization working within that social environment. The local administrative bodies in Saudi Arabia interact with the social environment in which they operate. For example, in the month of Ramadan, people fast from sunrise to sunset and perform prayers until late at night. To alleviate some of the hardship of devotees, the Saudi government reduces the number of working hours from 8 hours per day to 6 hours per day and allows people to start work at 10 a.m. instead of the usual 8 a.m. During Hajj period, most of the government departments in the western region are involved in the preparation for receiving pilgrims. Consequently, their normal working is affected. Also, the Saudi employee who comes from Bedouin areas is not ready to obey administrative orders and instructions because these individuals are influenced by their tribal life-style, which reinforces their manhood and independent tendency. In general, Saudi employees have no respect for formal working hours (Kashoggy, 1994). According to a recent study by the Institute of Public

Administration[4], 69% of civil servants in this country stay away from work for no valid reason while 54% come to work late (Khazindar, 2003). Furthermore, the restricted role of women in public jobs increases the dependency on foreign employees. The economic consequences of the above social customs are very significant and it is the duty of the administration to study and understand these social variables and decide what behaviours and/or manners can be changed to achieve balance between what is acceptable and what is required administratively.

The Kingdom has experienced massive growth in its education system. For example, during the implementation of the Sixth Five-Year Development Plan[5], the number of students in general education was about 3.8 million students in 1995 studying in more than 22,000 schools. Students in universities rose from 165,000 in 1995 to 263,000 in 1999. In addition, during the same period, a number of public and private colleges, and a university were established in different parts of the Kingdom (Ministry of Planning, 2000: p45). The Kingdom recognized the importance of providing educational opportunities for both males and females. In 1970 the female students were only 13,000 compared to 412,000 male students. By the year 2001, the female students had increased to 2,420,198 compared to 2,595,452 male students (King Fahd Bin Abdulaziz, 2004a). Female participation in primary, preparatory, secondary, vocational education and teacher colleges has increased to 48% compared to 52% male. In fact by year 99/20000 females participation in higher education was 54.9% compared to 45.1% males (Al-Lail, 2003). The World Bank found that female literacy has risen from 16.6% in 1970 to 52% in 2000 (The Observer, 20030). The development of girls' education brought with it increasing opportunities for women in both education and employment (King Fahd Bin Abdulaziz, 2004b). However, Saudi Arabia is still facing the challenge of linking women's education to development and society, and accepting women as a viable economic force.

The changing scenario brought about by the high female literacy rate will undoubtedly affect the status of women in Saudi Arabia. An increasing number of women are speaking out for their gender's involvement in decision-making processes (Arab Women Connect, 2004). The Saudi women are determined to outgrow their traditional responsibilities and participate in the affairs of the nation. They have

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[4] Established by the government in 1960 to train the government employees and develop their skills, and to raise their administrative, behavioural and technical abilities

[5] The former Five-Year Development Plan

made an enormous progress in the last decade; however, a great majority of them are employed in educational institutes, health services and social services sectors only. This huge increase in literacy rate must have its effect on changing and forming peoples' attitudes and consequently the services they need and the way these services are provided. As the people become more aware of their rights, they demand more and better services. The world is rapidly being transformed into what Marshal McLuhan famously described as "a global village" (Symes, 2004). Travel, communications, culture, trade exchanges and the internet are having important impact on social changes in the Kingdom. The Kingdom supports and endorses the trend towards globalization that helps foster links between different cultures and expands prospects for cooperation. The effect of globalization and active interaction with the rest of the world would make people aware of their right to judge the quality of services provided by local and public sector.

2.6 Political Trends

The administrative system in a country is part of the political system. The principles and the values of a political system are reflected in the way the administrative system works and to whom it is accountable. The political system in Saudi Arabia differs from the political system in the western-style democracies. Therefore, the political values and principles which influence the administrative system and, accordingly, affect the way it works, are different from those in western countries.

The political system in Saudi Arabia is an absolute monarchy and highly centralized. The King is the head of the state and he is the ultimate source for all three types of authorities: judiciary, organisational, and executive as is stated in the Basic Law (Umm-Ulqura, 1992b; Saudi Arabian Information Resources, 2003d). The state deems the Qur'an (the holy book) and the Sunnah (examples set by the prophet of Islam) to be its Constitution and there is no legislative assembly. Instead, Majlis Ash-Shura (Consultative Council) which is called the organisational authority (a term used in the Consultative Council Law and in the Basic Law of the government), was established in 1992. The primary function of Majlis Ash-Shura is to provide the King with advice on issues of importance in the Kingdom. The Council at present consists of 120 members appointed by the King for a four-year

renewable term (Saudi Arabian Information Resources, 2003c). The responsibility of Majlis Ash-Shura includes discussion on regulations, domestic and international issues and all other matters of public interest. Any government action not approved by the council will have to be arbitrated by the King (Umm-Ulqura, 1992a; Saudi Arabian Information Resources, 2003b; Majlis Ash-Shura, 2004).

The King is the head of the executive authority. Therefore he acts as the prime minister as well, and remains the final arbiter of the state affairs. The King also retains the power to appoint and dismiss the Council of Ministers, and has the power to dissolve the council, restructure it, or appoint a new one at any time (Saudi Arabian Information Resources, 2003a). The Council of Ministers which was established in 1953 is responsible for drafting and overseeing implementation of the internal, external, financial, economic, education and defence policies and general affairs of the state. It functions in accordance with the basic system of the government. It has the authority to monitor the implementation of laws, regulations, rules and resolutions, to create and organise public utilities, to follow up the execution of the general plan of development, to form committees to gather information about the performance of various ministries and other government bodies, or about any given matters. The said committees are required to submit their findings to the council for consideration. The Council might set up commissions to make inquiries in the light of these findings and take decisions according to laws and regulations (Saudi Arabian Information Resources, 2003a).

The organisational and the executive authorities have a cooperative relationship when executing their duties. Therefore, Majlis Ash-Shura participates with the Council of Ministers to outline external and internal policy (Umm-Ulqura, 1992b; Saudi Arabian Information Resources, 2003d). Resolutions passed by the Majlis are submitted to the Council of Ministers for consideration. If Majlis Ash-Shura and the Council of Ministers are of the same opinion, royal endorsement shall be issued, but if their opinion is at variance, the King may take what ever decision he may deem proper (Umm-Ulqura, 1992a; Saudi Arabian Information Resources, 2003b).

As already stated (p10), there is no taxation in Saudi Arabia. The central government finances all public and local services from oil income and the people pay no taxes for those services. Despite the budget deficit after the fall in oil prices and the real need to find ways of raising finances for public services, the concept of taxation is yet to be introduced in the Kingdom.

Compared to liberal democratic countries, the Saudi political system is very different in many aspects. The political system of countries such as USA, UK and France is based on democracy. The UK for example, is a parliamentary monarchy system, where the parliament represents the legislature power in the country. The Members of Parliament in the UK and France and members of the Congress in the USA are democratically elected by universal suffrage of citizens over the age of 18. They are elected roughly every four or five years. In these countries, the governments function to secure this principle and to promote the common interests of the people, (Baker, 2003; Weisser & Kishlansky, 2003; Adams, 2003). The first principle of the democracy is that the citizens collectively represent the nation's authority by electing leaders to represent them in the government. The second Principle is that the people delegate their powers to elected officials who, in turn, represent the will of the people by ensuring that the government is accountable to its citizens (Baker, 2003; Weisser & Kishlansky, 2003; Adams, 2003).

In western countries, most legislation is initiated by the government such as public bills, or legislation concerning the general laws, which govern the population as a whole. The legislature engages in the debate and adoption of laws. The legislative authority has the authority to investigate and watch over the executive branch and its agencies. Therefore, in democratic countries, government is mainly responsible to legislative assembly, which can check the performance of the government and organise investigation committees (Baker, 2003; Weisser & Kishlansky, 2003; Adams, 2003). Despite the wide-ranging authority, the head of government such as the President in the USA has limitations on his power. While the Supreme Court, the media, and the public opinion can affect presidential actions, Congress has the greatest ability to limit the President's power (Baker, 2003).

Thus in the western style democracy, the principles of democracy are reflected in the way public sector operates and to whom it is accountable. Accountability is an important feature of the democratic system of representative government. Elected officials must conduct themselves in a responsible manner. The political system in these countries is a source of accountability for the executives and their departments. People with their vote can remove officials who ignore their intentions or who betray their interest. Democracy gives free access to governmental information on political and economic activities and decisions and gives the citizens the chance to have their voice heard and to influence government policies. Access to information allows

citizens to challenge governmental actions with which they disagree and to seek redress for official misconduct. It also deters officials' misconduct by reminding them of their accountability. Therefore, the relationship between democracy, accountability and access to government information is vital.

In Saudi Arabia, the King is the head of the State and the ultimate source of all types of authority. Political parties are not allowed, and there is no elected parliament in the Kingdom of Saudi Arabia. Until now, all 120 members of Majlis Ash-Shura were hand-picked by the King. The council debates and advises but has no power to initiate legislation. However, on 26 November 2003, the King issued a decree empowering the Consultative Council to propose new laws without first seeking his permission (Okaz Daily, 2003c).This small step is expected to speed up the decision-making process in the Kingdom. Under the decree, the Council will be able to propose new laws or amendments and have more power to resolve disputes with the cabinet. Ministers will remain appointed by the King, and therefore they are accountable only to him. Similarly, officials in public sectors are appointed by government, and accordingly, they are accountable to government. There is no parliamentary or public accountability that is conducted by an independent body to evaluate their decisions and actions. Given the fact that a Saudi government is not elected, there is neither public accountability nor any independent accountable body in Saudi Arabia that has the authority to hold officials in public sectors accountable for their decisions and actions.

Taxation is the essential basis for a responsible representative government. People in the western liberal democracies pay taxes so that their government can finance the services they need. The people have a say in the way their money is spent by electing their representatives in the government, and by holding them accountable for spending the money that they paid to the government through taxes. In contrast, the Saudi citizens expect their government to finance the public services from the oil income. So far the Saudi government is meeting the expectations of its citizens, but in such an environment there is a risk that even when the democratic principle is activated, the elected representatives would simply act as a lobby for higher public spending which they would not have to finance. Therefore, taxation is the essential basis for any responsible representative government, and free and fair elections are essential features of an accountable government.

One important means of holding officials and their departments responsible for

their decisions and actions is to evaluate and assess the efficiency and effectiveness of the services for which they are responsible. Democracy in western countries allows external independent bodies, such as the Audit Commission (AC) in Britain, to ensure that public money is spent economically, efficiently, and effectively in the areas of local government, housing, health and criminal justice services (Audit Commission, 2004). The aim of AC is to promote high standards of external audit and public accountability and ensure that the Commission is at the forefront of professional debates on the accounting and auditing issues across the public services. AC plays an important role in helping to secure improvement, and provides assurance of value of money. The Commission works in the public interest and uses its body of knowledge, information and expertise about resources and management as a firm foundation to help deliver beneficial changes in the way services are delivered and the way users experience them. Constructive changes stem from focussing firmly on what matters to service users (Bowerman, 1994).

In Saudi Arabia, reforming public administration should be a central and urgent task of the Saudi Government. The public sector needs to be reformed to encourage private-sector investment and growth, to curb monopolies and to be efficient and effective. Therefore, an independent public audit body such as AC in the UK should be established in Saudi Arabia to assess the efficiency and effectiveness of municipalities. This would be an important step towards real political reform and good governance. However, a higher level of human development and public sector development in Saudi Arabia cannot be achieved without improving key aspects of governance system. This would require reforming the essence of governance, i.e., state institutions as well as activating the voice of the people. Presently, a small step has been taken towards political reforms. The Council of Ministers announced that elections for half of the members of only 14 municipal councils - those representing the main municipalities in the 14 administrative districts in the kingdom (See section 2.7.1) - would be held in 2005, and there would be nationwide elections for 30% of the members of the Consultative Council in 2006 (Okaz, 2003b). The Kingdom has taken the initial steps of establishing democracy. Further steps are needed on the line of western democracies to become fully representative. The Kingdom will in the future face the challenges of introducing full and comprehensive political reforms, making the government more transparent and accountable to the electorate and diversifying the economy.

2.7 Local Authorities

The executive powers of government in Saudi Arabia are represented at two levels: the first is the central level; the second is the local level. At the local level, the local authorities display distinctive characteristics because of the unique social and political status of the Kingdom. There are two levels of local authorities: the first is at the regional level, called Emirates. An Emirate forms the fundamental unit of local government at the regional level. The second is the municipality level.

Since the 1970s, the Kingdom has developed rapidly in various fields. This massive development is reflected in the standard of economic and social life (Attar, 1997). For the past 30 years, the economic development of Saudi Arabia has been broadly governed by Five-Year Development Plans. The central government departments of various ministries and their branches are responsible for the accomplishment of these plans. At the local level, regional authorities play their role in the accomplishment of the Five-Year Development Plan. The main objectives of the regional development are to limit internal migration, which has a negative effect upon cities; to protect the environment; to develop, organise, and coordinate economic activities at the regional level, so that every region can get maximum benefit and use of its resources; and to activate the role of development centres to help develop various regions in the Kingdom (Ministry of Planning, 2000: p385).

Municipalities also play an important role in achieving the national objectives as stated in the Five-Year Development Plan. The municipal sector is responsible for all that concerns construction, planning, improving and beautifying of the cities and villages, and improving health and environment hygiene services (Ministry of Planning, 2000: p385). The current Five-Year Development Plan stated that the Ministry of Municipal and Rural Affairs must provide more and better services to citizens efficiently (Ministry of Planning, 2000: p393). In general, the Seventh Development Plan emphasises improving the efficiency and effectiveness of public sector. In addition, the fourth objective of the Seventh Development Plan[6] is to expand the provision of essential services (such as education, health, transport and communication services) to the public, as well as to diversify the ways these services are financed and administered (Ministry of Planning, 2000: p410). Moreover, the second strategic principle of the Seventh Development Plan emphasises

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[6]The current Five-Year Development Plan in the Kingdom

improvement of the efficiency of services provided directly or indirectly by the government to the citizens (Ministry of Planning, 2000: p417).

2.7.1 Regional "Emirates" System

The Kingdom is divided into thirteen administrative districts[7] (regions): Al-Riyadh, Makkaha, Al-Madinah, Eastern Province, Qasim, Ha'il, Tabuk, Northern boundaries, Asir, Al-Jouf, Al-Baha, Jizan, and Najran. These regions are under the Regional Authorities Establishment Act (1992) "Nizam Al-Manatiq" which was issued to replace the 1963 "Nizam Al-Moqatat". Some of its articles were modified in 1994 by a Royal Decree. The ordinance's aim is to maintain security and discipline and to guarantee the citizens' rights and freedoms in the guidelines of Islamic rules. The administrative governor of each region is a Prince who is appointed by the King and is subordinate to the interior minister. Each Prince represents the central government in his region. He also has to supervise ministries' branches, agencies and public Institutions in his region. The ordinance gives the Prince wide responsibilities within his region. He is responsible for keeping the peace and maintaining order, besides his participation in developing the services and utilities in his region. Each region has a regional council, which is headed by the Prince of the region and consists of the deputy of the Prince, the deputy of the governor, the heads of the government agencies in the region and members of the citizens as members of the regional council. As the administrative system in the Kingdom is highly centralised, the members of the regional council are appointed by the Chairman of the Council of Ministers upon a nomination by the Prince (governor of the region), that is also approved by the interior minister. These members are chosen from the region's residents, and from the government departments in the region. The regional council is responsible for all matters concerned with improving the standard of all services in the region, defining the region's needs and proposing their inclusion into the National Development Plan, deciding upon worthwhile projects according to the priorities and proposing their inclusion into the annual National Plan, studying the organisational plan for the cities and villages within the region and following its implementation after being approved, following up of the implementation of all that concerns the region's development plan and the budget

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[7]See Appendix 5

(Umm-Ulqura, 1992c). All these matters are consultative, and the region's Prince is the administrator of the region's affairs on behalf of the central authorities, as well as being the head of the region's council.

2.7.2 The Municipalities System

2.7.2.1 The Development Stages of Municipalities

The second level of local authorities in Saudi Arabia is the municipalities sector. The municipal and rural sectors in Saudi Arabia play a fundamental role in the achievement of the economic and social development in the Kingdom. Municipalities in Saudi Arabia have been through many stages of development. In 1924, The National Council "Al-Majlis Al-Ahli" was established to organise the municipalities and to help them to carry out their duties towards citizens. Al-Majlis Al-Ahli was followed by the Consultative National Council "Al-Majlis Al-Ahli Al-Istishari" in the cities: Makkaha, Al-Madinah, Jeddah and Tabuk. The system was changed again in 1926 when the government issued the Basic Regulations "Al Talimat Al Assasiah" (Rasheed, 1981; Al Sabban, 1990). This was considered an important document because it defined and organised the regime and the administrative system of the Kingdom at both national and local levels in the early stages (Al-Mutairy *et al.*, 1989). Municipalities acted in the light of the Basic Regulations until 1927 when the government issued the Municipal Ordinance "Nizam Da'irt Al-Baladiya". In 1938, the General Ordinance for Municipalities "Al-Nizam Al-Aam Lee Amanat Al Asima Wal Baladyat" was issued. This ordinance abolished the Municipal Ordinance and all preceding incompatible ordinances (Rasheed 1981). It was considered crucial and vital to the history of municipalities in Saudi Arabia as this ordinance gave responsibility of organising and administering the towns to the municipalities (Al-Mutairy *et al.*, 1989).

The most recent ordinance is the Municipalities and Rural Ordinance "Nizam Al-Baldiat Wal Qora" of 1977. All municipalities in Saudi Arabia nowadays work under the 1977 Ordinance. The Ordinance defined the municipality as a legal entity, financially and administratively independent and carrying out its functions according to the ordinance regulations. The establishment, naming of municipalities, definition, and modification of their levels and the cancellation of the municipalities are decisions to be taken by the Ministry of Municipal and Rural Affairs. The municipal

authority is responsible for all actions concerned with organising, maintaining and beautifying its areas and maintaining public health, safety and comfort. The municipal responsibilities are carried out by the municipal council and by the head of the municipality "the Mayor". The municipal council performs legislative and monitoring duties. It consists of his deputy assistant and members of the council who are chosen[8] by secret ballot. The municipal council is responsible for setting up the municipal programmes and projects, and approving them; reviewing the budget; and monitoring the municipal activities. The head of the municipality is the head of the municipal executive body, and is responsible for all the municipality affairs. He is responsible for administering the municipality and for ensuring that the municipality employees are implementing their duties according to the rules and regulations. He represents the municipality in dealing with other bodies. However, the head of the municipality represents the Ministry of the Municipal and Rural Affairs, while, the chairman of the municipal council represents the local people (Umm-Ulqura, 1977). The appointment of the members of both the regional council and the municipal councils make them in practice representatives of the central authorities which appointed them. Accountability of the regional and municipal council requires that members of the council should be elected by the people. However, the government has realized the importance of introducing election as an important tool for activating the role of the councils, and announced that elections for half of the members of 14 municipal councils would be held in the near future (See section 2.6).

2.7.2.2 Supervision over Municipalities

The Ministry of Municipal and Rural Affairs (MOMARA) was established in 1975. It is the prominent central body responsible for municipal activities in the Kingdom. It supervises planning and public policy and follows the execution of all municipal affairs (Al-Mutairy *et al.*, 1989; Al-Mogren 1992; Ministry of Municipal and Rural Affairs, 1999). The Municipal Minster enjoys wide power to ensure that the municipalities perform their duties and responsibilities with maximum effect. Usually a central committee from MOMARA inspects municipalities and submits its report to the municipal minister and to the deputy ministers about the municipality's performance of its duties, and the obstacles that face the municipality and

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[8] The article did not name who chooses these members

suggestions to overcome those problems (Kashoggy, 1994). There is no department within the MOMARA responsible for the assessment of the efficiency and effectiveness of the municipalities.

2.7.2.3 Type of Municipalities in Saudi Arabia

Municipalities in Saudi Arabia are categorised in four ranks according to functions, responsibilities and independence. The Saudi municipalities' categories are as follow (Al-Sabban 1990):

- Class A includes municipalities for large cities with a population over 300,000 people.
- Class B includes municipalities for towns with a population over 100,000 people.
- Class C includes municipalities for towns with an average population about 30,000 people.
- Class D includes municipalities for towns with an average population about 5,000 people.

Table 2. 5 Rank of Municipalities in Saudi Arabia[9]

Municipality	Total	A	B	C	D
Amanat (Municipalities serving major cities)	5	-	-	-	-
Municipalities	97	11	20	52	14

2.7.2.3.1 Class A Municipalities

Class A municipalities serve the main cities in the Kingdom. They are highly independent and report directly to the minister of municipalities and rural affairs. They have complete authority to manage the municipality's own affairs and services. Their power according to the 1977 Ordinance lies with the Municipal Mayor and municipal council, except for those matters that must be approved administratively or financially by the minister (Al-Sabban, 1990 & Khalil, 1990). Class A Municipalities co-operate and co-ordinate many matters with MOMARA, Regional Offices[10], and

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[9]Ministry of Planning, 2000.

[10]The regional offices are the General Directorates of Municipal and Rural Affairs (GDOMARAs) which were established by a decision by the minister of MOMARA (1977/1978) in various regions including Central, Western, Eastern, Northern and Southern and Qasim provinces (Al-Mutairy, 1989). They acted as centres of communications for technical matters; they participate in

other municipalities. According to the Seventh Development Plan, there are 5 "Amanat" and 11 Class A Municipalities in Saudi Arabia (Ministry of Planning, 2000). Recently, The Council of Ministers raised the number of Amanat to 14 (Okaz, 2003b). "Amanat" come under Class "A" Municipality serving major cities: Makkaha, Al-Madinah, Al-Riyadh, Al-Dammam and Jeddah (Kashoggy, 1993). A Class A Municipality has a number of responsibilities such as setting local policies and priorities for its services, preparation and approval of its master plan, preparation of the annual budget, preparation, control and supervision of all the municipal ministry projects in the city, selection of contractors and establishment of required payment procedures, preparation of projects' design details and specification of tenders, all administrative affairs, provision of all kinds of municipal services, and all land administrative tasks (Al-Sabban 1990, p120).

However, it is important to point out that the following services are not the responsibility of municipalities in Saudi Arabia:

- Water and drainage systems are the responsibility of the Ministry of Water established in 2001 but commenced operation in 2002 (Okaz, 2002). Prior to 2000, water and sanitary drainage systems were the responsibility of the Water and Sewage Departments in different regions. These departments are semi-independent authorities. Each department is under the control of a board of directors, chaired by the regional governor and including the membership of the deputy ministers of the responsible ministries (such as ministries of Finance, Agriculture, Health) together with other members of Municipal and Rural Affairs (Al-Awaji, 1989; Kashoggy, 1993; Al-Mutairy *et al.*, 1989).
- Health services are the responsibility of the Ministry of Health.
- Education is the responsibility of the Ministry of Education, which is responsible for general education in primary, intermediate and secondary schools and for Royal Technical Institutes, antiquities and museums.

Class A Municipalities serve about 50% of the country's population and spend about one-half of the total budget of MOMARA. Each Class A Municipality has an independent budget, and the Municipal Mayor has authority over day-to-day expenses, salaries, and small projects. He also has the authority to make direct

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municipality functions in some cases and actually perform part of the job in other cases (Al-Sabban, 1990). However, GDOMARAs in Makkah, Riyadh, Asir, and Qasim regions were cancelled by the Council of Ministers on 13/10/2003 (Okaz, 2003a)

purchases up to a value of 10,000 Saudi Riyals for each individual case and up to SR 2 million for tenders. Compared to other municipal classes, Class A Municipalities receive substantial revenues from their services because of their higher populations, many commercial enterprises and private industries (Al Sabban, 1990). Municipal branches for Class A Municipalities were established to reduce the centralisation in providing municipal services and are responsible for preparing land survey decisions, issuing certificates for water admittance and electricity connection, controlling cleaning, performing some maintenance and asphalting roads, tree-planting and supervising work related to the hygiene of the city as well as coping with rains and floods (Khalil, 1990).

2.7.2.3.2 Class B Municipalities

The functions of Class B Municipalities are similar to those of Class A Municipalities, but with certain limitations (Al-Sabban, 1990). Class B Municipalities have complete autonomy over municipal services and internal administration. The Regional Office acts as a supervisor, assistant, and co-ordinator. Financially, Class B Municipalities are responsible for the preparation of the annual budget which it sends to the regional office. The regional office puts it in the regional budget and negotiates it with the Ministry (Al Sabban, 1990).

2.7.2.3.3 Class C Municipalities

The jurisdiction of this group of Class C Municipalities is more limited than Class B. It is more dependent on the Regional Office which guides and monitors its performance. Employee ranks are lower than those of Class B Municipalities. Financially, Class C Municipalities have authority over day-to-day expenses and small projects supervised by the regional office (Al Sabban, 1990; Khalil, 1990).

2.7.2.3.4 Class D Municipalities

The majority of the municipalities in Class D were established in the 1970s. These municipalities have smaller responsibilities as they serve smaller populations. Regional Offices supervise most of their research and planning (Al-Sabban, 1990).

2.8 Development of Jeddah City and JM

Jeddah falls within Makkah Al-Mukrramah Region. It is the second largest city in Saudi Arabia, located on the western coast of the Red Sea and covering an area of 470 square kilometres. In 1993, the population of Jeddah City was more than 1.5 million (Alsharif. *et.al.*, 1999). It is a very old city port, and is the main gateway for pilgrims coming on their life's journey to the holy places in Makkah and Madinah. From ancient times, Jeddah has been an important centre of trade and developed rapidly because it was the main port of entry for most goods into the country. It passed through many stages and vicissitudes of economic prosperity and stagnation during the Saudi period. After King Abdulaziz unified the country, Jeddah enjoyed great attention and entered a large development and urbanisation process that is still going on. Jeddah consists of four main areas: the historic area which still retains its heritage status and traditional environment (Al-Balad District), the business and trade areas with wide roads (several districts), new houses and large shopping centres (several districts), and the Corniche area spreading over 130 kilometres along the Red Sea (Jeddah Chamber of Commerce and Industry, 1992).

The new Jeddah went through many stages of development. The first stage, unplanned developing stage (1948-1962), was where Jeddah was extended and built towards the north, south and east. The second stage (1962 – 1975) was characterised by primary studies for the development of Jeddah before the implementation of the National Development Plans. The third stage (1970-1975) was the stage of implementing the First Development Plan. During the period of implementing the first National Development Plan, the old Jeddah City was restructured and new roads and gardens were built.

The commercial centres have achieved a level of success that has made Jeddah a trading centre full of marketing opportunities for people both inside and outside the country. Jeddah port together with facilities provided for exporting and importing has helped this trade. Gold and silver trading is considered one of the most important activities in Jeddah city. In the industrial field, Jeddah is considered one of the most important centres in Saudi Arabia and has developed rapidly. There are now many industries in Jeddah such as iron and steel, glass, petrol refining, cleaning powders, soap, leather, tiles, cement, soft drinks, confectionaries, clothes, gold and silver. These industries were started by individual initiatives which were encouraged and

helped by the Saudi government. Many industrial towns have been built in the country such as the one in Jeddah City, which was built in 1969. In the field of education, many schools for all ages have been built. In the field of transport, the Ministry of Municipal and Rural Affairs together with the Ministry of Transport have created a network of highways and bridges (Jackson, 1979).

JM was established in 1926 and was promoted to "Amanat" status in 1981, (Institute of Public Administration, 1999). It works under the 1977 ordinance. It is headed by a Mayor. His responsibilities are those that came under article 28 of the 1977 Ordinance. Responsibilities of JM are those of a Class A Municipality. The Jeddah Municipality has thirteen municipal branches named after their districts[11]: Towal, Dhahban, Briman, Ubhor, Al-Mattar, Jeddah-Al-Jadida, Al-Azizia, Al-Shirafia, Al-Balad, Al-Jamaa, Khuzam, Umm-Al-Sallam and Al-Janoubia (Jeddah Municipality 1992).

However, JM objectives as were defined by JM[12] are as follows:

a. Organise, improve, and beautify the city.
b. Maintain health and hygiene of Jeddah City through general cleaning and health protection.
c. Supervise markets and food substances and consumer goods.
d. Supervise the execution of the specifications and measures related to food substances and shops licences.
e. Organise cultural and leisure activities.
f. Establish, supervise and execute public policy for city planning, building licences, naming and numbering districts, roads and squares.
g. Investigate how to improve the traffic system of Jeddah City.
h. Execute all projects concerned with public parks, planting and beautifying the city, establishing zoos and children's playgrounds.
i. Perform and supervise all needed works for asphalting, paving and lighting the whole city.
j. Maintain roads, bridges, pavements and rainwater-drainage.
k. Organise and administer all land affairs and the municipality's properties...etc.

In order to improve the municipal services, it is very important to assess the

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[11] See Appendix 6

[12] Data Sent By Department of Public Affairs in Jeddah Municipality. JM clarified with the sent data that these objectives are as they stated in article 5 "municipality functions" of Municipalities and Rural Ordinance of 1977. Also, see Article 5, Municipalities and Rural Ordinance, 1977

efficiency and effectiveness of these services. This is the purpose of this research.

2.9 Conclusion

This chapter has reviewed the context in which local authorities work in Saudi Arabia. The decline in GDP since 1998 and the high growth of population has put pressure on the public sector to improve their efficiency and effectiveness. As the political system in Saudi Arabia is an absolute monarchy, the administrative system is highly centralized. The discussion of the political trends suggests that a democratic system is vital in making officials accountable to the people who elected them. Transparency and accountability are important elements of any democratic system. Thus, the decision taken by the Council of Ministers and the decree issued by the King concerning the elections of members of the municipal councils and the Consultative Council, are important first steps towards democracy and therefore towards transparent and accountable government in Saudi Arabia.

JM as one of the main municipalities in the Kingdom has an important role in achieving the economic and social goals of the country. It is expected to provide its services efficiently and effectively. It is important that an external and/or an internal body within the MOMARA should be established to assess the efficiency and effectiveness of the services provided by JM. Such an evaluation forms an important element of JM's accountability and will be dealt with in Chapters 6 and 7. The next chapter reviews the literature on the meaning of efficiency and effectiveness and different methods of evaluation of efficiency and effectiveness and the relationship between efficiency and effectiveness. It also discusses attempts at administrative reform in Saudi Arabia.

CHAPTER 3

EFFICIENCY AND EFFECTIVENESS IN THE LITERATURE AND THEIR CRITERIA

3.1 Introduction

The previous chapter explored the context in which local authorities operate and discussed economic, social and political trends and their implications for the public sector. Declining GDP and growing population demand that the government improve the efficiency and effectiveness of its services to meet the growing needs of its citizens. A comparison of the Saudi Arabian and the western system was made wherever possible. The importance of a democratic system in enhancing accountability, transparency, and public access to information was highlighted. It was concluded that elections guarantee the accountability of elected officials to the people who elect them. The decree issued by the King concerning the election of 30% of members of the municipal councils is an important first step towards full democracy and, therefore, towards more accountable government. Furthermore, the development of local authorities in Saudi Arabia was reviewed, and the relationship between the local authorities and the Five-Year Development Plan was reviewed. The local authorities in Saudi Arabia consist of a regional system as well as a municipal system. Since this study is mainly concerned with the municipal system in the kingdom, the functions of municipalities in general and JM's objectives in particular were reviewed. It is suggested that assessment of the efficiency and effectiveness of JM's selected services would promote accountability and transparency of JM.

This chapter deals with different concepts and interpretations of efficiency and effectiveness. Various efficiency and effectiveness criteria are derived from those concepts and interpretations. The international experiences of pursuing efficiency and effectiveness are reviewed. Different methods of public policy evaluation of efficiency and effectiveness and the relationship between efficiency and

effectiveness are also discussed. This chapter reviews Saudi efforts of administrative reforms and suggests that Saudi Arabia should adopt the same kind of policies, measures and tools as OECD countries to improve public sector efficiency and effectiveness. It suggests that the efficiency and effectiveness of JM's services should be assessed regularly to improve performance management. Such evaluation will contribute to accountable and transparent governance, which will lead to better provision of services and ensure against any abuse of organisational power while still providing the effective and efficient use of resources.

3.2 Definitions of Efficiency and Effectiveness

3.2.1 The Concept of Efficiency

Usilaner and Soniat (1980) state that the simplest and most widely used technique to measure efficiency is output (measured by final products or services produced) divided by input (measured by labour hours, staff years, or effort). Similarly, the British Treasury defines efficiency as "the ratio of the output of an activity to the resources used to produce that output" (HM Treasury, 1988, p28). Jackson and Morgan define efficiency as, "the economical manner in which goal-oriented operations are carried out, something of an input/output ratio" (Jackson & Morgan 1978: 320). Amitai Etzioni has a similar definition: "The efficiency of an organisation is measured by the amount of resources used to produce one unit of output" (cited Lane 2000: 243).

Simon (1967 & 1998) has explained that the criterion of efficiency is best understood in its application to commercial organisations, which are governed by the profit objective. In such an organisation, the criterion of efficiency requires it to choose the alternative which leads to the maximum achievement of the organisation's objectives with the given resources. This concept of efficiency compares benefit and costs. It relates the consumption of resources to the results obtained. On the one hand it means the maximisation of income, if costs are considered as fixed, and on the other hand, it means the minimisation of cost, if income is considered as fixed. The efficiency criterion is best understood in commercial organisations because money provides a common denominator for the measurement of both output and income, and allows them to be directly compared (Simon, 1967 & 1998). Sørensen (1993) makes much the same point in more

measured terms. He believes that the application of the efficiency criterion in the public sector is more complex, perhaps because the public sector suffers from formal constraints and political influences, has complex goals and affects the whole society. However, this standard concept of efficiency is offered by many scholars and writers on organisations, such as Mentzer and Konrad (1991), Deller and Hastead (1994), Pollitt (1993), Golany and Tamir (1995), McSparran (1995), and Berman (1998). Thus, the standard definition of efficiency is concerned with achieving an organisation's objectives with available resources in the most economical way. This can be measured by comparing outputs to the inputs which are used to produce that output.

Other scholars and schools of thoughts are concerned with ways of achieving efficiency. Arens and Leobbecke (1988) believe that it is often easier to set efficiency criteria rather than effectiveness criteria if efficiency is defined as reducing cost without reducing effectiveness. They refer efficiency to the resources used to achieve the accomplished objectives, and give examples of types of inefficiency which occur in all organisations, namely: acquisition of goods and services is excessively costly; raw materials are not available for production when needed; duplication of efforts by employees; work is done that serves no purpose, with too many employees (Murshid, 1988).

The Classical School[1] sees efficiency as a result of applying administrative principles that direct and control the internal performance of the organisation. It is concerned with the organisational structure, and the way the work is done to achieve the maximum efficiency. This school focuses on the internal performance to achieve its goals by best use of its resources (Murshid, 1988).

Mayo and Roethlisberger, who represent the Human Relations School, look at social factors as the primary influence on the level of production. The studies of this school show the importance of the working group and informal organisation in fixing the level of production. The school calls for attention to the worker's feelings, and the relationship between the worker and his subordinates, bringing into being a spirit of team-work, and encouraging the worker to participate in decision-making. All these factors will increase the chances of achieving efficiency and effectiveness. The

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[1] The Classical School is represented by the Scientific Management School: Frederick Taylor, Henry Gant, Frank Gilbereth, and Harrington Emerson; Administrative Management: Henri Fayol, James Mooney, Luther Gulick, Lidall Urwick, and Willougby; Bureaucratic School: Max Weber

organisation will be inefficient if it cannot fulfil its individuals' needs, causing them to refrain from contributing to the organisation (Murshid, 1988). Sadiq (1980) also considers human resources to be a very important factor in determining the standard of administrative efficiency, and the ability to perform, but he believes that the most important human resources are the people in leadership and in middle management positions, who have the most effect on administrative efficiency. These people are the ones who determine the ability of the organisation to mix its available material and human resources. He emphasises the interaction between the workers in general, and the leadership in particular, and the type of organisation and the current administrative methods. He suggests that these people should have characteristics such as a highly developed ability to analyse, to organise, and to interact with the environment and to adjust to the rapid changes that happen as a result of external developments. They should be able to think in a logical and organised way, understand the social and economical development process while, at the same time, understanding and using new administrative methods. Consequently, it is very important to consider the role of training in producing such people.

Lorsch and Lawrance (1970), argue that, for an organisation to be efficient, the work inside the organisation has to be correlated with the requirement of the organisation's task, technology, external environment, and the organisation's individuals' needs. Their view represents the situational theory which suggests that no single way should be adopted to achieve organisational efficiency, because achieving organisational efficiency depends on the demands of the external environment and the organisation's individuals' needs. The view of this theory comes from the idea that organisations are natural systems and contain many factors which are difficult to identify. Besides, these internal factors are exposed to external influences which can not be controlled.

3.2.2 The Suggested Efficiency Criteria

From the above review, the standard conception of efficiency is concerned with the ability to utilise resources in an economical manner to achieve maximum organisational objectives. Therefore, to assess the efficiency of any organisation, one has to measure over time how well the resources (inputs) were used to produce the service (outputs). There are three different ways of improving efficiency: by doing

the same with less, by doing more with the same, and by doing more with less. All three concern the ratio between inputs and outputs, which both have to be measured over time, which requires what are called management information systems. However, from the standard conception of efficiency, the following criteria are suggested for the assessment of the efficiency of an organisation:

1. Best usage of financial and material resources.
2. Best performance of human resources.

Different ways of improving efficiency help to explain why some organisations are more efficient and able to reduce costs and save time than others. Arens and Leobbecke, the Classical School, Mayo and Roethlisberger, Sadiq, and Lawrence and Lorsch all represent alternative interpretations of efficiency, which reflect important factors concerned with ways of enhancing organisation's performance. From the alternative interpretations of efficiency, criteria are suggested to assess how well the organisation is working towards efficiency. The suggested criteria are as follow:

1. The ability of the organisation to convert inputs (human efforts, finance, rules…etc.) into outputs efficiently.
2. Motivating the employees to provide the service in the best way.
3. Simplifying the procedures to provide the service needed.
4. Employing the most qualified people to provide the service.
5. Using appropriate methods to provide the service in the best way.
6. Effective training for the employees who are responsible for providing the service.
7. The availability of a good system of control and observation.
8. The existence of clear plans and defined programs which explain the needed process, how it works, its cost, its income, when to start, and when to end.
9. The capability of the organisation to interact with the internal environment (rules/employees/machines…etc.).
10. Using the most advanced technology to improve performance and prevent mistakes.
11. The co-operative relationship between individuals in the organisation.
12. The existence of a strict system for rewards and discipline in the organisation.
13. Excellence of co-operation with the authorised bodies.

14. Minimising the use of financial resources by reducing the cost of providing the service.
15. Using consultants and learning from local and international experience to provide the service in the best way.
16. The intelligibility of internal rules and policies.
17. Decentralisation of decision making.

3.2.3 The Concept of Effectiveness

There is general agreement that effectiveness can be defined as the extent to which the organisation can meet or exceed its predetermined goals and objectives. The accomplishment of goals is considered as the necessary condition for effective performance (Jackson & Morgan, 1978; Daft & Dahlen, 1984; Arens & Leobbecke, 1988; Murshid, 1988; Pollitt, 1993; Banner & Gagne, 1995; Golany & Tamir, 1995). Georgopoulos and Tannenbaum have similar ideas. They explain that effectiveness is the degree to which an organisation as a social system, with given resources and means, fulfils its objectives without diminishing its resources and placing excessive strain upon its members (Banner & Gagne, 1995).

The Goal School's view of effectiveness also falls within the standard concept of effectiveness and represents the traditional as well as the most widely adopted view. It focuses on the organisation's ends, and is interested in whether or not an organisation achieves its goals. The Goal School is explicit in the technique or philosophy of management by objectives (MBO). Under this approach, the actual performance of an organisation and its members are assessed by how well they achieve specific goals. From this perspective, effectiveness is measured in terms of goal attainment. Stated goals and objectives are compared with the actual attainment of those goals and objectives. Therefore, in order to evaluate effectiveness according to this approach, first, the organisation must have specified goals, which must be identified; second, general agreement on these goals must be reached in the organisation; and third, these goals must be measurable. Although this approach seems very objective and satisfying, serious problems arise when it comes to identifying goals. The public goals of an organisation tend to be quite abstract and bear little resemblance to operative goals. They are influenced by people, politics, and external environment. For example, a new dean in a business school can change

the goals from a teaching emphasis to research emphasis and shift the reward criteria to reflect this (Banner & Gagne, 1995). Therefore, an organisation needs to "cascade" objectives within the organisation, so that the objectives of the organisation as a whole are converted into specific objectives for sub-units and then for individuals. Despite problems associated with the goal approach for measuring effectiveness, it is the standard approach in considering effectiveness (Jackson & Morgan, 1978).

Other scholars and schools of thoughts represent ways of enhancing and achieving effectiveness. For example, Peters and Waterman (1982) see what they describe as excellent organisations as responding to change of any sort in their environment. They studied the excellence – as they define it - of seventy-five highly regarded companies. The following eight attributes emerged to characterise excellence and effective organisations moving and acting in a turbulent competitive environment; always staying close to people, and always know what they want; giving people autonomy and independence; encouraging risk taking, experimentation, and creativity; releasing people's creativity and their ability to deal with situations in the work place; standing for and committing themselves to value not just profits; enhancing their business in order to expand it; maintain lean staffing; simultaneously give workers autonomy, control while still directing them.

Charles Perrow argues that a good and correct structure is a way to effectiveness (Banner & Gagne, 1995). While for Usilaner and Soniat (1980) effectiveness is related to the quality of services (e.g. responsiveness, timeliness, accessibility, availability, reliability, citizen participation or satisfaction with those services). Similarly, Mcsparran (1995) thinks that to achieve effectiveness managers must do more with fewer resources; new employees must fully understand their role; employees' demands and needs should be taken into account; and services must be accomplished on time.

The System School sees organisations as an open system composed of interrelated subsystems (parts) which interact with an external environment. Subsystems which perform badly will affect the whole (Banner & Gagne, 1995). This approach looks at organisations as systems and evaluates organisational performance on this basis. Therefore, for an organisation to be effective, it must preserve productive relations with all aspects of its environment (suppliers, customers, unions, government agencies, and other constituencies). It must also

identify and respond to changes in consumer taste, technology, economies, social values, and the like. Rather than looking at results of operations, it concentrates on ways to achieve ends (Banner & Gagne, 1995). Feedback becomes crucial in helping the organisation learn from experience, so it can develop, adjust and respond to the environmental demands (Jackson & Morgan, 1978). The difference between the Goal School and the System School regarding effectiveness is that the Goal School focuses on the organisation's ends, while the System School focuses on the means which deliver these ends. It looks at how the ends are achieved (Banner & Gagne, 1995).

On the other hand, for the Human Relations School, effectiveness is concerned with the success of achieving co-operation between organisations and individuals that would lead to the achievement of the organisational objectives. The organisation will be effective if it is able to achieve its goals (Murshid, 1988).

3.2.4 The Suggested Effectiveness Criteria

From the above review, the standard definition of effectiveness defines it as the extent to which an organisation can achieve its predetermined goals. Therefore, the following effectiveness criteria are suggested to assess the effectiveness of public organisations:

1. The service fulfils the national objectives and government guidelines.
2. The service fulfils clear objectives.
3. The quality of the provided service meets the people's expectations.
4. The service fulfils the community's needs and desires.

However, effectiveness measures determine the impact and quality of the services being provided and describe the impact - both positive and negative - that the provision of the service has on the client or community.

Different ways for improving effectiveness help to explain why some organisations are more effective than others. Peters and Waterman, Charles Perrow, Usilaner and Soniat, Mcsparran, the System School and the Human Relations School all reflect different ways for enhancing and achieving effectiveness. From these alternative interpretations of effectiveness, the following criteria are proposed to assess how well the organisation is working towards effectiveness:

1. The service is provided at the right time.
2. The ability of the organisation to bring about changes to the service, and to face problems and changes in the environment.
3. The ability to put into practice "Total Quality Management."
4. The extent of job satisfaction of the employees.
5. The extent of employees' satisfaction with their salary.
6. The extent of employees' loyalty to and association with the organisation.
7. The ability of the organisation to undertake organisational and administrative development.
8. The excellence of the communication system between the departments in the organisation.
9. The efficiency of the organisation and work division methods.

3.3 The Relationship between Efficiency and Effectiveness

As discussed in Section 3.2 above, efficiency is a relational factor, measured by the ratio of outputs to inputs or of benefits to costs (direct or indirect costs). Efficiency is influenced by time factor, the organisation might give up some of its efficiency in the short term to achieve more efficiency in long term, on the other hand, it might concentrate on efficiency in the short term and ignore long term efficiency. Effectiveness, as discussed above, is also relational because rarely is there only one fixed objective for the organisation. Mostly, there is more than one objective, and these objectives may be in conflict with each other. However, the degree of effectiveness is determined by the extent to which the organisation achieves its objectives. Effectiveness is the relationship between outputs and the intended goals and is also influenced by the time factor. An organisation might be more concerned with achieving its objectives in the short term at the expense of its objectives in the long term, or it might give up its current objectives for more objectives in the future. An example of this is the movement by the Saudi Government towards job-Saudization (replacing non-Saudi employees by Saudi employees) in public sector. Job-Saudization might lead to a short term inefficiency of government departments because of the replacement of highly experienced employees by less experienced ones, but in the long term the less experienced

employee will gain experience and then the government departments will increase their efficiency and effectiveness.

However, the organisation's effectiveness might be high, while its efficiency is low or vice versa (Murshid, 1988). For example, earlier in the twentieth century, development of the infrastructure was an important government objective and government capital expenditure was larger than current expenditure. That ratio declined from the mid 1970s in most countries except for Japan, Italy, Spain, Portugal, Netherlands and Luxembourg (Metcalfe & Richards, 1993). Also in 1989 in the UK, in a report on the Government's efficiency strategy, the Public Accounts Committee of the House of Commons criticised the record of implementation of efficiency scrutiny recommendations and the failure of departments to realize the forecast savings. In addition, there have been occasions when potential savings and management reforms have been rejected by ministers for political reasons. One of the most unintelligent and persistent examples of this is overriding priority given to reducing the number of civil servants, even when there is clear evidence that manpower cuts reduce effectiveness (Metcalfe & Richards, 1993). However, efficiency and effectiveness criteria in the public sector are influenced by policies which define and set the public sector's work, and are influenced by the government preferences. They are strongly bound up with the societies' values and needs in specific time and circumstances. The circumstances might call for concentrating on the effectiveness of government departments and the importance of achieving their objectives at the expense of their efficiency as was the case during the short-lived economic boom period in Saudi Arabia when the Saudi government focused on achieving its ambitious objectives disregarding the cost. On the other hand, government policy might give preference to efficiency, and then the government departments concentrate on reducing the expenditure at the expense of achieving some of their objectives (Murshid, 1988).

3.4 Review of International Literature on Efficiency and Effectiveness

In almost all western countries, a strong drive to reform and improve public sector came to the forefront in the 1970s. Public services and local authorities around the world face the responsibility of building effective, accountable, and transparent systems to deliver services efficiently and effectively (Boorsma, 1995; Bovaird, 1997). OECD countries became obsessed by the need to get better results out of the resources provided by the taxpayers and the users, and to deliver more and better services for less. More attention is given to serve the citizens rather than the government. Therefore, these countries tried to integrate performance measurements into government operations to control expenditure and meet increasing demands for improved performance. Efforts were made to reduce public expenditure and public sector employment through privatization, contracting out and decentralization. Benchmarking was introduced as an efficiency tool for measuring the performance of one organisation against a standard. Moreover, legislation and initiatives were introduced by governments to enhance and improve efficiency and effectiveness. Advances in the information and communication technologies facilitated the delivery of services more efficiently. In addition, a greater emphasis was put on evaluating the performance of the public sector which was reflected both in increased self-evaluation by public sector organisations and evaluation by external performance review bodies.

3.4.1 Serving Consumers

An important aim of the so-called new public management is to give greater weight to the interest of the consumer in services delivery. For example, in the USA, more attention is paid to what the customers want out of federal services rather than what bureaucrats decide about those services (ROHM, 1996). As in the USA, the UK shifted its emphasis to measuring outcomes and outputs rather than the inputs and giving more importance to the needs of consumers rather than the interests of producers (OECD, 1999). The creation of the Citizens' Charter Programme in the UK was intended to develop the public services and make them more responsive to the wishes and needs of their users; to foster better services and customer choice; to provide more information on the standard of service people are entitled to expect and

give clear information as to whom should the customer redress when things go wrong (OECD, 1992). The present labour government has continued with this approach. In South Korea, in order to enhance the quality of services provided by government agencies, the Office of the Prime Minister's evaluation bureau conducts surveys of customer satisfaction of ministry-provided public services. The Ministries that receive favourable marks are awarded commendations to encourage a competitive environment among them to promote better services (Woo-Cheol, 1997).

3.4.2 Privatization, Contracting Out and Decentralization

In the UK, the transfer of previously public owned businesses to the private sector has resulted in improvement of the performance of the public sector and allowed greater emphasis on consumer representation on public sector bodies (Cowper & Samuels, 1997; OECD, 1992). By 1996 two-thirds of formerly state-owned industries such as Rolls-Royce, the National Freight Company and British Airways has been transferred to the private sector (Foster & Plowden, 1996). Furthermore, to achieve efficiency, the UK government opted for increasing the role of the private sector by wider competition and contracting out (Cowper & Samuels, 1997; OECD, 1992; OECD, 1999). In the USA also, performance measurements and a desire to adopt the private sector technique of continuous improvement through comparison among organisations with like functions and processes have yielded positive results (Kopczynski, 1999). In addition, in many OECD countries, decentralisation has played an important role in enabling governments to deliver services efficiently and effectively. For example, in the UK, transfer of services and public provision of goods from central government to local governments has resulted in increased efficiency (Foster & Plowden, 1996). In Spain as well, as it became a fully democratic country in 1978, a new and closer relationship between the state and the citizens, and a process of decentralisation of political and administrative authorities toward regional governments began (Goñi, 1997).

3.4.3 Benchmarking

The quest for improved value for money has led to the development of a range of efficiency tools such as "Benchmarking", an efficiency tool based on the principle of measuring the performance of one organisation against a standard, whether absolute

or relative to other organisations (Cowper & Samuels, 1997). Benchmarking seeks to enhance competitive advantage by learning from best practice in other organisations. It is a key analytical tool in identifying performance improvement targets in cost reduction programmes and total quality management concepts. Benchmarking was first used in the USA in the late 1970s, and has recently become more wide spread as a management technique in Europe (Dence, 1995). The UK used three aspects of benchmarking within the public sector: setting standard of performance which an effective organisation could be expected to achieve; comparing the performance of a number of organisations providing a similar service; and undertaking a detailed examination within a group of organisations of the processes which produce a particular output, with a view to understanding the reasons for variations in performance and incorporating best practice (Cowper & Samuels, 1997).

As in the UK, Sweden has also adopted the "Benchmarking" technique to improve performance of public sector. Areas that are considered inefficient or ineffective are subject to benchmarking in order to identify and eliminate factors responsible for inefficiency and ineffectiveness. As with the UK, Sweden is also striving to provide more efficient and effective services by making optimal use of the resources at its disposal. It also uses benchmarking to identify differences between comparable public institutions. Strengths and weaknesses are identified and the unsatisfactory areas are guided to improve their efficiency. An example of benchmarking in Swedish experience is the Annual Benchmarking of Local Government Authorities, which deals with the benchmarking of the finance of the Swedish local authorities. The Swedish Association of Local Authorities in co-operation with the Central Bureau of Statistics carries out the benchmarking. Its general purpose is to elucidate the general results of local government authorities, which are published in the form of a yearly report that contains analysis of indicators describing all areas of local government. The basis of all types of indicators employed consists of statistics from the annual accounts of local government authorities and of operational statistics, population, and statistics on personnel. There is a wide variation in the ways each authority develops organisational and operational methods, as well as choosing standards for reporting financial and operational statistics. However, the evaluation and following-up of local government activities has increased significantly at both central and local levels (Dahlberg, & Statskontoret, 1997).

In Norway, each Ministry is required to define goals and performance requirements within its region of responsibility and make reports on the results achieved. The Ministries develop methods and performance criteria to be used to assess the results of their subordinate agencies. To make public aware of performance targets and to enhance accountability, Norwegian agencies are required to publish their information on performance (Lassen, 1997).

3.4.4 Government's Legislations and Initiatives

In many of the OECD countries, legislation and initiatives were introduced by governments to try to streamline government services, reduce costs, down-size agencies, as well as try to improve the services delivery to the consumer. In the USA, legislation such as the Chief Financial Officer Act (1991) and the Government Performance Result Act "GPRA" (1991) were passed to improve performance management. The Chief Financial Officer Act of 1991 requires annual financial statements whereas GPRA is mainly concerned with improvements in the effectiveness in public accountability, service delivery, congressional decision-making, the internal management of agencies, and their accountability for achieving programme goals (ROHM, 1996). The GPRA Act also requires agencies to measure their performance and results. Therefore, the agencies must define their specific goals, determine the proper level of resources, assess which programmes are working, and fix those that are not (OECD, 2000). Further Acts, such as the National Performance Review (1993), the Government Management Reform Act (1994) and an Executive Order (1995) were issued to strengthen and improve the efficiency of various government agencies. Congressional and Executive branches agreed to make these changes successful (ROHM, 1996).

Similar to the USA, the UK has also focussed on improving efficiency and effectiveness in the public sector. In this regard, several important reforms have been introduced since 1979. A wide range of initiatives in the areas of central government, the National Health Service, and local government have been undertaken to improve value for money (Cowper & Samuels, 1997). Furthermore, the UK Government has created Next Steps Agencies to carry out many of the executive functions of central government. These agencies are given the responsibility to develop management in government and to deliver a better quality of services to the public more efficiently

and effectively. Through their respective ministers, Next Steps Agencies are accountable to Parliament for their performance and expenditure (OECD, 1992). The Next Steps Agencies programme has brought significant gains in terms of improved efficiency, greater transparency, and clearer focus on the task and on the client base that the agencies serve (OECD, 1999). This is best understood as an example of decentralisation as well as distinguishing policy-making and service delivery.

In Spain in 1977, a new general budget law put public managers under obligation to be more efficient and effective in carrying out the public sector's services, which shifted the focus on accountability to a more performance-based accountability (Goñi, 1997).

3.4.5 Information and Communication Technologies

The information and communication technologies (ICTs) have had a significant impact upon the efficiency of the public sector of many countries. For example, to deliver services more efficiently in Korea, special laws have been introduced to give citizens the "right to know", and encourage their participation in the administrative processes. The aim is to ensure justice, transparency, and confidence in government. The Seoul City "On-line Procedure Enhancement for Civil Application (OPEN)" allow citizens to monitor the whole process of civil applications from the submission of an application to the decision itself. It promotes transparency in administrative procedures and eliminates the possibility of corruption through the public supervision, and allows staff responsible for audit and investigation to monitor how civil applications are processed. Citizens' participation makes the policy-making process transparent, which will prevent distortions in policy-making. By visiting these home pages, citizens and stakeholders can access public information more easily and efficiently. The Korean government is trying to utilise information and communication technologies (ICTs), to obtain high efficiency in administration, as well as to strengthen citizen-government interaction. All Korean local governments have introduced this system while some central government units intend to introduce this system under current plans to construct an e-government. The overall objective of the e-government initiatives is to support government efforts to strengthen public participation, transparency, democratic accountability, and policy effectiveness (Im, 2001). Most of the western countries have also introduced e-government to bring

greater efficiency in government as well as strengthen government-citizen connections by ensuring transparency, openness and participation via the internet.

3.4.6 External Audit

Various evaluation and auditing measures have been important part of OECD countries' administrative performance, and have been introduced to ensure greater transparency and accountability in public organisations. In the USA, government agencies such as "Washington State Commission on Efficiency and Accountability in Government" (WSCEAG) were established to enhance efficiency and effectiveness of public sectors. WSCEAG achieved its stated goal of enhancing the efficiency and effectiveness of state government programs and reduced costs while maintaining or improving the quality of service (Christenson, 1991). Another example is the creation of the Commission of Efficiency and Effectiveness in Virginia, to re-examine state government to see how effectively it serves Virginia's citizens and how efficiently it provides them with those services (Commission of Efficiency and Effectiveness, 2004).

In the UK, the National Audit Office (NAO) that is totally independent of government, audits the accounts of all government departments and agencies as well as a wide range of other public bodies, and reports to Parliament on the economy, efficiency and effectiveness with which government bodies have used public money (Bowerman, 1994; National Audit Office, 2004a). At the local level, the Audit Commission is responsible for ensuring that public money is spent economically, efficiently, and effectively (See section 2.6).

In South Korea, the Board of Audit and Inspection inspects the accounting and functions of the various administrative agencies. It has recently begun to attach greater importance to inspecting agencies' policy performance to keep up with the trend for performance-based accountability. In addition, through citizen's participation, many ad hoc committees have been established to promote citizens' participation in the process of policy-making to ensure accountability. Through these committees, the concerned citizens may offer their policy recommendations that may be studied and reviewed in public hearings. If a policy is approved by the President, the administrative agencies must take action to ensure its implementation (Woo-Cheol, 1997).

In general, many governments in OECD countries have realized that they need to regain the public's trust by providing more choice, democracy and transparency. Moreover, these countries have realized that the relationship between the public sector, the government and the public must be based on clearer accountability and improved performance. Therefore, accountability is receiving growing attention in those countries. A number of OECD countries have taken important steps in reforming traditional accountability arrangements. Other member countries may not have addressed accountability explicitly but public sector reforms have drawn attention to accountability issues and even challenged existing arrangements. However, despite the fact that accountability varies among different countries (reflecting different factors and traditions) and may even vary within a country (according to the status and form of organisations, nature of activities and level of governments of OECD countries), all these countries have realized the importance of shifting from compliance-based accountability to performance-based accountability.

As seen above, almost all the reviewed OECD countries were under great pressure to change and develop their public sector. Electorates were demanding an efficient and effective government. Therefore, these countries put greater emphasis on getting better results from the available resources. Much of current public reform is an effort to meet society's need to deliver more and better services for less.

Thus, Performance Management is the key aspect of public sector reforms of many OECD member countries. Checks and balances have been introduced to ensure that changes are being implemented in the best way possible. Direct accountability to citizens via the ballot box is not sufficient. The government must restrain itself by creating and sustaining independent public institutions empowered to oversee its actions and demand an explanation for any illegal behaviour and impose penalties if necessary. Accordingly, the governments have increased both self-evaluations by public sector organizations themselves and evaluations by external bodies that are empowered by Acts and Initiatives. Many of these Acts required public sector organisations not only to assess their performance, but also to fix problems if they are found. Audit arrangements for public sector organisations vary among OECD countries, but the main objectives of performance management in public organisations in these countries is to support better management decision-making leading to improved outcomes for the community, and to meet external accountability requirements. Therefore, these countries adopted a wide range of

policies and a variety of measures and tools to improve public sectors and their efficiency and effectiveness. Similarly, assessment of the efficiency and effectiveness of JM's selected services in Saudi Arabia will contribute to the improvement of performance management of JM. It will also contribute to accountable and transparent governance, which will lead to better provision of services, ensure against any abuse of organisational power, and yet promote its effective and efficient use of resources.

3.5 Different Methods of Public Policy Evaluation of Efficiency and Effectiveness

Evaluation is important in a result-oriented environment because it provides feedback on efficiency, effectiveness, and delivery of public policies and can be critical to policy improvement and innovation. In essence, it contributes to accountable government. The objective of evaluation is to improve decision-making at all levels (PUMA, 1998). Evaluation provides politicians and managers with better means for improving service delivery, planning, and allocating resources. There are various evaluation techniques. All these techniques share common features, but each has its advantages and disadvantages. The choice of techniques to be used in a particular programme depends on its appropriateness to the evaluation question at hand, to cost and administrative feasibility (Ruegg & Feller, 2003).

Guba and Lincoln (1989) described the historical evolution of public policy evaluation practice as first, second, and third generation evaluations. First-generation evaluation focused on measurement. The role of the evaluator was technical; he or she was expected to know about and be able to use the vast number of "psychometric measurement instruments" that were available by the mid 1940s, so that any variable named for investigation could be measured. The first generation targeted students, their learning ability, and scores they achieved. Thus, the second generation evaluation was born which was modification of the earlier procedure to refine the new curricula. The goal was to measure the extent to which the new curricula were achieving their objectives and to identify the strengths and weaknesses in the curricula programme design. The role of the evaluator was thus to describe patterns of strengths and weaknesses with regard to stated objectives. However, in the late 1950s in America, the emphasis was shifted from the question, "are the objectives

being achieved" to "are the objectives worthwhile?" The third-generation thus called for judgments of "worth". Various models for achieving this goal were devised in the 1960s and 70s where the essential feature was that the evaluator to some extent or other had to act as a judge (Guba & Lincoln, 1989). In the development of the three generations of evaluation, each succeeding generation represents a step forward but all three generations had defects. Deficiencies in the first three generations provided the stimulus for the development of the fourth generation evaluation.

The fourth generation evaluation model adopts different stakeholders' views in determining the variables and instruments that are used in the investigation and responds to the needs of all those who have an active stake in the evaluation process and results. The responsive evaluation has four phases, which may be re-iterated and overlapped. In the first phase, stakeholders are identified and solicited for claims and issues they want to bring into study. Guba and Lincoln have identified three main classes of stakeholders. First are the agents, the persons involved in using, producing or implementing the study results. Second are the beneficiaries, those who profit from the use of the study outcomes. And third are the victims, those persons who are negatively affected by the study. In the second phase, all stakeholders are introduced to the others to begin a negotiating process through comments, agreements and/or disputes to determine what issues and topics will be assessed. Some of the original claims, concerns or issues will be resolved in this phase. The unresolved issues are carried to the third phase for investigation and further information collection by the evaluator. In the fourth phase, negotiations under the guidance of the evaluator take place to reach a consensus on each disputed item. The information that had been collected is analysed and disseminated to all the stakeholders for comments. The still unresolved items form the core for future evaluation when it becomes possible (Guba & Lincoln, 1989; Guba & Lincoln, 2001). Section 4.2 considers the merit of this approach for evaluating services provided by JM.

3.6 Review of Efforts at Administrative Reform in Saudi Arabia

Efforts towards administrative reform in the Kingdom of Saudi Arabia have gone through different stages since its foundation. The earliest efforts were devoted to developing the administrative system in the Kingdom in the period prior to the establishment of the Council of Ministers in 1953. In this period, the Kingdom sought the help of Arab and western experts to establish new administrative systems or to develop the existing ones. These efforts did not cover the whole administrative system, and did not lead to the establishment of permanent and specialized bodies for administrative development. The establishment of the Council of Ministers in 1953 is considered to be the first step to the establishment of a comprehensive administrative system in the Kingdom. The international organisations such as International Monetary Fund and the International Bank for Reconstruction and Development played a prominent role in the administrative reform efforts. In addition, the United Nations' experts in 1961 studied the administrative system in the Kingdom and made recommendations resulting in the establishment of the Institute of Public Administration. Subsequently, in 1963, the Kingdom made a contract with the American Ford Foundation to perform a comprehensive reorganisation of the administrative system. The role of the Ford Foundation has been crucial in the development of the administrative system in the Kingdom (Asfour, 1986; Institute of Public Administration, 1999). Since 1970, the Kingdom has relied upon many administrative development organisations such as the High Committee for Administrative Reform, the General Bureau for the Civil Service, the Central Body for Organisation and Methods, the Organisation of Control and Investigation and the Institute of Public Administration to develop the administrative system (Institute of Public Administration, 1999). On 30 April 2003, the King issued two royal decrees for the comprehensive reorganisation and restructuring of the administrative bodies in an effort to enhance the performance of government organisations. The reorganisation was mainly concerned with the establishment of new ministries and the integration or separation of existing ones. Another decree was issued concerning the restructuring of the Council of Ministers (Okaz, 2003a).

The administrative reforms in the Kingdom show that no initiatives or steps were taken either to enhance accountability and transparency or to improve performance

management, efficiency and effectiveness in the public sector. There has been only one study concerning the efficiency of public administration in Saudi Arabia, an empirical study conducted by Murshid and Raslan (1989). This study sought to define the concept of efficiency in government organisations in Saudi Arabia as conceived by the government employees and the beneficiaries of the government services respectively. The study dealt with the concept of efficiency in government departments in general and confined itself to the western region of the Kingdom. Murshid and Raslan concluded that the most important result of the empirical study was that the public judged the efficiency of government departments in terms of their own degree of satisfaction with those services. This result is natural, as the aim of the establishment of government departments is to provide the best possible services. Government employees gave more importance to better use of human resources and excellence of the organisation, each of which is considered a means to achieve the objectives. The research team made recommendations, including better use of human resources through the use of properly-qualified and trained employees and managers; continuous updating of job training and appropriate motivation to improve output; re-evaluation of the responsibilities of government units; and simplification of procedures. However, the study criticised the standard of efficiency in government organisations and provided recommendations to improve their level of efficiency. This study was an important first step towards more detailed investigations for the measurements of efficiency and effectiveness in government departments.

Salim (1990) studied auditing and formal control over government programs in Saudi Arabia. He noted that even though Article 7 of the General Control Bureau ordinance pointed to the importance of checking the efficiency and effectiveness of government performance, the general control department did not act upon this article. Salim stressed that control over the public sector should include the assessment of efficiency (the ratio of inputs to outputs) and effectiveness (the extent to which government achieves its objectives).

Other studies concerning local authorities in Saudi Arabia were mainly concerned with different problems facing the Saudi local authorities. Nevertheless, two of the studies (Al-Sabban, 1982; Rasheed & Abu-Shahra, 1981) made direct recommendations to improve the efficiency and effectiveness of local authorities. They agreed mainly upon the importance of delegating more responsibility to local bodies to enable them to carry out their services more efficiently and effectively.

However, these studies in general pointed out the low standard of efficiency and effectiveness of local authorities. There is no Saudi literature concerning the use of Delphi Technique at central, local level or private sector.

3.7 Conclusion

Some standard concepts have emerged from various interpretations of efficiency and effectiveness. The standard conception of efficiency is concerned with economical ways of utilising resources to achieve objectives and efficiency is measured by measuring the ratio of two factors - inputs and outputs. The standard conception of effectiveness is concerned with the extent to which goals are achieved. From these standard conceptions, criteria for assessing efficiency and effectiveness are proposed. From these alternative interpretations, efficiency and effectiveness criteria were derived which could be used to assess how well an organisation is working towards efficiency and effectiveness.

A survey of international literature showed that the reform of the public sector in OECD countries is aimed at improving the performance management as well as the efficiency and effectiveness of the public sector. These countries have taken many initiatives and used different tools to ensure a more accountable and transparent public sector. However, it must be noted that improvement in efficiency does not always result in more effective service or vice versa.

A survey of Saudi literature revealed that no initiatives were taken in Saudi Arabia to either enhance accountability and transparency or improve performance management, efficiency and effectiveness of the public sector. It also shows a glaring lack of any effort on the part of the Saudi government or private sector to evaluate the efficiency and/or effectiveness of services. This is the first study to evaluate the efficiency and effectiveness of services in Saudi Arabia. In order to improve the efficiency and effectiveness of the public sector in Saudi Arabia as in OECD countries, the government should take the following steps:

- reduce public expenditure and public sector employment through privatization, contracting out and decentralization,
- introduce benchmarking as an efficiency tool,
- introduce legislation and initiatives to enhance and improve efficiency and effectiveness of the public sector,

- establish e-government to deliver services more efficiently,
- establish special organisations to evaluate the performance and efficiency and effectiveness of the public sector.

This is also the first study to apply the Delphi Technique methodology in Saudi Arabia to obtain the consensus of the Saudi experts for the development of criteria to assess efficiency and effectiveness of services provided by a local authority. The next chapter deals with Delphi Technique. The various criteria for efficiency and effectiveness suggested earlier in this chapter were sent to a panel of experts in local authorities in Saudi Arabia to develop a consensus view about these concepts and the criteria which should be used to assess the selected services.

CHAPTER 4

DELPHI TECHNIQUE

4.1 introduction

The concepts and different interpretations of efficiency and effectiveness were reviewed in the previous chapter and it is clear that such concepts are well established. Efficiency is concerned with the economical way of accomplishing objectives, and referred to as the ratio of output to input. Effectiveness is referred to as the extent to which the defined objectives are achieved. Different criteria to assess the efficiency and effectiveness were suggested.

The international literature on efficiency and effectiveness showed that the reform of public sector in OECD countries is aimed at improving the efficiency and effectiveness of their public sector. Many initiatives and steps have been taken and different tools have been used by these countries to ensure a more accountable and transparent public sector. Up until now, there has been no study of measures to improve efficiency and effectiveness in the Saudi context, whether in public sector or in the private sector. This is the first study to evaluate the efficiency and effectiveness of government services in Saudi Arabia.

This chapter describes the Delphi Technique and explain the reasons for choosing this methodology and rejecting other methods. It also deals with the use of Delphi Technique to develop the appropriate efficiency and effectiveness criteria in the Saudi environment. The criteria generated by this means will be used to assess the efficiency and effectiveness of the services provided by JM and discussed in Chapter 5 and 6.

4.2 Methodology

There are different methods such as interviews, documents, questionnaires and Delphi Technique that could be employed to collect data for the purpose of evaluation. The main objective of this research is to assess the efficiency and effectiveness of the selected services provided by JM. For this purpose, criteria for measuring the level of efficiency and effectiveness in the Saudi context are needed, especially as this is a pioneer study. The study therefore requires the most appropriate tools for collecting and assessing the required data. Efficiency and effectiveness criteria should be generated for the purpose of evaluation. This section explains why DT was selected as the most appropriate means of generating criteria for assessing efficiency and effectiveness in the Saudi context. It considers and dismisses other methods, such as interviews and the different evaluation techniques discussed in Section 3.5 above.

Interviews have a great deal in common with questionnaires. They are designed in much the same way and can be used in empirical studies to obtain data directly from the respondents. Instead of questions being read by the respondents, questions will be asked by an interviewer who will record the answers. One of the disadvantages of interview surveys is that interviews require a high degree of consistency in presentation and therefore require a trained interviewer (Moor, 1983; Elian & Gain, 2000). Moreover interviews consume too much time, effort and money, particularly when the sample is large and the subjects are geographically dispersed as in this research project. Interviewees may be more responsive to personalities, moods and interpersonal dynamics between the interviewee and the interviewer than with more impersonal methods such as questionnaires. Interviews provide an opportunity for the researcher to choose quotes and specific examples, thereby making the results more subjective. Furthermore, the answers of the interviewees may not lend themselves to quantitative analysis (Moor, 1983; Hussey & Hussey, 1997; Elian & Gain, 2000).

Some of the disadvantages discussed above for interviews, are shared by the first, second, and third generation evaluations described in Section 3.5. All three evaluation approaches fail to accommodate value-pluralism. The values of an inquirer or the persons involved in the inquiry cannot be ignored. Thus the value-pluralism within the societies and between the cultures becomes an important factor

in an evaluation (Guba & Lincoln, 1989). Furthermore, the three generations tend to make sole use of the scientific method to determine the 'truth' underlying a phenomenon instead of focussing on the overall work of the programmes and services to the community. These shortcomings make all three generations inappropriate methods for the evaluation in this study.

According to Guba and Lincoln, the evaluator cannot remain objective. The evaluator and the administrator responsible for the programme under study either become too close to remain objective or become adversarial, thus falsifying the results of the study. The recognition of these shortcomings in evaluation methodologies led to the development of the fourth generation evaluation. According to the fourth generation evaluation, social, cultural and political factors form an integral part of any evaluation process, without which the evaluation efforts would be sterile, useless and meaningless (Guba & Lincoln, 1989). Considering the Saudi environment, none of these factors is conducive to evaluation responsive research in Saudi Arabia. The municipality officials are unelected and act as administrators for the central government. As a female researcher in a very conservative and strictly religious society, the author would not be allowed to arrange meetings with male stakeholders. In view of these constraints, fourth generation evaluation methodology was also ruled out.

Delphi Methodology overcomes most of the shortcomings encountered with other methods. The Delphi Technique as described in Section 4.4 is an exercise in group communication among panel of geographically scattered experts (Turoff & Hiltz, 2004). It evokes information and judgments from participants to facilitate problem solving, planning, and decision-making. It is particularly useful when the problem is not susceptible to analytical techniques, but could profit from subjective and collective judgements (Linstone & Turoff, 1975; Dunham, 1998). Therefore, Delphi Technique is designed to generate consensus judgment. There are no stated criteria available for the assessment of the efficiency and effectiveness of major services provided by Jeddah Municipality. This study recognises the fact that to assess the efficiency and effectiveness of the selected services, the necessary criteria should be generated from the environment in which JM operates. The Delphi Technique is the most suitable tool for obtaining the consensus of Saudi experts on the provision of local services and on the assessment of the performance of the municipal services.

Accordingly the suggested efficiency and effectiveness criteria (Chapter 3) were sent to a panel of experts on local administration in Saudi Arabia in two rounds of Delphi questionnaires to get their consensus on, firstly, the concept of the efficiency and effectiveness and, secondly, the criteria that should be used to assess the efficiency and effectiveness of the selected services. The generated efficiency criteria were then used to assess the efficiency of the selected services. Documents (published data, and data obtained from JM on request) are used to obtain quantitative data for the assessment of the efficiency of some of the selected municipal services (Chapter 5).

Main Questionnaires were then used to assess the effectiveness of the selected services (Chapter 6). The effectiveness criteria identified in Section 4.6 were used to design the main questionnaires which were sent to the beneficiaries of JM's services, the experts on local administration in Jeddah City and the staff of JM departments concerned with providing the selected services. These questionnaires were designed as closed questionnaires where the respondents were asked questions and required to answer by choosing between a number of alternatives. In addition, where necessary, further questions were asked to explore the respondents' opinion or suggestions that could not be obtained from multiple-choice questions.

Questionnaires were chosen for the following reasons:

a. A questionnaire is easy to analyse and provides a range of answers, thus reducing the chance of the respondents overlooking something and avoiding the possibility of obtaining ambiguous answers.
b. Closed questionnaires can be used to obtain straightforward, uncomplicated information.
c. Questionnaires are flexible and can be used to reach a very large number of people quickly.
d. They can be completed at the respondent's own pace, allowing time to think about the answer and, if necessary, consult relevant documents.
e. The respondent could, if so desired, look through the whole questionnaire before answering. It also avoids the problem of respondents adopting a defensive posture at the beginning of an interview.
f. Each sample (e.g. the experts are considered as one sample) has the same set of questions to answer.

g. By using pre-test or pilot questionnaires, the researcher can ensure that the final questionnaire is unambiguous. It also allows the researcher to check that nothing has been overlooked.
h. It is an economical way of collecting data.
i. It does not allow the researcher to interfere with answers of the respondents compared with the other methods such as interviews and observation (Moore, 1983).

Because of these advantages, questionnaires were chosen as the most appropriate method of measuring the effectiveness of the selected services.

4.3 Definition of Delphi Technique

The Delphi Technique is a method developed by the RAND Corporation in the 1950s. It is constructed by sending several rounds of questionnaires to a panel of experts to obtain their opinion on their specialised area. It allows the panel of experts to achieve consensus on a complex problem (Beattie & Reader. 1971; Twiss, 1974; Linstone & Turoff, 1975; Buffa, 1980; Paliwoda, 1983; Duffield, 1993; Bolongaro, 1994; Ono & Wedemeyer, 1994; Critcher & Gladstone, 1998). The technique provides experts with freedom to contribute and challenge alternative aspects and ideas and to think independently and effectively between rounds (Needham & De Loë, 1990).

4.4 The Process of Delphi Technique

A series of questionnaires are sent to a panel of experts who are knowledgeable about a particular subject. There are no limits on the number of questionnaires that can be sent to the chosen panel of experts. The process of the Delphi Technique is as follows (Paliwoda, 1983; Linstone & Turoff, 1975):

a. The first questionnaire is designed and sent to a panel of experts who are asked to respond to questions and give their opinions on their specialist area.
b. After the questionnaire is returned, the results are summarised and, based on these results, a new questionnaire is developed. In the same way, the following questionnaire is designed and based on the results of the previous returned questionnaire.

c. The questionnaire rounds are designed to achieve consensus by asking Delphi panel members to evaluate their second, third (and if necessary more) responses in the light of the panel responses to each question in the preceding round. Those with apparently more extreme views are asked to reassess their answers to earlier rounds in the light of the general opinion. This is an important feature of the Delphi process designed to generate consensus judgements.
d. The questionnaire rounds continue until the differences between the rounds are minimal, thus generating the final consensus view of the panel.

4.5 Why it is a Reliable Method for Achieving Consensus on the Efficiency and Effectiveness Criteria

The Delphi Technique is a reliable method for achieving the Saudi experts' consensus on the efficiency and effectiveness criteria for the following reasons:

a. DT enables individuals with differing perspectives and differing cognitive abilities to contribute to those parts of a complex problem for which they have the prerequisite knowledge and skills (Linstone & Turoff, 1975).
b. DT provides a way of assembling a wide range of subjective judgements in order to identify common ground and arrive at a general agreement in the form of group consensus (Linstone & Turoff, 1975; Usilaner & Soniat, 1980: Turoff & Hiltz, 2004).
c. The successive rounds of DT give the panel the opportunity to revise their own views in the light of the emerging consensus (Linstone & Turoff, 1975; Paley, 1994; Usilaner & Soniat, 1980). The panel can be provided with statistical mean results. This feedback system stimulates fresh thinking and evokes responses that are more reasoned. Individual panel members become alerted to factors and developments that they might have missed.
d. The panel members remain anonymous, and are able to change their viewpoints without experiencing any loss of face (Duffield, 1993; Paliwoda, 1983). The process is designed to maximise input from individuals while minimising the problems of face-to-face group interaction. Opinions can be freely expressed without pressure from others thus avoiding the risk of so-called "group-think". Since individuals receive the collective results from all participants, they can

refine and modify their opinions based on the information generated in subsequent rounds of questionnaires (Lang, 1998).

e. DT procedure is especially advantageous in situations where input is needed from individuals who cannot meet face to face for reasons such as time, cost, politically unacceptable differences, and cultural and communication barriers (Linstone & Turoff, 2002; Duffield, 1993; Beattie & Reader. 1971).

As the Saudi experts are located in different institutions in different parts of the Kingdom, these advantages make DT the most appropriate method for obtaining the consensus of experts of local administration on the meaning of efficiency and effectiveness, and on the efficiency and effectiveness criteria which should be used to assess the selected services.

4.6 The Conducted Delphi Questionnaires

The aim of conducting Delphi questionnaire, as mentioned earlier in this chapter, is to obtain a consensus of Saudi experts in local administration on the meaning of efficiency and effectiveness, and to generate efficiency and effectiveness criteria relevant to the Saudi environment. These criteria are then used to assess the efficiency and effectiveness of JM's selected services.

The Delphi Technique is dependent on the judgement of knowledgeable experts. Delbecq et al (1975) argue that understanding of the aims of the Delphi exercise by all participants is the most important factor. Otherwise, a panellist may answer inappropriately. Hansen and Ramani (1988) also stress that respondents to questionnaires should be well-informed in the appropriate area. Therefore, selection of the experts is crucial (Turoff & Hiltz, 2004). For the present study, lists of prospective experts were collected and the members were selected based on either the position they occupied within the local authorities or their knowledge of the local authorities. The experts belonged to municipalities or academic institutions, or were managers of private companies or other knowledgeable persons. The table below shows the names of the institutes, number of persons contacted and the number who responded to the questionnaires:

Table 4.1 Name of Institutions and Number of Experts Who Responded to Delphi Questionnaires

Host institution category	Number of experts in each institution	
	Actual size of the sample	No. of respondents
1. Jeddah Municipality.	10	5
2. Riyadh Municipality.	10	4
3. Makkah Municipality.	10	3
4. Imarat Makkaha Al-Mokrramah.	10	3
5. Ministry of Municipal and Rural Affairs.	15	13
6. The Institute of Public Administration in Riyadh City.	8	6
7. King Abdulaziz University.	8	6
8. King Saud University.	1	1
9. Dallat Albaraka (large private company).	5	1
10. Famous writers.	4	2
11. Former Mayor of Jeddah city.	1	1
Total number of experts	**82**	**45**

Fifty-four percent (54%) of the total sample responded to both rounds of questionnaires.

The experts from Jeddah, Riyadh and Makkah municipalities were chosen because these municipalities serve the major cities in the kingdom. The respondents included well-known experts in local administration from the Institute of Public Administration in Riyadh, King Abdulaziz University in Jeddah and King Saud University in Riyadh. Most of the selected academicians have also served as consultants in local administrative bodies in the Kingdom. Among the other respondents were a former Mayor of JM and two famous writers based in Jeddah who are well-known for their interest in the affairs of Jeddah. From the private sector, only one person, an executive manager of a large company "Dallat Albaraka" that had been working for the JM on contract for cleaning Jeddah city, responded to both questionnaires. The respondents are deeply knowledgeable and broadly experienced in the local administrative authorities.

The minimum number of participants to ensure a good group performance depends upon study design but researchers generally believe that a minimum of 10 and a maximum of 50 participants are desirable in Delphi studies (Needham & De Loë, 1990) with the optimum number ranging between 20 and 30 participants (Critcher & Gladstone, 1998). Brockhoff (1975) suggests that under ideal circumstances, groups as small as four can perform well (Turoff & Hiltz, 2004). The number of respondents used in this study is 45, well within the accepted range. The

panel's opinion is summarised statistically in sections 4.6.2 and 4.6.4. A statistical computer program (SSPS) was used to obtain frequency tables for Delphi questionnaire in both phase one and phase two.

4.6.1 Delphi Questionnaire-Phase One

45 experts replied to Delphi Questionnaire-Phase one. The questionnaire consisted of the following four questions as illustrated in Tables 4.2 and 4.3:

1. In the first question, the experts were given a set of 19 possible efficiency criteria suggested in section 3.2.2 (Table 4.2).
2. In the second question, the experts were given a set of 19 possible effectiveness criteria suggested in section 3.2.4 (Table 4.3). In both questions, experts were invited to:
   a. indicate to what degree they agreed with each criterion (very important, important or, not important), and
   b. indicate if there were other important criteria, and the degree of their importance.
3. In the third question, for reference purposes, the objectives of Jeddah municipality were listed. These objectives were derived from the Rural and Municipalities ordinance of 1977 (see section 2.8). The participants were asked if there were other objectives that should be added to JM objectives (see 2 section 4.6.2).
4. In the fourth question, the participants were asked whether there was a relationship between the efficiency and effectiveness of the municipality (see 5 section 4.6.2).

4.6.2 The Results of the Delphi Questionnaire-Phase One

The first round of the Delphi Questionnaire produced the following information:

1. The number of times that each efficiency and effectiveness criterion was evaluated as very important or important, and consequently the grades that each efficiency and effectiveness criterion were given were calculated (see Table 4.2 for efficiency criteria and Table 4.3 for effectiveness criteria).
2. The panel of experts suggested two new effectiveness criteria:
   a. exchanging administrative experience and organisational ideas between

municipalities and Jeddah municipality.

b. rotating administrative leadership in the municipality.

3. The panel suggested no additional efficiency criteria.
4. The panel suggested adding the following fifteen objectives to JM's objectives:
   a. setting down civil regulations that specify the construction rules and approval of the geometrical layouts for residential buildings according to scientific and technical bases.
   b. bringing in advanced technology for roads which defines roads and land utilisation, which would have a positive effect in the construction of Jeddah city and on the homogeneity of the manner of construction.
   c. carry out programmes to increase citizens' consciousness of development.
   d. establishing geometrical traffic regulations.
   e. establishing research administration and developing the municipality's activities to harmonise with the present development.
   f. changing plans according to criteria that define the project's priorities.
   g. taking into account utilisation studies when drawing up projects and different programmes.
   h. reliance on information technology for procedures and documentation.
   i. setting up emergency calling and communication plans, checking equipment and enhancing its effectiveness to satisfy the great majority of inhabitants.
   j. complete the infrastructure.
   k. developing the information system to use it when putting into effect strategic plans, now and in the future.
   l. modernising and executing precautionary and remedial maintenance systems to protect the environment.
   m. privatisation of some services to improve the quality.
   n. improving the quality of the local environment (air, water and land) and carrying out environmental evaluation for vital projects.
   o. continuing the development of constructional heritage preservation methods for ancient Jeddah.
5. 27 experts out of 45 believed that there is a relationship between efficiency and effectiveness. Only 7 experts believed that there was no relationship between efficiency and effectiveness. 11 experts gave no answer to this

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question.

Each efficiency and effectiveness criterion (Tables 4.2 & 4.3) was evaluated as follows: each time the criterion was evaluated as very important it was given 2 marks, each time the criterion was evaluated as important it was given 1 mark. The answers which evaluated the criterion as not important were neglected. The grade for each criterion is the total of the number of marks that the criterion gained as very important plus the marks that the criterion gained as an important.

Table 4.2 Summary of the Efficiency Criteria Grades in Delphi Questionnaire-Phase One

Efficiency criteria	Freq.		Grade
	Very important	Important	
1. Best usage of material resources	42	3	87
2. Motivating the employees to provide the service in the best way	38	7	83
3. Simplifying the procedures to provide the service needed	35	10	80
4. Employing the most qualified people to provide the service	36	8	80
5. Best usage of performance of human resources	32	13	77
6. Using appropriate methods to provide the service in the best way	33	11	77
7. Effective training for the employees who are responsible for providing the service	33	11	77
8. The availability of a good system of control and observation	33	11	77
9. The existence of clear plans and defined programs which explain the needed process, how it works, its cost, its income, when to start, and when to end	31	13	75
10. The capability of the municipality to interact with the internal environment (rules/employees/machines…etc)	32	11	75
11. Using the most advanced technology to improve performance and prevent mistakes	29	16	74
12. The co-operative relationship between individuals in the municipality	29	15	73
13. The existence of a strict system for rewards and discipline in the municipality	28	15	71
14. Excellence of co-operation with the authorised bodies	25	20	70
15. Using the minimum finance by reducing the cost of providing the service	27	14	68
16. The ability of the municipality to convert inputs (human efforts, finance, rules…etc) into outputs efficiently and effectively	23	20	66
17. Using consultants and learning from local and international experience to provide the service in the best way	22	22	66
18. The intelligibility of internal rules and policies	21	21	63
19. Decentralisation of decision making	19	21	59

Table 4.3 Summary of the Effectiveness Criteria Grades in Delphi Questionnaire-Phase One

Effectiveness Criteria	Freq. Very important	Freq. Important	Grade
1. The service fulfils clear objectives	36	8	80
2. The service fulfils the national objectives and government guidelines	36	8	80
3. The service fulfils the community's needs and desires	36	8	80
4. The efficiency of the organisation and work division methods	31	13	75
5. The service fulfils selective objectives	31	13	75
6. The quality of the provided service meets the people's expectations.	31	11	73
7. The excellence of the communication system between the departments in the municipality	27	18	72
8. The extent of the employees' loyalty and their association to the municipality	29	13	71
9. The service is provided at the right time	27	16	70
10. The status of the municipality in the eyes of the local people who benefit from its services	27	15	69
11. The extent of job satisfaction of the employees	21	22	64
12. Put into practice "Total Quality Management"	24	16	64
13. The ability of the municipality to bring about changes to the service to face problems and changes in the environment	24	15	63
14. The status of the municipality in the eyes of other government bodies	23	17	63
15. The assessment of the beneficiaries of the service that the service is excellent	20	23	63
16. The ability of the municipality to undertake organizational and administrative development	18	22	58
17. The service fulfils the needs of the people who most want it	21	15	57
18. The extent of the employees' satisfaction about their salary	15	27	57
19. Minimising the service fees	20	14	54

4.6.3 Delphi Questionnaire-Phase Two

The panel of experts in Delphi questionnaire-phase two consisted of the same 45 respondents as for Delphi questionnaire-phase one. In this questionnaire:

1. The experts were provided with the grades that each efficiency and effectiveness criterion obtained in the Delphi questionnaire-phase one.
2. Each expert was provided with a separate sheet with his own assessment of each efficiency and effectiveness criterion in Delphi questionnaire-phase one.

The Phase Two questionnaire consisted of the following five questions shown in Tables 4.5 to 4.8:

1. In the first question, the experts were given the same efficiency criteria that they were given in Delphi questionnaire-phase one (Table 4.4). In the light of the given grades for each efficiency criterion, the participants were invited to re-evaluate each efficiency criterion as very important, important or not important.

2. In the second question, the experts were given the same set of effectiveness criteria (Table 4.5) which was given in Delphi questionnaire-phase one. In the light of the given grades for each effectiveness criterion, the participants were invited to re-evaluate each effectiveness criterion as very important, important or not important.
3. In the second question, the experts also were also given the effectiveness criteria which were suggested by the experts in Delphi questionnaire-phase one (Table 4.6). They were invited to give their opinion as to whether they agreed or disagreed with the suggested criteria.
4. In the third question, participants were given the 15 suggested objectives and asked to indicate if they agreed or disagreed that these objectives should be added to JM's objectives (listed in Table 4.7).
5. In the fourth question, the participants were given a list of services (listed in Table 4.8) which are provided by JM and asked to identify the most important services.

The efficiency and effectiveness criteria (Table 4.4 & 4.5) were evaluated as shown in Delphi questionnaire-phase one.

4.6.4 The Results of the Delphi Questionnaire-Phase Two

The second round of the Delphi questionnaire produced the following results:

1. The number of times that each efficiency and effectiveness criterion was evaluated as very important or important. Consequently the grades that each efficiency and effectiveness criterion was given was re-calculated (see Table 4.4 for efficiency criteria and Table 4.5 for effectiveness criteria).
2. The numbers of experts who agreed and disagreed with each effectiveness criterion that was suggested by experts in the Delphi questionnaire-phase one. Most of the experts in the Delphi questionnaire-phase two agreed with the suggested criteria (Table 4.6).
3. The number of experts who agreed and disagreed with each suggested objective. Most of the experts in the Delphi questionnaire-phase two agreed with the suggested objectives (Table 4.7).
4. The importance attached to each service to be considered for assessment (Table 4.8): 14 out of 25 services received grades ranging between 35 – 42 marks. The

following 11 services are selected for assessment:

- Preserving environmental safety through general cleanliness.
- Construction planning for the city.
- Building and maintaining roads regularly.
- Organising and co-ordinating the city.
- Asphalting roads.
- Beautifying the city.
- Organising and numbering roads, quarters and squares.
- Providing and maintaining drainage system.
- Planting trees.
- Establishing public parks.
- Establishing and maintaining pavements.

These services come under the following heads among the services provided by JM:

a. Maintaining Environmental Hygiene and Safety:
   - Health protection.
   - General cleaning services.
b. Planning and construction of the city:
   - Construction of the city.
   - Development of the traffic system.
   - Naming roads and districts, and numbering houses.
c. Drainage system.
d. Planting trees and beautification of the City.

Table 4.4 Summary of the Efficiency Criteria Grades in Delphi Questionnaire-Phase Two

Efficiency criteria	Freq.		Grade
	Very important	Important	
1. Best usage of material resources	39	5	83
2. Best usage of performance of human resources	38	7	83
3. Simplifying the procedures to provide the service needed	36	9	81
4. Using appropriate methods to provide the service in the best way	35	10	80
5. Motivating the employees to provide the service in the best way	35	10	80
6. Employing the most qualified people to provide the service	35	10	80
7. Effective training for the employees who are responsible for providing the service	31	14	76
8. The co-operative relationship between individuals in the municipality	31	14	76
9. The existence of clear plans and defined programs which explain the needed process, how it works, its cost, its income, when to start, and when to end	31	14	76
10. Using the most advanced technology to improve performance and prevent mistakes	30	15	75
11. The availability of a good system of control and observation	31	13	75
12. The capability of the municipality to interact with the internal environment (rules/employees/machines...etc)	28	16	72
13. Using the minimum finance by reducing the cost of providing the service	29	14	72
14. The ability of the municipality to convert inputs (human efforts, finance, rules...etc) into outputs efficiently and effectively	26	19	71
15. Excellence of co-operation with the authorised bodies	26	18	70
16. The intelligibility of internal rules and policies	21	24	66
17. The existence of a strict system for rewards and discipline in the municipality	22	20	64
18. Using consultants and learning from local and international experience to provide the service in the best way	21	21	63
19. Decentralisation of decision making	17	22	56

Table 4.5 Summary of the Effectiveness Criteria Grades in Delphi Questionnaire-Phase Two

Effectiveness criteria	Freq.		Grade
	Very important	Important	
1. The service fulfils clear objectives	41	4	86
2. The service fulfils the national objectives and government guidelines	40	5	85
3. The service fulfils the community's needs and desires	40	4	84
4. The quality of the provided service meets the people's expectations	33	12	78
5. The extent of the employees' loyalty and their association to the municipality	29	15	73
6. The efficiency of the organisation and work division methods	28	16	72
7. The ability of the municipality to bring about changes to the service to face problems and changes in the environment	29	14	72
8. The excellence of the communication system between the departments in the municipality	27	17	71
9. The service is provided at the right time	26	18	70
10. The extent of the job satisfaction of the employees	26	18	70
11. The state of the municipality in the eyes of the local people who benefit from its services	29	12	70
12. The service fulfils selective objectives	26	17	69
13. Put into practice "Total Quality Management"	22	19	63
14. The ability of the municipality to undertake organizational and administrative development	23	20	66
15. The service fulfils the needs of the people who most want it	22	18	62
16. The state of the municipality in the eyes of other government bodies	19	22	60
17. The assessment of the beneficiaries of the service that the service is effective	18	23	59
18. The extent of the employees' satisfaction about their salary	19	18	56
19. Minimising the service fees	14	23	51

Table 4.6 Summary of the Panel of Experts' Opinion in Delphi Questionnaire-Phase Two on the Effectiveness Criteria That were Suggested by the Panel of Experts in Delphi Questionnaire-Phase One

Effectiveness criteria suggested by the panel of experts	Freq.	
	Agree	Don't agree
1. Exchanging administrative experience and organisational ideas between municipalities and Jeddah municipality	40	3
2. Rotating administrative leadership in the municipality	36	7

Table 4.7 Summary of the Experts' Opinion in Delphi Questionnaire-Phase Two on the Suggested Objectives That were Suggested by the Panel of Experts in Delphi Questionnaire-Phase One

Suggested objectives	Freq. Agree	Freq. Don't agree
1. Developing the information system to use it when putting into effect strategic plans, now and in the future.	42	2
2. Setting down civil regulations, which specify the construction, rules, and approval of the geometrical layouts for residential buildings according to scientific and technical bases.	41	1
3. Bringing in advanced technology for roads which defines roads and land utilisation, which would have a positive effect in the construction of Jeddah city and on the homogeneity of the manner of construction.	41	1
4. Modernising and executing precaution and remedial maintenance systems to protect the environment.	40	2
5. Setting up emergency calling and communication plans, checking equipment and enhancing its effectiveness to satisfy the great majority of inhabitants.	39	3
6. Completing the infrastructure.	39	4
7. Improving the quality of the local environment (air, water and land) and carrying out environmental evaluation for vital projects.	39	3
8. Establishing research administration and developing the municipality's activities to harmonise with the present development.	38	4
9. Taking into account utilisation studies when drawing up projects and different programmes.	38	4
10. Reliance on information technology for procedures and documentation.	38	5
11. Establishing geometrical traffic regulations.	37	4
12. Carry out programmes to increase citizens' consciousness of development.	36	6
13. Changing plans according to criteria which define the project's priorities.	36	6
14. Continuing the development of constructional heritage preservation methods for ancient Jeddah.	36	5
15. Privatisation of some services to improve its quality.	34	10

Table 4.8 Summary of the Suggested Services Which Should be Considered for the Assessment in Delphi Questionnaire-Phase Two

The services that the panel believes to be most important	Freq.
1. Preserving environmental safety through general cleanliness	42
2. Construction planning for the city	41
3. Building and maintaining roads regularly	41
4. Organising and co-ordinating the city	39
5. Asphalting roads	39
6. Beautifying the city	39
7. Organising and numbering roads, quarters and squares	38
8. Maintaining canals for floods	38
9. Supervising markets	37
10. Maintaining bridges	35
11. Planting trees	35
12. Establishing public parks	35
13. Supervising food substances in markets	35
14. Ensuring that stores shops... etc have licenses	35
15. Establishing and maintaining pavements	34
16. Organising some educational and amusement events on different occasions	33
17. Establishing children's playgrounds	32
18. Preserving environmental safety by carrying out health protection procedures	32
19. Issuing health certificates for workers	30
20. Improving traffic in the city	29
21. Lighting the whole city	29
22. Protecting public safety	28
23. Protecting public comfort	28
24. Checking that specifications and criteria concerning food substances are executed	27
25. Establishing zoos	26

4.6.5 The Indicators Obtained from Delphi Questionnaires

The next two tables (4.9 and 4.10) summarise the grades that each efficiency and effectiveness criterion obtained in the two phases of the Delphi exercise.

A comparison of the grades obtained for efficiency showed that only 2 out of 19 criteria achieved a difference of greater than 5 marks while the differences for the remaining criteria ranged between 0-5 marks. Similarly, comparison of the grades for effectiveness criteria revealed that only 5 out of 19 criteria showed a difference of greater than 5 marks while, the differences for the remaining criteria were in the range of 0-5 marks (Table 4.10).

Table 4.9 Summary of the Grades That Each Efficiency Criterion Obtained in Delphi Questionnaire-Phase One and Delphi Questionnaire Phase Two

Efficiency criteria	Grade Delphi one	Grade Delphi two	Difference between grades
1. Best usage of material resources	87	83	4
2. Best usage of performance of human resources	77	83	6
3. Simplifying the procedures to provide the service needed	80	81	1
4. Using appropriate methods to provide the service in the best way	77	80	3
5. Motivating the employees to provide the service in the best way	83	80	-3
6. Employing the most qualified people to provide the service	80	80	0
7. Effective training for the employees who are responsible for providing the service	77	76	-1
8. The co-operative relationship between individuals in the municipality	73	76	3
9. The existence of clear plans and defined programs which explain the needed process, how it works, its cost, its income, when to start, and when to end	75	76	1
10. Using the most advanced technology to improve performance and prevent mistakes	74	75	1
11. The availability of a good system of control and observation	77	75	-2
12. The capability of the municipality to interact with the internal environment (rules/employees/machines…etc)	75	72	-3
13. Using the minimum finance by reducing the cost of providing the service	68	72	4
14. The ability of the municipality to convert inputs (human efforts, finance, rules…etc) into outputs efficiently and effectively	66	71	5
15. Excellence of co-operation with the authorised bodies	70	70	0
16. The intelligibility of internal rules and policies	63	66	3
17. The existence of a strict system for rewards and discipline in the municipality	71	64	-7
18. Using consultants and learning from local and international experience to provide the service in the best way	66	63	-3
19. Decentralisation of decision making	59	56	-3

Table 4.10 Summary of the Grades That Each Effectiveness Criterion Obtained in Delphi Questionnaire-Phase One and Delphi Questionnaire Phase Two

	Effectiveness criteria	Grade Delphi one	Grade Delphi two	Difference between grades
1.	The service fulfils clear objectives	80	86	6
2.	The service fulfils the national objectives and government guidelines	80	85	5
3.	The service fulfils the community's needs and desires	80	84	4
4.	The quality of the provided service meets the people's expectations	73	78	5
5.	The extent of the employees' loyalty and their association to the municipality	71	73	2
6.	The efficiency of the organisation and work division methods	75	72	-3
7.	The ability of the municipality to bring about changes to the service to face problems and changes in the environment	63	72	9
8.	The excellence of the communication system between the departments in the municipality	72	71	-1
9.	The service is provided at the right time	70	70	0
10.	The extent of the job satisfaction of the employees	64	70	6
11.	The state of the municipality in the eyes of the local people who benefit from its services	69	70	1
12.	The service fulfils selective objectives	75	69	-6
13.	The ability of the municipality to undertake organizational and administrative development	58	66	8
14.	Put into practice "Total Quality Management"	64	63	-1
15.	The service fulfils the needs of the people who most want it	57	62	5
16.	The state of the municipality in the eyes of other government bodies	63	60	-3
17.	The assessment of the beneficiaries of the service that the service is effective	63	59	-4
18.	The extent of the employees' satisfaction with their salary	57	56	-1
19.	Minimising the service fees	54	51	-3

The results of this exercise clearly demonstrated that there was a consensus on the most important criteria, thus removing any need to proceed to a third phase. The results also show that Saudi experts concur with the standard definition of efficiency and effectiveness.

4.6.5.1 Efficiency Criteria (Table 4.9)

The main results can be summarised as follows:

a. The following criteria gained the highest grades.
   - Best usage of material resources.
   - Best usage of human resources.
   - Simplifying the procedures to provide the service needed.
   - Using appropriate methods to provide the service in the best way.
   - Motivating the employees to provide the service in the best way.
   - Employing the most qualified people to provide the service.

b. The Saudi experts reached consensus about the concept of efficiency. The first two criteria which obtained the highest and equal grades - best usage of material resources and best usage of the human resources - indicate that to assess the efficiency of the selected services, one has to measure how well all resources (input) are used to produce the services (output).

Assessing the efficiency of the selected services requires detailed quantitative data about input (resources used to produce the services) and about the accomplished services. Chapter 5 discusses the problems in obtaining this data.

4.6.5.2 Effectiveness Criteria (Table 4.10)

The main results can be summarised as follow:

Following criteria gained the highest grades.

- The service fulfils clear objectives.
- The service fulfils the national objectives and government guidelines.
- The service fulfils the community's needs and desires.
- The quality of the provided service meets the people's expectations.

The Saudi experts reached consensus about the concept of effectiveness. The above criteria which obtained the highest grades indicate that to assess the effectiveness of the selected services, one has to measure the extent to which the accomplished services fulfil clear objectives, fulfil the national objectives, fulfil the community's needs and desires and the quality of the accomplished service. The Saudi experts concur with the standard international definition of effectiveness which is concerned with the extent to which objectives are achieved.

These effectiveness criteria were used to design the questionnaires used to assess the effectiveness of the selected services. The results are discussed in Chapter 6.

4.7 Conclusion

This chapter has explained the reasons for choosing Delphi Technique and questionnaires to conduct the empirical studies. It describes how two rounds of Delphi questionnaires were designed and sent to local administration experts in Saudi Arabia to obtain their opinions on the concept of efficiency and effectiveness and to develop the efficiency and effectiveness criteria to be used to assess the selected municipal services. The results of the Delphi questionnaires show that the experts' concepts of efficiency and effectiveness concur with the standard international conceptions of efficiency and effectiveness. The experts also reached consensus on the efficiency and effectiveness criteria to be used to assess the selected municipal services. Chapters 5 and 6 consider the efficiency and effectiveness of the selected services.

CHAPTER 5

ASSESSING THE EFFICIENCY OF JM'S SELECTED SERVICES

5.1 Introduction

Chapter 4 explained why DT is a reliable method for achieving consensus on the efficiency and effectiveness criteria. It described the results of two rounds of Delphi questionnaires which were sent to experts in local administration in Saudi Arabia in order to generate criteria for the assessment of the efficiency and effectiveness of selected municipal services. This chapter considers the assessment of the efficiency of selected JM services according to the criteria generated in Chapter 4. It highlights the problems faced by this researcher in obtaining the necessary data and suggests that JM should keep a complete record of costs of the accomplished services. It further emphasizes that JM should become transparent and accountable.

The following services were chosen for the assessment of efficiency and effectiveness based on the opinion of the experts expressed in Delphi questionnaire phase-two.

a. Services provided by the General Department of Environmental Hygiene:
   - Health protection services.
   - General cleaning services.

b. Services provided by the General Department of Construction Planning:
   - Construction of Jeddah city.
   - Developing and improving the traffic system.
   - District and road naming & house numbering

c. Services provided by the Department of Road Maintenance and Rain Water Drainage System.
   - Maintenance of the roads and drainage system.

d. Services provided by the General Department of Parks and Beautification.

- Planting trees and beautifying the city.

The following data is needed in order to assess the efficiency of these services.

a. Accomplished services.
b. Costs of the services comprising:
    - Operational costs (current costs).
    - Capital costs, which include staff numbers, salaries, equipment, maintenance costs and raw materials. These costs are invariant with output.
    - Overhead costs, which are fixed costs such as capital costs, office running costs, payroll, personnel (manager, secretaries, etc.). These costs do not vary with outputs.

5.2 Problems of Obtaining Data

A major problem was that this researcher could not obtain direct access to JM's database. In spite of their initial promise of providing the necessary data, most of the JM's departments did not respond. Efforts to obtain municipality data have been extremely disappointing. Repeated requests fell on deaf ears. All Departments with the exception of the Department of Health Protection Services and the Department of General Cleaning Services failed to respond to repeated requests for data. There appears to be no uniform policy applied by the JM regarding public access to information as some Departments cooperated while others failed to respond even after several requests. Furthermore, the published data for the accomplished services was incomplete and very patchy and consequently could not be used for the evaluation of the services.

There are several possible reasons for this lack of cooperation:

1. JM does not keep a complete record of the accomplished objectives (outputs) and their costs (inputs).
2. Officials in public organisations and municipalities consider information concerning their departments as secret. This is in direct contrast to democratically-elected governments where citizens' access to government documents is protected by law or where public bodies regularly publish audited accounts. By whatever means, the citizens are able to assess the performance of the elected officials. They are able to see how resources are allocated and how they are utilised.

3. As discussed in Chapter 2, political values in Saudi Arabia as in other countries influence the administrative system and the way it works. The highly centralized political system in Saudi Arabia is reflected in the local administrative system where officials are appointed and dismissed by the central government. Thus they feel accountable to central government rather than to the public.

For whatever reasons, the researcher could not gain access to the data necessary for the assessment of the efficiency of all the selected services. The evaluation was limited to health protection and general cleaning services for which the researcher did obtain sufficient data to enable her to assess these services.

The relevant data covered the following years:

a. The General Department for Environmental Hygiene:
   - Year 1410 H[1] (August 1989-July 1990).
   - Year 1415 H (June 1994-May 1995).
   - Year 1420 H (April 1999- March 2000).

b. The General Department for Parks and Beautification:
   - Year 1416 H (June 1995 – May 1996).
   - Year 1417 H (June 1996 – April 1997).
   - Year 1418 H (May 1997 – April 1998).

c. The Department of Roads' Maintenance and Rain Drainage System.
   - Years 1998/1999/2000.

5.3 Efficiency Ratio of the General Department for Environmental Hygiene

5.3.1 Efficiency Ratio for Health Protection Department

The results of Delphi exercise demonstrated that efficiency criteria which got the highest and equal grades are best usage of material resources, and best usage of human resources. Efficiency means getting the most out of available resources to achieve goals that the municipality is pursuing. Therefore, measuring efficiency will focus on cost, usage of human resources (staff) and time. Comparing the efficiency ratios of the selected services for subsequent years will show the efficiency or inefficiency of those

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[1] Hijra Year

services. The efficiency ratio is measured as follows

$$\text{Efficiency Ratio} = \frac{\text{Outputs}}{\text{Inputs}}$$

The following Tables 5.1 – 5.3 show the only data provided by the Health Protection Department. It covers the years 1989/1990, 1994/1995 and 1999/2000. The number of staff working in the department and its budget represent the input data.

Table 5.1 Budget of Health Protection Department

Year	Budget (SR)
August 1989 – July 1990	13,000,000
June 1994 - May 1995	12,000,000
April 1999 – March 2000	11,000,000

Table 5.2 Accomplishments of Health Protection Department

Accomplishments	Year		
	August 1989– July 1990	June 1994– May 1995	April 1999– March 2000
Number of baits	623,515	517,900	633,808
Number of eaten baits	148,712	141,615	152,259
Number of infected areas	617,416	553,419	645,317
Number of treated areas	857,123	885,116	895,195
Number of stray dogs killed	6,452	5,985	6,797
Number of stray cats killed	16,912	16,500	17,364
Number sprayed garbage containers	4,115,112	3,900,000	4,543,501

Table 5.3 Number of Staff in Health Protection Department

Type of Job	Number of Staff
Hygiene Specialists	2
Supervisors	7
Administrators	2
Total	**11**

The budget data cannot be used to assess the efficiency of the Health Protection Department as it covers the whole department. We would need to have disaggregated costs for individual services. However, we know the number of the staff in three years and this data can be used to calculate efficiency ratios by using the data for the accomplishment of the service (output) and number of staff (input) working for the department (Tables 5.2 & 5.3) as follows:

$$\text{Efficiency Ratio} = \frac{\text{Number of baits,/number of treated areas/ number of killed stray dogs/ number of killed stray cats/ number sprayed garbage containers}}{\text{Total number of staff}}$$

Table 5.4 represents the calculated efficiency ratio of the Health Protection Department for seven different services, baits, number of eaten baits, number of treated areas, treated areas, killed stray dogs, killed stray cats and sprayed garbage containers.

Table 5.4 Efficiency Ratios for Health Protection Department

Service	August 1989-July 1990	June 1994-May 1995	April 1999-March 2000
Number of baits	56,683	47,082	57,619
Number of eaten baits	13,519	12,874	13,842
Number of infected areas	56,129	50,311	58,665
Number of treated areas	77,920	80,465	81,381
Number of stray dogs killed	587	544	816
Number of stray cats killed	1,537	1,500	1,579
Number sprayed garbage containers	374,102	354,545	413,046

Figure 5.1 Efficiency Ratios for Health Protection Department

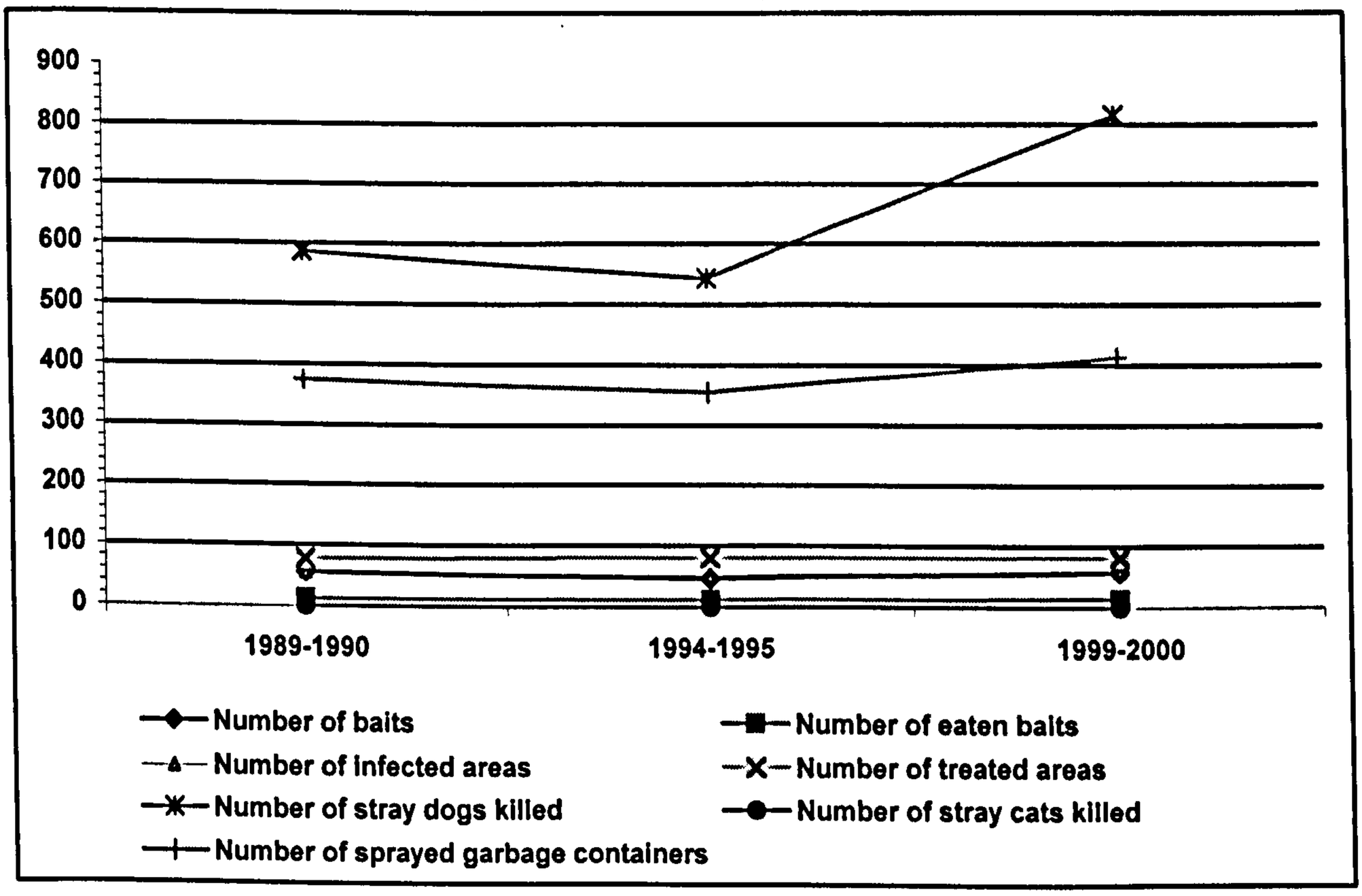

Table 5.5 summarises the differences between efficiency ratios for the years in question.

Table 5.5 Difference between Efficiency Ratios for Services Provided by Health Protection Department

Service	Difference between efficiency ratio in year(June 1994 - May 1995) from year (August 1989 – July 1990)	Difference between efficiency ratio in year(April 1999 – Mar 2000) from year (June 1994 - May 1995)	Difference between efficiency ratio in year(April 1999 – Mar 2000) from year (August 1989 – July 1990)
Number of baits	-17%	22%	2%
Number of Eaten Baits	-5%	8%	2%
Number of Infected Areas	-10%	17%	5%
Number of treated areas	3%	1%	4%
Number of killed stray dogs	-7%	14%	5%
Number of killed stray cats	-2%	5%	3%
Number of sprayed garbage containers	-5%	17%	10%

The table shows a decline in efficiency ratios for the year 94/95 for all services except for 'number of treated areas. Later years show modest improvements, which more than compensated for the earlier decline. These results indicate that the JM executed its services more efficiently in 99/00 compared with 94/95 and had recovered enough to show some improvement over year 89/90. It would be interesting to find out the factors that caused the deterioration in the year 94/95.

5.3.2 Efficiency Ratio for the Cleaning Control Department

The following Tables 5.6, 5.7 and 5.8 summarise data for the Cleaning Control Department.

Table 5.6 Budget of Cleaning Control Department

Year	Budget (SR)
August 1989 - July 1990	100,000,000
June 1994 - May 1995	115,000,000
April 1999 - March 2000	95,000,000

Table 5.7 Accomplishments of Cleaning Control Department

	Accomplishments		
Year	Garbage (Tonnes)	Scrapped Vehicles	Building Waste (M^3)
August 1989 – July 1990	1,000,000	1,600	200,000
June 1994 - May 1995	1,100,000	2,000	300,000
April 1999 – March 2000	1,397,000	8,057	500,000

Table 5.8 Number of Staff in the Cleaning Control Department

Type of Job	Number of Staff
Engineers	3
Supervisors	24
Administrators	5
Total	**32**

Efficiency ratios for the Cleaning Control Department were calculated in the same way as for the Health Protection Department. Table 5.9 shows the results.

Table 5.9 Efficiency Ratio of Services Provided by Cleaning Control Department

Year	Efficiency Ratio		
	Garbage (Tones of waste per man)	Scrapped vehicles (vehicle per man)	Building Waste (M^3 of waste per man)
August 1989 – July 1990	31.250	50	6.250
June 1994 – May 1995	34.376	62	9.375
April 1999 –March 2000	34.656	252	15.625

Figure 5.2 Efficiency Ratio of Services Provided by Cleaning Control Department

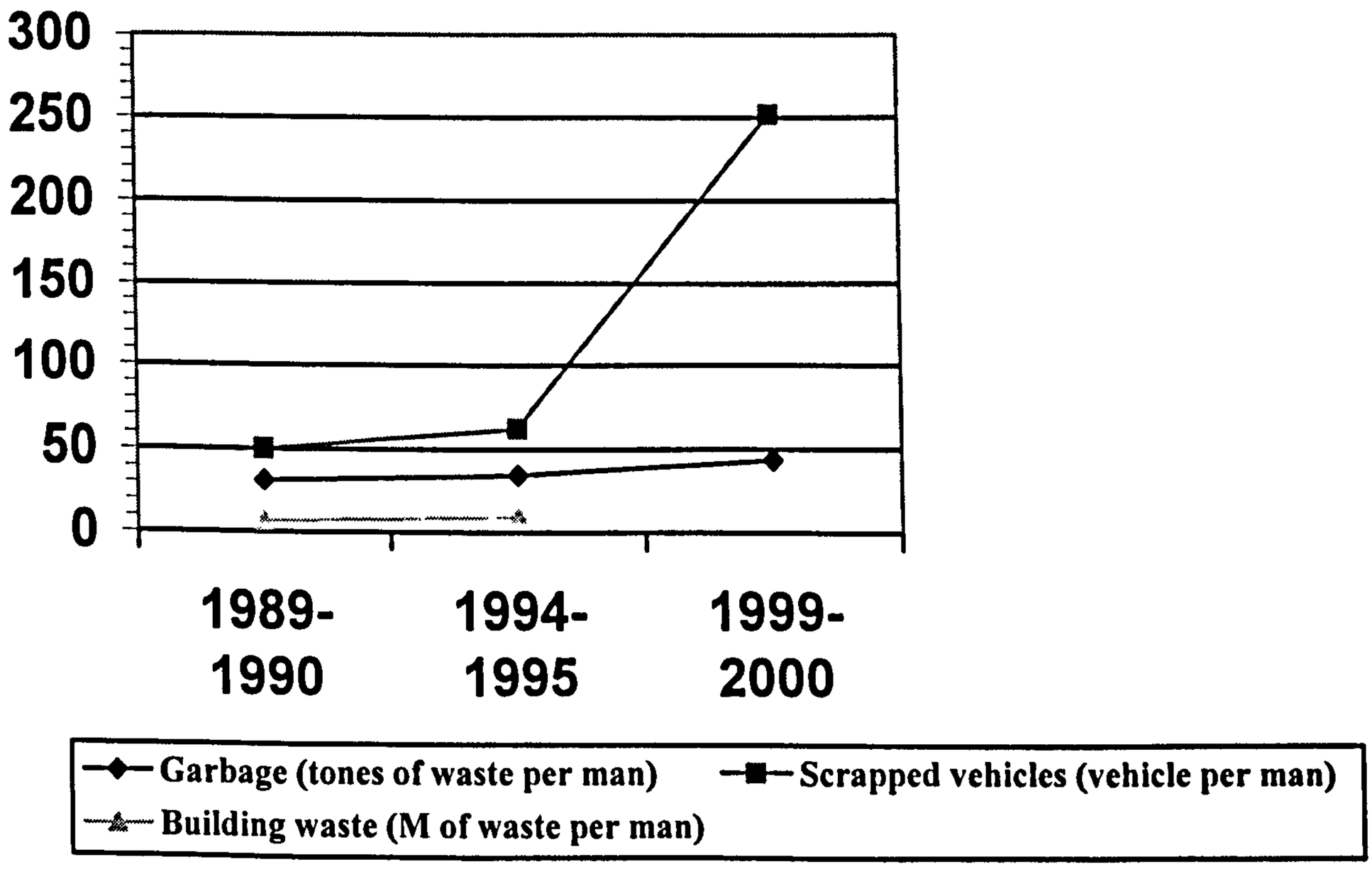

Table 5.10 Differences between Efficiency Ratios for Services Provided by Cleaning Control Department

Services	Difference between efficiency ratio in year(June 1994 - May 1995) from year (August 1989 – July 1990)	Difference between efficiency ratio in year(April 1999 – March 2000) from year (June 1994 - May 1995)
Garbage	10%	27%
Scrapped vehicles	24%	306%
Building waste	50%	67%

Table 5.10 summarises the differences between efficiency ratios for the years in question. Comparison of the efficiency ratios for each service for the successive years shows that the efficiency ratios for all services was increased significantly, however the increase in the ratio for scrapped vehicles for the year (1999-2000) was the highest. Staff number remained unchanged.

5.4 Efficiency Ratio of the General Department for Parks and Beautification

The following Tables 5.11 to 5.16 summarise data for the General Department for Parks and Beautification.

Table 5.11 Budget for the General Department of Parks and Beautification

Budget (SR)	August 1989–July 1990	June 1994–May 1995	May 1999–April 2000
Estimated budget	50,000,000	50,000,000	40,000,000
Approved budget	37,950,000	28,012,000	20,332,960

Table 5.12 Planted Areas

	August 1989–July 1990	June 1994–May 1995	May 1999–April 2000
Planted areas (M^2)	831,568	927,711	10,943,785

Table 5.13 Planted Areas (Parks, Roads and Squares)

Sub-Municipalities	June 1995-May 1996		June 1996-April 1997		May 1997-April 1998	
	New	Replanting	New	Replanting	New	Replanting
Towel	-	888	-	1,905	-	888
Dahban	15,910	-	-	2,000	1,700	-
Abhur	19,500	-	-	37,726	51,157	-
Jeddah Al-Jadidah	17,700	8,652	8,500	-	6,500	2,800
Al-Azizia	-	800	-	1,800	-	2,800
Al-Matar	-	4,000	7,650	2,350	2,000	3,000
Priman	6,500	-	11,200	-	27,334	-
Um-Alsullam	-	13,500	4,160	-	4,160	-
Khuzam	-	4,000	-	8,020	-	3,000
Al-Sharafia	-	5,200	-	4,845	2,500	4,250
Al-Balad	-	3,330	-	20,450	-	20,000
Al-Jamah	4,784	-	6,730	-	7,318	-
Al-Janoub	-	32,000	3,800	-	23,000	5,000
Al-shati	-	3,000	26,800	-	-	-
Total	**64,194**	**50,770**	**688,840**	**97,096**	**139,169**	**41,738**

Table 5.14 New Established Parks

Sub-Municipalities	June 1995-May 1996		June 1996-April 1997		May 199-April 1998	
	Number of Parks	Total Areas (M^2)	Number of Parks	Total Areas (M^2)	Number of Parks	Total Areas (M^2)
Towwel	-	-	-	-	-	-
Dahban	1	15,910	-	-	1	1,700
Abhur	1	19,500	-	-	3	10,700
Jeddah Al-Jadidah	2	15,700	2	8,500	1	5,000
Al-Azizia	-	-	-	-	-	-
Al-Matar	-	-	1	7,650	1	2,000
Priman	1	6,500	1	11,200	5	27,334
Um-Alsullam	-	-	1	4,160	1	4,160
Khuzam	-	-	-	-	-	-
Al-Sharafia	-	-	-	-	1	2,500
Al-Balad	-	-	-	-	-	-
Al-Jamah	-	-	1	4,000	2	7,318
Al-Janoub	-	-	-	-	2	2,300
Al-shati	-	-	5	23,210	-	-
Total	**5**	**57,610**	**11**	**68,720**	**17**	**83,712**

Table 5.15 Number of Transplants from JM Nursery

Year	For Municipalities	For government agencies	Total
June 1995-May 1996	672,935	93,188	766,123
June 1996-April 1997	633,187	118,993	752,180
May 1997-April 1998	701,941	55,294	757,235
Total	**2,008,063**	**267,475**	**2,275,538**

Table 5.16 Volume of Yearly Used Water for Plants

	Volume of water (M^3)
Volume of yearly used water for plants	9,000,000

Table 5.17 Number of Staff of Parks and Beautification Department

Type of jobs	Number of staff
Formal employee	21
labour	1
Part time	248 distributed at the following: • Parks & Beautification Department • Landscapes department at Sub-municipalities • Workshops • Plants Protection Department

This data cannot be used because it represents total inputs such as the estimated and approved budgets for the General Department of Parks and Beautification (Table 5.11), the total number of staff of the department (Table 5.17) and volume of water per year used for plants (Table 5.16). To measure efficiency ratios we would need to have disaggregated costs for individual services. Without this data, efficiency ratios could not be calculated. Tables 5.12 to 5.14 represent only output data. No input data was provided by JM to calculate efficiency ratios for those services.

5.5 Efficiency Ratio for the Department of Roads' Maintenance and Rain Drainage System

The following Tables 5.18 and 5.19 summarise data for Maintenance and Working Department.

Table 5.18 Cost of Asphalt, Pavements and Concrete

Years	Cost (SR)
Cost for the last three years (1998, 1999 & 2000)	282,540,000
Average cost for one year	94,180,000

Table 5.19 Number of Staff of Maintenance and Working Department

Type of Jobs	Number of Staff
Engineers Supervisors Administrators	24

This data was inadequate for any statistical analysis because it represents only the cost of asphalt, pavements and concrete and the number of staff. There is no output data to match this input data. JM appears not to keep proper records on the input and output data for reasons discussed in Section 5.2.

5.6 Conclusion

To assess efficiency, inputs have to be compared with outputs. However the data for inputs and outputs provided by JM for the selected services was insufficient to allow me to proceed with the assessment of the efficiency. This is mainly due to the lack of transparency that characterises the Saudi administrative system. The only practicable assessment was for services provided by the General Department for Environmental Hygiene, by comparing the amount of accomplishments (outputs) to the number of staff (inputs) and by comparing the measured efficiency ratio for the three given years, for both Health Protection and Cleaning Control Departments. The results demonstrate a trend towards increased efficiency for the Health Protection Department for the year April 1999- March 2000 and for the Cleaning Control Department for the period covering the years June 1994- May 1995 and April 1999- March 2000. Nevertheless, if more input and output data had been provided by the General Department for Environmental Hygiene and for the rest of the selected services, it would have been possible to measure their efficiency more accurately and consequently a clearer picture of the standard of the efficiency of the JM's selected services would have emerged. To proceed with the evaluation, more detailed data were needed such as allocated costs, salaries, equipment and maintenance costs and overhead costs. Therefore, JM are recommended to keep a complete record of costs (inputs) of the accomplished services. There are several reasons why JM did not provide the required data, ranging from the absence of a central data bank to straight-forward denial of access to data. For JM to become a more efficient organisation, it must become transparent and accountable. The next chapter deals with the analysis of the main questionnaires, which were designed to assess the effectiveness of the selected services.

CHAPTER 6

ASSESSING THE EFFECTIVENESS OF THE MUNICIPAL SERVICES

6.1 Introduction

The previous chapter attempted to assess the efficiency of selected municipal services using the efficiency criteria which were generated by the Delphi exercise. JM provided only enough data to assess the efficiency of health protection and general cleaning services. The results showed that efficiency increased greatly after a previous deterioration. As mentioned in Section 5.3.2, the increase in efficiency was due to better use of human resources.

This chapter deals with the results of the main questionnaires, which were designed to assess the effectiveness of selected municipal services as follows:

a. Maintaining environmental hygiene and safety:
    - Health protection services.
    - General cleaning services.
b. Construction planning of the city:
    - Construction of the city.
    - Development of the traffic system.
    - Naming roads and districts, and numbering houses.
c. The drainage system.
d. Planting trees and beautification of the City.

The questionnaires were designed to assess the effectiveness of these services using the following criteria generated by the Delphi exercise described in Chapter 4 (page 71):

a. The service fulfils clear objectives.
b. The service fulfils the national objectives and government guidelines.
c. The service fulfils the community's needs and desires.

d. The quality of the provided service meets the people's expectations.

These criteria were used to design the main questionnaires used to assess the extent to which these objective were met. Identical questionnaires were sent to beneficiaries of the services and to Saudi experts in Jeddah City. The questionnaires sent to staff were designed specially for each department. The staff in the Department of Roads' Maintenance and Rainwater Drainage Systems did not respond to the questionnaire. Thus, the respondents represent:

a. Beneficiaries of the services.
b. Experts on local administration in Jeddah City.
c. Staff of the General Department for Environmental Hygiene.
d. Staff of the General Department for Construction Planning.
e. Staff of the General Department for Parks and Beautification.

By using a statistical computer program (SPSS), a statistical analysis[1] technique is used to analyse the research questionnaires, which were designed to collect the data.

This chapter describes the formal objectives of the relevant departments and reviews the results of the questionnaires for assessing the effectiveness of the selected services by the beneficiaries of the services, the experts on local administration in Jeddah City, and the staff themselves.

6.2 Formal Objectives of JM's Departments

Table 6.1 shows the formal objectives of the departments chosen for study as published in Jeddah Municipality's yearly report[2].

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[1] See appendix 1

[2] Jeddah Municipality, Accomplishments and Ambitions, Yearly report: 1998/1999, P 60

Table 6.1 Formal Objectives of JM's Departments

1. The General Department of Environmental Hygiene	
A. **Health Protection Department**	The objective of the department is to protect the environmental hygienic safety of the city by co-operation and co-ordination of related public health bodies.
B. **Cleaning Control Department**	The objective of the department is to supervise and develop all cleaning operations in the city.
The General Department of Construction Planning	
A. **City Planning Department**	The objective of the department is to develop full and detailed plans of city planning and construction in the light of the results of planning studies and to co-ordinate with concerned bodies to implement them.
B. **City Transport & Traffic Section**	The objective of this section is to provide and maintain the existing traffic lights at cross roads and improve traffic flow of the city.
C. **Naming and Numbering Department**	The objective of the department is to set up integrated system for naming districts & roads and numbering houses.
4. The Department of Roads Maintenance and Rain Drainage System	
The objective of the department is to maintain the drainage system and pumping stations.	
5. The General Department of Park and Beautification	
The objective of the department is to establish and maintain public parks, plant tress, and beautify the city.	

6.3 Analysis of the Results of the Questionnaires

This section analyses the assessments of the selected services by beneficiaries of the services (beneficiaries), the experts and the staff of the relevant departments (Environmental Hygiene, Construction Planning and Parks and Beautification). Most of the questions offered respondents five degrees of choices in rating the extent to which the service was accomplished. The terms of these choices varied between services as follows:

- Very large, large, reasonably large, small degree and not at all.
- Excellent, very good, good, bad and very bad.
- Very easy, easy, reasonably easy, difficult and very difficult.

- All districts, most districts, half of the districts, few districts and very few districts.

Each category carried equal weight and were classified as in Table 6.2 below.

Table 6.2 The Choices Which Were Given to the Questionnaires Respondents to Answer the Questions & the Classification of Those Choices

Effectiveness of the service	Choices of answers which falls under each category	Category
Very high	very large, excellent, very easy or all districts	First category
High	large, very good, easy or most districts	Second category
Medium	reasonably large, good, reasonably easy or half of the districts	Third category
Low	small, bad, difficult or few districts	Fourth category
Very low	not at all, very bad, very difficult or very few districts	Fifth category

6.3.1 Analysis of the Results of the Questionnaires (by the Beneficiaries of the Services[3] and by the Experts[4])

6.3.1.1 Demographic Characteristics of the Samples (the Beneficiaries of the Services and the Experts)

The following Table 6.3 summarises the demographic characteristics of the sample that represent the beneficiaries of the services.

[3] See appendix 2 for the results of the beneficiaries of the services' assessments of the selected services

[4] See appendix 3 for the results of the experts' assessments of the selected services

Table 6.3 Demographic Characteristics of the Beneficiaries of the Services

Demographic characteristic	Type	Freq.	%
Gender	Male	319	36.8
	Female	174	34.8
	Didn't say	7	1.4
	Total	**500**	**100.0**
Age	20-25	103	20.6
	26 – 30	139	27.8
	31 – 35	72	14.4
	36 – 40	63	12.6
	41-45	67	13.4
	46-50	29	5.8
	51 – 55	7	1.4
	56 – 60	2	.4
	61 – 70	7	1.4
	Didn't say	11	2.2
	Total	**500**	**100.0**
Marital status	Married	346	69.2
	Single	128	25.6
	Didn't say	26	5.2
	Total	**500**	**100.0**
Job	Employee	136	27.2
	Teacher	113	22.6
	University students	87	17.4
	Engineer	11	2.2
	Accountant	8	1.6
	Housewife	8	1.6
	Merchant	5	1.0
	Librarian	4	0.8
	Others	128	28.6
	Total	**500**	**100.0**
Area	Al-Mattar	110	22.0
	Al-Jamaa	84	16.8
	Khuzam	60	12.2
	Al-Azizia	54	10.8
	Jeddah-Al-Jadida	50	10.0
	Al-Janoubia	33	6.6
	Ubhor (outskirt)	28	5.6
	Briman (outskirt)	28	5.6
	Umm-Al-Sallam (outskirt)	27	5.4
	Al-Balad (mainly commercial areas)	13	2.6
	Al-Shirafia (residential & commercial area)	11	2.2
	Didn't say	2	0.4
	Total	**500**	**100.0**
Type of accommodation	Private accommodation	249	49.8
	Private compound	85	17.0
	Public compound	78	15.6
	Other	72	14.4
	Didn't say	16	3.2
	Total	**500**	**100.0**
Owner-ship of the accommodation	Landlord	242	48.8
	Tenant	242	48.8
	Didn't say	16	3.2
	Total	**500**	**100.0**

The questionnaire was distributed to both males and females in schools, King Abdulaziz University and other governmental and private organisations in Jeddah City. It was hoped that the final sample would include respondents from almost all districts of Jeddah City. Although door-to-door distribution of the questionnaire in each district was considered initially, it was abandoned as infeasible. Due to cultural and traditional constraints, the response rate from such distribution would have been too low and would also have required tremendous effort and enormous resources. Therefore, it was decided to send the questionnaire to people who are likely to respond to it. Seven hundred copies of the questionnaire were distributed, of which 500 were returned.

The final sample of the beneficiaries of the services constituted 63.8% males, 34.8% females and 1.4% did not state their gender. For a study of this kind, location of residence of the respondent is more important than profession because the study is aiming to obtain the beneficiaries' opinion on the delivery of services in their districts regardless of their profession. However, for general interest, the profession has been shown. The respondents were from all districts except Dhahban and Towal districts that are on the out skirts of Jeddah City.

The questionnaire was also distributed to a sample of experts on local administration in Jeddah City. Sixty-four were from JM, King Abdulaziz University, Imarat Makkaha Al-Mokrramah region and Jeddah governate to provide an expert opinion and appraise the actual delivery of services more accurately. Sadly, in spite of repeated requests and efforts, only 11 (17%) responded. Particularly disappointing was the fact that none of the 20 experts from JM responded. Seven of the experts live in heavily populated residential areas (Al-Mattar, Al-Balad, and Khuzam), two live in sparsely populated districts (Briman, and Al-Janoubia) and one did not state his location of residence. Table 6.4 below gives details of these experts.

Table 6.4 Demographic Characteristics of the Experts

Demographic characteristic	Type	Freq.	%
Job	Professor	1	9.1
	Associate professor	2	18.2
	Assistant professor	3	27.2
	Confidential affairs manager	1	9.1
	Public relations manager	1	9.1
	District services general manager	1	9.1
	Civil engineer	1	9.1
	Didn't say	1	9.1
	Total	**11**	**100.0**
Area	Al-Mattar	4	3.6.3
	Al-Balad	2	9.1
	Al-Janoubia	2	18.2
	Khuzam	1	9.1
	Briman	1	18.2
	Didn't say	1	9.1
	Total	**11**	**100.0**

6.3.1.2 Analysis of the Results of the Assessment of the effectiveness of Services concerning Maintaining Environmental Hygiene Safety Services

Tables 6.5 to 6.6 summarises the assessment of the effectiveness of services concerning maintaining environmental hygiene safety by beneficiaries and experts as follow:

- Health protection services (Table 6.5).
- General cleaning services (Table 6.6).

Table 6.5 Health Protection Services

Indicators used for the measurement of services	The Assessment		
	W.A.M		The degree or category which the assessment related
	B	E	
1. The extent to which JM adheres to defined criteria to achieve health protection for Jeddah City	2.74	2.64	R. large
2. The extent to which JM introduces health protection criteria to the inhabitants of Jeddah City	2.15	1.56	Small (B) Not at all (E)
3. The opinion of the sample about the extent to which the services of health protection achieved their objectives:			
a. Spraying garbage containers	2.73	2.27	R. large (B) Small (E)
b. Elimination of rodents	2.32	2.27	Small
c. Extermination of stray dogs & cats	3.00	3.09	R. large
d. Filling up of land depressions & ponds	2.36	2.45	Small
4. The extent to which the health protection services fulfil the inhabitants' needs	2.43	2.00	Small
5. The sample's overall assessment concerning health protection services	2.54	2.18	Good (B) Bad (E)

The ratings were mixed.

The beneficiaries rated the services to

- A reasonably large degree (third (medium) category) three times.
- Small degree (fourth (low) category) four times.

The experts rated the services to

- A reasonably large degree (third (medium) category) three times.
- Small degree (fourth (low) category) three times.
- Not at all (fifth (very low) category) once.

The overall rating is low.

Table 6.6 General Cleaning Services

Indicators used for the measurement of services	The assessment				
	The percentage or the number which represents the majority of the sample		W.A.M		The degree or category which the assessment related
	B	E	B	E	
1. The extent to which JM follow defined criteria to maintain cleanliness of Jeddah City			2.82	2.64	R. large[5]
2. How often JM carries out the cleaning services:					
a. Collecting garbage	67.2%	7			Daily
b. Collecting commercial waste	26.0%	4			Daily
	26.0%				Weekly
c. Collecting construction waste	31.0%	5			Yearly
d. Removal of scrapped vehicles	43.8%	6			Monthly
e. Cleaning main roads	45.6%	5			Daily (B)
					Monthly (E)
f. Cleaning streets	40.4%	5			Monthly (B)
					Yearly (E)
3. The extent to which the provided services fulfilled the inhabitants' needs			2.67	2.36	R. large (B)
					Small (E)
4. The extent to which the inhabitants are satisfied with the general cleaning services:					
a. Collecting garbage			2.99	3.18	R. large
b. Collecting commercial waste			2.61	2.82	R. large
c. Collecting construction waste			1.98	1.64	Small (B)
					Not at all (E)
d. Removal of scrapped vehicles			2.00	1.64	Small (B)
					Not at all (E)
e. Cleaning main roads			3.24	2.91	R. large
f. Cleaning streets			2.32	1.9	Small
5. The sample's overall assessment concerning the general cleaning services			2.88	3.3	Good
6. The extent to which JM supervises the general cleaning services:					
a. Collecting garbage			2.83	2.73	R. large
b. Collecting commercial waste			2.69	2.45	R. large(B)
					Small (E)
c. Collecting construction waste			2.21	2.09	Small
d. Removal of scrapped vehicles			2.18	1.09	Small
e. Cleaning main roads			3.32	3.00	R. large
f. Cleaning streets			2.40	1.73	Small (B)
					Not at all (E)
7. The extent to which the supervision of the general cleaning services fulfils the inhabitants' needs:					
a. Collecting garbage			2.90	2.90	R. large
b. Collecting commercial waste			2.64	2.45	R. large(B)
					Small (E)
c. Collecting construction waste			2.11	1.82	Small
d. Removal of scrapped vehicles			2.11	1.82	Small
e. Cleaning main roads			3.24	3.00	R. large
f. Cleaning streets			2.30	1.82	Small
8. The sample's overall assessment concerning the supervision of general cleaning services			2.82	2.30	Good (B)
					Bad (E)

[5] Reasonably large degree

Beneficiaries gave an overall medium rating (eleven in third (medium) category and nine in fourth (low)), while experts gave an overall low rating (nine in third (medium) category, two in fourth (low) and nine in fifth and lowest).

6.3.1.3 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Construction Planning of Jeddah City

Tables 6.7 to 6.9 summarises the assessment of the effectiveness of services concerning construction planning of Jeddah City by beneficiaries and experts as follow:

- JM's construction services (Table 6.7).
- Traffic improvements services (Table 6.8).
- District and road naming and house numbering services (Table 6.9).

Table 6.7 City Construction Services

Indicators used for the measurement of services	The Assessment				
	The percentage or the number which represents the majority of the sample		W.A.M		The degree or category which the assessment related
	B	E	B	E	
1. The opinions of the sample as to how Jeddah City is built	71.6%	9			Thought that some areas are built according to clear and defined construction plans and some areas are built without plans
2. The extent to which the essential services are provided in the districts where the sample live:					
a. Electricity	97.4%	11			Provided
b. Water	81.0%	10			Provided
c. Drainage system	58.4%	9			Not provided
3. The extent to which the other services are provided in the districts where the sample live:					
a. Mosque	97.2%	10			Provided
b. Pharmacy	84.2%	9			Provided
c. Boys' school	83.0%	8			Provided
d. Clinic	70.2%	7			Provided
e. Girls' school	85.6%	8			Provided
f. Supermarket	87.8%	10			Provided
g. Park and children's playground	79.4%	8			Not provided
h. Post office	68.0%	9			Not provided
4. The extent to which the construction plan of Jeddah City fulfils the inhabitants' needs			2.8	2.55	R. large (B) Small (E)
5. The sample's overall assessment concerning the construction plan of the districts where they live			2.97	3.18	Good
6. The overall assessment of the sample concerning the Jeddah City construction plans			3.17	3.00	Good

The overall rating by both beneficiaries and experts for the effectiveness of drainage systems and for the parks and playgrounds is very low. The overall rating for other services was medium. These differences are because some districts are built according to defined and clear construction plans while some districts are not.

Table 6.8 Traffic Improvements

Indicators used for the measurement of services	The Assessment		
	W.A.M		The degree or category which the assessment related
	B	E	
1. The sample's assessment concerning traffic improvements services in Jeddah City:			
a. Providing traffic lights at cross roads	3.26	3.45	Good (B) Very good (E)
b. Maintaining the existing traffic lights	3.57	4.00	Good (B) Very good (E)
c. Improving crossroads	3.08	3.27	Good
d. Improving bends	2.98	3.00	Good
e. Improving traffic flow	3.06	2.80	Good
2. The extent to which the traffic improvements fulfil the inhabitants' needs	2.90	2.91	R. large
3. The sample's overall assessment concerning the traffic improvements	3.18	3.00	Good

Beneficiaries placed all services in the third (medium) category while the experts gave a slightly more favourable rating: four in the third (medium) and two in the second (high) category. The overall rating is medium.

Table 6.9 District and Road Naming & House Numbering

Indicators used for the measurement of services	The Assessment				
	The percentage or the number which represents the majority of the sample		W.A.M		The degree or category which the assessment related
	B	E	B	E	
1. The extent to which the sample agree that the most important characteristics for any scheme for naming districts and roads & for numbering houses is to make it easier to reach a target address and to deliver letters	94.8 %	11			Agree
2. The extent to which the way the districts and roads are named and the way houses are numbered making easier to find a target address:					
a. Naming districts and roads			2.61	1.80	R. easy[6] (B) Difficult (E)
b. Numbering houses			2.40	1.82	Difficult
3. The extent to which districts and roads in Jeddah City are named and to which houses are numbered:					
a. Naming districts and roads	43.8 %	5			Not all roads are named
b. Numbering houses	50.6 %	8			Not all houses are numbered
4. The extent to which naming districts and roads & numbering houses in Jeddah City fulfils the inhabitants' needs			2.42	1.64	Small (B) Not at all (E)
5. The sample's overall assessment concerning naming districts and roads and numbering houses in Jeddah City:					
a. Naming districts and roads			2.86	2.09	Good (B) Bad (E)
b. Numbering buildings and houses			2.61	2.18	Good (B) Bad (E)

Both beneficiaries and experts gave a generally low rating: beneficiaries placing these services once in the third (medium) category and twice in the fourth (low), and experts placing all three in the fourth (low) category.

[6] Reasonably easy

6.3.1.4 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Maintaining Roads and Drainage System

Table 6.10 summarises the assessment of the effectiveness of the road maintenance and drainage services by beneficiaries and experts:

Table 6.10 Road Maintenance and Drainage Services

Indicators used for the measurement of services	The Assessment: The percentage or the number which represents the majority of the sample		W.A.M		The degree or category which the assessment related
	B	E	B	E	
1. Whether there is a draining system for rainwater in the districts where the sample live	51.8%	10			There is a draining system (B) There is no draining system (E)
2. Whether rainwater accumulates on roads and streets in Jeddah City	98.6%	11			Rainwater accumulates on roads and streets
3. The amount of rainwater which accumulates on roads and streets in Jeddah City	73%	9			Too much and affects traffic flow
4. Whether the rainwater accumulates in the area where the sample live	88.8%	11			Accumulates
5. Whether JM clears the rainwater, which accumulates in the area where they live	71%	8			JM clears the accumulated rainwater
6. How quickly JM clears accumulated water	49.5%	5			Takes a long time (B) In short time (E)
7. Whether rain damages roads and streets in Jeddah City	96.6%	11			Rain damages roads and streets
8. The extent to which the drainage system in Jeddah City fulfils the inhabitants' needs			1.66		Not at all
9. The overall assessment of the sample concerning the services of the drainage system in Jeddah City			1.91		Bad (B) Very bad (E)

Beneficiaries and experts alike rated these services as poor.

6.3.1.5 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Tree Planting and City Beautification

Table 6.11 summarises the assessment of the effectiveness of the tree planting and City beautification services by beneficiaries and experts:

Table 6.11 Tree Planting and City Beautification

Indicators used for the measurement of services	The Assessment W.A.M B	W.A.M E	The degree or category which the assessment related
1. The extent to which the sample thought that JM follows clear and defined programs to provide services to beautify and plant trees in Jeddah City:			
a. Establishing and operating public parks	2.70	2.27	R. large (B) Small (E)
b. Maintaining public parks	2.56	2.00	Small
c. Planting trees on main roads	3.28	2.73	R. large
d. Establishing children's playgrounds	2.05	1.45	Small (B) Not at all (E)
e. Planting trees in squares	3.02	2.82	R. large
f. Establishing green spaces	2.56	2.18	Small
2. The extent to which the provided services to beautify and plant trees in Jeddah City fulfil the inhabitants' needs:			
a. Establishing and operating public parks	2.64	2.09	R. large (B) Small (E)
b. Maintaining public parks	2.52	2.09	Small
c. Planting trees on main roads	3.11	2.73	R. large
d. Establishing children's playgrounds	2.07	1.45	Small (B) Not at all (E)
e. Planting trees in squares	2.91	2.73	R. large
f. Establishing green spaces	2.48	2.09	Small
3. The assessment of the sample concerning the services to beautify and plant trees in Jeddah City:			
a. Establishing and operating public parks	2.86	2.60	Good
b. Maintaining public parks	2.73	2.06	Good (B) Bad (E)
c. Planting trees on main roads	3.28	3.30	Good
d. Establishing children's playgrounds	2.27	1.80	Bad
e. Planting trees in squares	3.14	3.40	Good (B) Very good (E)
f. Establishing green spaces	2.70	2.50	Good (B) Bad (E)
4. The sample's overall assessment concerning the services that are carried out by JM to beautify and plant trees in Jeddah City	3.05	2.80	Good

Beneficiaries gave a rather higher rating to these services. They placed eleven in the third (medium) category and seven in the fourth (low) or fifth (very low) while the experts rated once in the second category (high), six in the third (medium), nine in the fourth (low) and twice in the fifth (very low).

In general, beneficiaries and experts gave similar ratings to most of the services. They gave similar overall ratings to the following five services (Table 6.27):

- Health protection services (low).
- City Construction (medium-low).
- Traffic improvements (medium).
- Naming roads and districts and numbering houses (low).
- Maintaining roads and drainage system (very low).

However, they differed over the following services:

- General cleaning: beneficiaries rated them as medium and experts as low.
- Tree planting and city beautification: beneficiaries rated them as medium and experts as low.

Thus, the beneficiaries' rating of the overall effectiveness of most of the services was higher than the experts'. The beneficiaries' ratings can be summarised as follows:

- Three groups of services as medium.
- One group of services as medium-low
- Two groups of services as low.
- One group of services as very low.

The beneficiaries' overall evaluation was low. The experts' rating can be summarised as follows:

- One group of services as medium.
- One group of services as medium-low.
- Four groups of services as low.
- One group of services as very low.

The experts' overall evaluation was, if anything, even lower.

6.3.2 Analysis of the Staff's Assessment of the Effectiveness of the Selected Services

Another set of questionnaires was distributed to staff working in the selected departments. Table 6.12 summarises the response rate of each department:

Table 6.12 The Size of the Sample and Respondents

Department	Sample size	Number of respondents	Response rate
The General Department of Environmental Hygiene	20	13	65%
The General Department of Construction Planning	20	17	85%
The Department of Roads Maintenance and Rain Drainage System	10	0	0
The General Department of Parks and Beautification	10	4	40%

6.3.2.1 Demographic Characteristics and Formal Descriptions and Objectives of Current Jobs of the Samples

The following Tables 6.13 to 6.20 summarise:

- The demographic characteristics of the staff of the General Department of Environmental Hygiene (Table 6.13).
- The formal descriptions and objectives of current jobs of the General Department of Environmental Hygiene (Table 6.14).
- Demographic characteristics of the staff of the Department of Construction Planning of Jeddah City (Table 6.15).
- Summary of the formal descriptions and objectives of current jobs of the staff of the General Department of Construction Planning (Table 6.16).
- The objectives of the General Department of Construction Planning as stated by the staff (Table 6.17).
- Demographic characteristics of the staff of the General Department of Park and Beautification (Table 6.18).
- Summary of the formal descriptions and objectives of current jobs of the staff of the General Department of Park and Beautification (Table 6.19).
- The objectives of the General Department of Parks and Beautification as stated by the staff (Table 6.20).

Table 6.13 Demographic Characteristics of the Staff of the General Department of Environmental Hygiene

Demographic characteristic	Type	Freq.	%
Job title	General Manager for Environmental Hygiene	1	7.7
	Assistant Manager	1	7.7
	Supervisor	3	23.0
	Hygiene Supervisor	2	15.4
	Didn't say	6	46.2
	Total	**13**	**100.0**
Job rank[7]	Sixth (Hygiene Supervisor)	1	7.7
	Seventh (Assistant Manager)	1	7.7
	Twelve (General Manager for Environmental Hygiene)	1	7.7
	Didn't say	10	76.9
	Total	**13**	**100.0**
Years of experience	1-5	3	23.1
	6-10	2	15.4
	11-15	1	7.7
	16-20	1	7.7
	21-25	1	7.7
	Didn't say	5	38.4
	Total	**13**	**100.0**
Years of experience in current job	1-5	4	30.8
	6-10	2	15.4
	11-15	2	15.4
	Didn't say	5	38.4
	Total	**13**	**100.0**

[7] Rank is a group of different jobs which have the same level of difficulties and responsibilities (Al-Sanaidy, 2001)

Table 6.14 Summary of the Formal Descriptions & Objectives of Current Jobs of the Staff of the General Department of Environmental Hygiene

Formal descriptions and objectives of current jobs of the sample	The Samples' opinion		
	Answer	**Freq.**	**%**
The sample distribution as to whether there is formal description of current Job	Yes	6	46.2
	No	6	46.2
	Didn't say	1	7.6
	Total	**13**	**100.0**
The Sample's Awareness of the Objectives of their Jobs	Yes	10	76.9
	No	3	23.1
	Total	**13**	**100.0**
The opinions of the sample as to whether their department has defined objectives	Yes	8	61.5
	No	5	38.5
	Total	**13**	**100.0**
The opinions of the sample as to whether there is regular assessment of the department's objectives	Yes	5	38.5
	No	7	53.8
	Didn't say	1	7.7
	Total	**13**	**100.0**
The Opinions of the Sample as to the Way the Achieved Objectives are Measured	• Through JM follow-up department.	1	
	• Through periodical reports.	4	
	• Through supervision of the services.	4	

Table 6.15 Demographic Characteristics of the Staff of the Department of Construction Planning of Jeddah City

Demographic characteristic	Type	Freq.	%
Job title	Land Grant Department Manager	1	5.9
	Planning Department Manager	1	5.9
	Architect	1	5.9
	Planning Engineer	6	35.5
	Architecture Engineer	6	35.5
	Electrical Engineer	1	5.9
	Didn't say	1	5.9
	Total	**17**	**100.0**
Job rank	Ninth (Planning Department Manager & Architecture Engineer)	2	11.8
	Eighth (5 Architecture Engineers, Electrical Engineer & Architect)	7	41.2
	Seventh (2 Architecture Engineers, 3 Planning Engineer & Grant Department Manager)	6	35.5
	Didn't say	2	11.8
	Total	**17**	**100.0**
Years of experience	1-5	4	23.5
	6-10	2	11.8
	11-15	6	35.5
	16-20	4	23.5
	21-25	-	-
	26-30	-	-
	31-35	1	5.9
	36-40	-	-
	Total	**17**	**100.0**
Years of Experience in current job	1-5	10	58.8
	6-10	4	23.5
	11-15	2	11.8
	16-20	-	-
	21-25	-	-
	26-30	-	-
	36-40	1	5.9
	Total	**17**	**100.0**

Table 6.16 Summary of the Formal Descriptions & Objectives of Current Jobs of the Staff of the General Department of Construction Planning

Formal descriptions & objectives of current jobs of the sample	The Samples' opinion		
	Answer	**Freq.**	**%**
The sample distribution as to whether there is formal description of current Job	Yes	12	70.6
	No	5	29.4
	Total	**17**	**100.0**
The Sample's Awareness of the Objectives of their Jobs	Yes	12	70.6
	No	5	29.4
	Total	**17**	**100.0**
The opinions of the sample as to whether their department has defined objectives	Yes	12	70.6
	No	5	29.4
	Total	**17**	**100.0**
The opinions of the sample as to whether there is regular assessment of the department's objectives	Yes	6	35.3
	No	11	64.7
	Total	**17**	**100.0**
The Opinions of the Sample as to the Way That the Achieved Objectives are Measured	• Revision of construction criteria, which were applied to construction plans.	2	
	• Accumulation of works.	1	
	• Time taken by the person to finish a work.	1	
	• How well the job is done.	1	
	• Through reports about the quantity of the done job.	2	
	• Through periodical reports about the accomplishments of long and short term plans.	2	
	• Through ministerial reports.	1	
	• Questionnaires sent to the inhabitants and teachers.	1	
	• Questionnaires sent to taxi drivers about roads networks.	1	
	• Studies done by private specialist bodies.	1	

Table 6.17 The Objectives of the General Department of Construction Planning as Stated by the Staff

The objectives of the General Department of Construction Planning as stated by the sample
a. Apply the criteria for construction.
b. Provide essential services to the entire city.
c. Make plans for city development.
d. Name districts, roads, number houses and buildings.
e. Complete building road networks in the city.
f. Improve the road networks in the city
g. Establish signboards for all new areas.
h. Approve architecture of buildings.

Table 6.18 Demographic Characteristics of the Staff of the General Department of Park and Beautification

Demographic characteristic	Type	Freq.	%
Job title	General Manager	1	25.5
	General Manager	1	25.5
	Agriculture Engineer	1	25.5
	Architecture Engineer	1	25.5
	Total	**4**	**100.0**
Job rank	Eighth (General Manager of the Department, General Manager & Architecture Engineer)	1	25.5
	Ninth (Agriculture Engineer)	3	75.5
	Total	**4**	**100.0**
Years of experience	16-20	4	100.0
	Total	**4**	**100.0**
Years of experience in current job	1-5	2	50.0
	6-10	1	25.5
	16-20	1	25.5
	Total	**4**	**100.0**

Table 6.19 Summary of the Formal Descriptions & Objectives of Current Jobs of the Staff of the General Department of Parks and Beautification

Formal descriptions & objectives of current jobs of the sample	The Samples' opinion		
	Answer	**Freq.**	**%**
The sample distribution as to whether there is formal description of current Job	Yes	2	50.0
	No	1	25.5
	Didn't say	1	25.5
	Total	**4**	**100.0**
The sample's awareness of the objectives of their Jobs	Yes	4	100.0
	No	-	-
	Total	**4**	**100.0**
The opinions of the sample as to whether their department has defined objectives	Yes	4	100.0
	No	-	-
	Total	**4**	**100.0**
The opinions of the sample as to whether there is regular assessment of the department's objectives	Yes	4	100.0
	No	-	-
	Total	**4**	**100.0**
The Opinions of the sample as to the way they achieved objectives	• Number of green lands in the city.	2	
	• Number of public parks.	2	
	• Number of plants produced in JM's nursery.	1	
	• The amount of water used to irrigate parks and trees in Jeddah City.	1	
	• The number of times the public communicated with the municipality to give an opinion on planting trees and beautifying Jeddah City	1	

Table 6.20 The Objectives of the General Department of Parks and Beautification as Stated by the Staff

The objectives of the General Department of Parks and Beautification as stated by the sample
a. Establish and maintain public parks.
b. Plant trees on the roads, streets, and squares and in public parks.
c. Expand the green and planted areas in the city.
d. Beautify the city.
e. Provide sub-municipalities with plants from the municipality's nursery.
f. Provide an irrigation network for the responsible bodies to provide water for the city.
g. Establish leisure places inside and outside the city.

The main messages from these tables are that

- Six out of thirteen subjects from the General Department of Environmental Hygiene did not reveal their names, job titles, job ranks, and years of experience (Table 6.13). All six differed sharply from their colleagues.
    - All these stated that there was no description of their jobs.
    - Three of them also indicated that they were not aware of their department's objectives.
    - All six stated that their department did not have defined objectives, which suggests that most of the staff are insufficiently motivated to perform their jobs effectively.
    - All six indicated that there was no regular assessment of the department's objectives (Table 6.14).
- Almost half of the samples from the General Department of Environmental Hygiene and the General Department of Parks and Beautification and the great majority of the staff of the General Department of Construction Planning thought that there were descriptions of their jobs (Tables 6.14, 6.16 & 6.19).
- The great majority of the sample from the General Department of Environmental Hygiene and all from the General Departments of Construction Planning and of Parks and Beautification were aware of their departmental objectives (Tables 6.14, 6.16 & 6.19).
- Two-third of the sample from the General Department of Environmental Hygiene, the majority from the General Department of Construction Planning and all from the General Department of Parks and Beautification thought their departments had defined objectives (Tables 6.14, 6.16 & 6.19).

- It is interesting to note that when JM's staff were asked to state the *objectives* of their departments, most of them stated the *tasks* of their departments as stated in JM's yearly report. This finding suggests that the staff were aware of the general responsibilities, but were not familiar with the defined objectives of their respective departments (Tables 6.17 & 6.20). Detailed and clear departmental objectives are very important for the staff to accomplish their tasks. Objectives provide clear vision for the staff of what they are expected to achieve and encourage them to unify their efforts. The assessment of the efficiency and effectiveness of various departments could be measured against the set objectives.
- Only one person (Hygiene Supervisor) from the General Department of Environmental Hygiene thought that JM's follow-up unit is the responsible body for assessing the departments' objectives. However, the formal objectives and tasks of follow-up unit did not indicate that it was responsible for the assessment of the implementation of the departments' objectives. The main objective of this unit as stated in the JM's yearly report is to follow up administrative and technical works in the municipality, to ensure that rules and regulations are followed without obstacles and to ensure the flow of the work in order to prevent any neglect, violations or misuse of authorities (Organisational Committee of Jeddah Municipality, 1984; Jeddah Municipality, 1999). These tasks are specified as follows (Organisational Committee of Jeddah Municipality, 1984):
    - Perform the required inquiry and control procedure in all administrative units in the municipalities to ensure the validity of work and to guide the performance according to rules, regulations, and instructions.
    - Carry out the mayor's instructions concerning investigations about the administrative and technical violations in the municipality.
    - Study complains forwarded to the unit from the mayor and recommend the necessary procedures to deal with them.
    - Perform sudden investigation rounds to all the administrative units in the municipality to identify failure cases and submit report to the mayor concerning this.
    - Promote and develop the municipality employees' self-control.
    - Study reports made by the administrative units and submit its opinion and recommendations on these reports.

- Perform any other tasks that come under its jurisdiction.

In short, this unit is concerned with probity rather than efficiency or effectiveness.

According to the sample, the yearly departmental reports and the ministerial reports are considered as assessment of the accomplishment of their objectives. It is clear that these reports cannot be considered as sufficient or satisfactory way of assessing effectiveness. Therefore, it is suggested that the follow-up unit in JM should look at efficiency and effectiveness as well as probity.

The next section summarises staff assessment of the selected services.

6.3.2.2 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Maintaining Environmental Hygiene Safety

Tables 6.21 to 6.22 summarises the assessment of the effectiveness of services concerning maintaining environmental hygiene safety by the staff as follow:

- Health protection services (Table 6.21).
- General cleaning services (Table 6.22).

Table 6.21 Health Protection Services

Indicators used for the measurement of services	The assessment	
	W.A.M	The degree or category which the assessment related
1. The extent to which JM adheres to defined criteria to achieve health protection for Jeddah City	3.15	R. large
2. The extent to which JM introduces health protection criteria to the inhabitants' of Jeddah City	2.54	Small
3. The extent to which the health protection services achieved their objectives:		
a. Spraying garbage containers	3.62	Large
b. Elimination of rodents	3.15	R. large
c. Extermination of stray dogs and cats	3.96	Large
d. Filling up of land depressions and ponds	3.31	R. large
4. The sample overall assessment concerning health protection services	3.00	Good

The staff tended to give higher ratings on the effectiveness of health protection services. They placed one service in the low category, whereas beneficiaries rated four services and experts three in this category. They placed two services in the second (high) category while no service received this rating from beneficiaries or

experts. The staff did not place any service in the fifth (very low) category as experts did. The overall rating is medium.

Table 6.22 General Cleaning Services

Indicators used for the measurement of services	The assessment		
	The percentage which represents the majority of the sample	W.A.M	The degree or category which the assessment related
1. The extent to which JM follow defined criteria to maintain cleanliness of Jeddah City		3.38	R. large
2. How often JM carries out the cleaning services:			
a. Collecting garbage	11		Daily
b. Collecting commercial waste	8		Daily
c. Collecting construction waste	7		Monthly
d. Removal of scrapped vehicles	6		Daily
e. Cleaning main roads	10		Daily
f. Cleaning streets	6		Daily
	6		Monthly
3. The sample overall assessment concerning the general cleaning services			Good
4. The extent to which the inhabitants are satisfied with the cleaning services:			
a. Collecting garbage		2.77	R. large
b. Collecting commercial waste		2.77	R. large
c. Collecting construction waste		2.23	Small
d. Removal of scrapped vehicles		2.27	R. large
e. Cleaning main roads		3.31	R. large
f. Cleaning streets		2.69	R. large
5. The sample overall assessment concerning the supervision of general cleaning services		3.08	Good
6. The extent to which JM supervises the general cleaning services:			
a. Collecting garbage		3.23	R. large
b. Collecting commercial waste		3.23	R. large
c. Collecting construction waste		3.08	R. large
d. Removal of scrapped vehicles		3.23	R. large
e. Cleaning main roads		3.62	Large
f. Cleaning streets		3.23	Large
7. The extent to which JM supervises the general cleaning services		3.08	R. large
8. The sample overall assessment concerning general cleaning services		3.15	Good

The staff like the beneficiaries, rated eleven services in third (medium) category, while they rated only one in fourth (low) and two in the fifth (very low category).

The sample suggested that JM should introduce more services to improve the cleanliness of Jeddah City, but they did not state what these services should be[8].

6.3.2.3 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Construction of Jeddah City

Tables 6.23 to 6.25 summarises the assessment of the effectiveness of services concerning construction planning of Jeddah City by the staff as follow:

- JM's construction services (Table 6.23).
- Traffic improvements services (Table 6.24).
- District and road naming and house numbering services (Table 6.25).

Table 6.23 City Construction Services

Indicators used for the measurement of services	The assessment		
	The percentage which represents the majority of the sample	W.A.M	The degree or category which the assessment related
1. The construction plan of Jeddah City	10		Thought that the construction plans for Jeddah City are comprehensive plans
2. The essential services which are provided in the districts:			
a. Electricity		4	Most districts
b. Water		2.8	Half of the districts
c. Drainage system		1.4	Very few districts
3. The services that are provided in the districts:			
a. Mosques		3.9	Most districts
b. Pharmacies		4.3	All districts
c. Boys' schools		3.9	Most districts
d. Girls' schools		3.8	Most districts
e. Clinics		3.8	Most districts
f. Parks and children's playgrounds		2.8	Half of the districts
g. Post offices		2.5	Very few districts
h. Supermarkets		4.1	Most districts
4. The extent to which the construction plan of Jeddah City achieved its objectives		3.29	R. large
5. The sample overall assessment concerning the construction plans for the districts in Jeddah City		3.35	Good

[8] See Appendix 4 Table A4.16

The staff gave a very low rating for the effectiveness of drainage systems and post office services. Concerning the other services, they placed one service in the first (very high) category, six services in the second (high) category, and three services in the third (medium) category. Their overall rating for these services was medium.

Table 6.24 Traffic Improvements

Indicators used for the measurement of services	The assessment		
	The percentage which represents the majority of the sample	W.A.M	The degree or category which the assessment related
1. The sample's assessment of the traffic improvements of Jeddah City:			
a. Providing traffic lights at cross roads		3.82	Very good
b. Maintaining the existing traffic lights		3.59	Very good
c. Improving crossroads		3.47	Very good
d. Improving bends		3.41	Very good
e. Improving traffic flow		3.41	Very good
2. The extent to which the traffic improvements achieved its objectives		2.94	R. large
3. The sample's overall assessment concerning the traffic improvements		3.06	Good

The staff placed all services in the second (high) category while experts and beneficiaries rated them as medium. The overall rating of these services is high.

Table 6.25 District and Road Naming and House Numbering

Indicators used for the measurement of services	The assessment		
	The percentage which represents the majority of the sample	W.A.M	The degree or category which the assessment related
1. Number of staff who thought that JM applies a clear and established scheme for naming districts, roads and streets & for numbering houses in Jeddah City	9		
2. The extent to which the way the districts and roads are named making easier to find a target address		2.47	Difficult
3. The extent to which the way houses are numbered making easier to find a target address		2.35	Difficult
4. Whether there are additional characteristics which any scheme for naming districts and roads & for numbering houses should have	12		There are other additional characteristics
5. Whether all districts and roads in Jeddah City are named and whether all houses are numbered	3		Thought that all districts and roads in Jeddah City are named & all houses are numbered
6. The extent to which the way that districts and roads are named & the way that houses are numbered achieved the defined objectives		2.35	Small degree
7. The sample overall assessment concerning naming districts and roads in Jeddah City		2.65	Good
8. The sample overall assessment concerning numbering houses in Jeddah City		2.65	Good

Similar to beneficiaries and experts, staff also gave a low rating. They placed three services in the fourth (low) category, and one in the third (medium) category.

6.3.2.4 Analysis of the Results of the Assessment of the Effectiveness of Services concerning Tree Planting and City Beautification

Table 6.26 summarises the assessment of the effectiveness of the tree planting and City beautification services by the staff:

Table 6.26 Tree Planting and City Beautification

Indicators used for the measurement of services	The assessment		
	The percentage which represents the majority of the sample	W.A.M	The degree or category which the assessment related
1. The extent to which the sample thought that JM follows clear and defined programs to provide services to beautify and plant trees in Jeddah City:			
a. Establishing and operating public parks		2	Large
b. Maintaining public parks		2	Large
c. Planting trees on main roads		3	Large
d. Establishing children's playgrounds		3	R. large
e. Planting trees in squares		4	Very Large
f. Establishing green spaces		3	Very Large
2. The extent to which the provided services to beautify and plant trees in Jeddah City achieved defined objectives		3	R. large
3. The assessment of the sample concerning the services to beautify and plant trees in Jeddah City:			
a. Establishing and operating public parks		3	Very good
b. Maintaining public parks		2	Very good
		2	Good
c. Planting trees on main roads		3	Excellent
d. Establishing children's playgrounds		3	Good
e. Planting trees in squares		3	Excellent
f. Establishing green spaces		3	Excellent
4. The sample overall assessment concerning the services that are carried out by JM to beautify and plant trees in Jeddah City		3	Excellent

The staff rated these services higher than beneficiaries. They placed six in the first (very high) category, five in the second category (high) and four in the third (medium) category. The overall rating is high.

The staff assessment of all groups of services is as follow:

- One group of services as very high/high.
- One group of services as high.
- Three groups of services as medium
- One group of services as low.

The overall rating was medium – rather higher than the beneficiaries' and the experts' assessments (see p 99).

The staff agreed with the beneficiaries' and the experts' rating of

- District and road naming and house numbering rated as low.
- General cleaning services rated as medium.

The staff gave a higher rating to other services

- Health protection services - medium.
- City construction - medium.
- Traffic improvements services - high.
- Tree planting and beautifying Jeddah City – high/very high.

6.3.3 Summary of the Results

Table 6.27 below shows the overall rating of the effectiveness of the selected services by beneficiaries, experts and staff.

Table 6.27 The Overall Assessment of the Effectiveness of the Selected Services by Beneficiaries, Experts and Staff

The service	Overall rating of effectiveness		
	Beneficiaries' assessments	**Experts' assessments**	**Staff's assessments**
• Health protection services	Low	Low	Medium
• General cleaning services	Medium	Low	Medium
• Construction of the city	Medium-Low	Medium-Low	Medium
• Traffic improvements	Medium	Medium	High
• District and road naming & house numbering	Low	Low	Low
• Maintaining roads & drainage system	Very low	Very low	----9
• Tree planting & beautifying Jeddah City	Medium	Low	High-Very high
The overall rating of the effectiveness of all the selected services	**Low**	**Low**	**Medium**

The main conclusion is that JM's services are not rated highly either by the staff who deliver them, or by the beneficiaries or the experts in public service delivery. JM should take the following steps to improve the services:

- Goals and objectives of each municipal service should be clear.
- The stated goals should be measurable.
- The objectives within the JM should be cascaded down through the organisation.
- Standards of performance should be set for each department.

[9] This service was not evaluated by the staff

6.3.4 Comparison of the Efficiency and Effectiveness of Some of the Selected Services

Table 6.28 compares the effectiveness of some of the selected services with the efficiency analysed in Chapter 5.

Table 6.28 Comparison Between the Efficiency & Effectiveness of Some of Health Protection Services

The service	Efficiency ratio in 1995 compared to 1990	Efficiency ratio in 2000 compared to 1995	Efficiency ratio in 2000 compared to 1990	Effectiveness as rated by beneficiaries (B), experts (E) & staff (S)
Sprayed garage containers	-5%	17%	10%	Medium (B) Low (E) High (S)
Exterminated stray dogs	-7%	14%	5%	Medium (B & E) High (S)
Exterminated stray cats	-2%	5%	3%	
Baits	-17%	22%	2%	Low (B & E) Medium (S)
Eaten baits	-5%	8%	2%	

Although the efficiency of the above health protection services showed an improvement in 2000 compared to 1995, the overall effectiveness of these services was rated by both beneficiaries (the service recipients) and experts as low or medium. However, the staff's overall rating of effectiveness was high.

Table 6.29 shows comparison of the efficiency and effectiveness of some of general cleaning services.

Table 6.29 Comparison of the Efficiency & Effectiveness of Some of General Cleaning Services

The service	Efficiency ratio in 1995 compared to 1990	Efficiency ratio in 2000 compared to 1995	Effectiveness as rated by beneficiaries (B), experts (E) & staff (S)
Collection of Garbage	10%	27%	Medium (B, E & S)
Collection of Scrapped vehicles	24%	306%	Low (B) Very low (E) Medium (S)
Collection of Building waste	50%	67%	Low (B & S) Very low (E)

The above table shows that while the efficiency of these services was increased, their overall effectiveness was rated by both beneficiaries and experts as low or very low and staff as medium. The results suggest that JM had put more emphasis on reducing costs or providing these services to more inhabitants at the expense of the effectiveness of these services.

6.3.5 Summary of the Suggestions Made by the Beneficiaries, the Experts and the Staff to Improve the Selected Services

Just as staff, beneficiaries, and experts all had relatively, poor view of JM's services, they all had suggestions for improving performance as summarised below.

6.3.5.1 Health Protection Services

- Introduce hygiene awareness among the public.
- Improve the standard of the existing health protection services.
- Establish an independent hygiene department.
- Control and prevent air, water and soil pollution.

See Appendix 2 Tables A2.12 and A2.13, Appendix 3 Table A3.7 and Appendix 4 Tables A4.14 & A4.15 for details.

6.3.5.2 General Cleaning Services

- Introduce more cleanliness awareness among the public.
- Provide bigger and additional garbage containers where needed (including specialised containers for each type of garbage and waste).
- Penalise people who throw litter on roads and streets.
- Reward clean districts.
- Provide a channel for inhabitants to voice any complaints.

See Appendix 2 Tables A2.17 and A2.18, Appendix 3 Table A3.12 and Appendix 4 Table A4.19 for details.

6.3.5.3 City Construction

- Complete naming of streets, roads and districts and numbering of houses and buildings in Jeddah City.
- Use simple and logical schemes for numbering houses and buildings.
- Names and numbers should be visible to the inhabitants.
- Learn from naming and numbering schemes used in developed countries.
- Provide all essential services equally to all districts.
- Establish co-ordination between the providers of essential services such as electricity and water.
- Standardise colours and heights of buildings in an area.
- All construction in the city should be according to defined plans.
- Construction plans for any area should first provide the essential services before allowing building in these areas.
- Construction plans should make provision for car and bus parks.
- Provide areas for walking and sports for inhabitants.
- Complete and improve building road network in the city.
- Enlarge streets where needed, maintain broken roads and streets, and pave all main roads and streets in the city.
- Build bridges where needed.

See Appendix 2 Tables A2.28 and A2.29, Appendix 3 Table A3.21 & Appendix 4 Table A4.49 for details.

6.3.5.4 Drainage

- Maintain the existing drainage system and extend it to cover all of the Jeddah City.

See Appendix 4 Table A4.15 for details.

6.3.5.5 Tree Planting and the City Beautification

- Educate people about the importance of planting trees in the city.
- Establish more parks and children's playgrounds.
- Enlarge the existing parks and maintain them.
- Provide public toilets, lights and seats in the parks.

- Plant trees on all roads and streets.
- Expand green and planted areas in the city and maintain them.
- Prune trees on roadsides and in districts and parks.
- Invite the private sector to help in beautifying the city and planting trees.
- Invite inhabitants to plant trees in front of their houses.
- Penalise people who misuse public parks.

Here we have a useful collection of suggestions, some ambitious and costly but others relatively cheep and easy to implement.

See Appendix 2 Tables A2.54 and A2.55, Appendix 3 Table A3.46 & Appendix 4 Tables A4.68 and A4.69 for details.

6.4 Conclusion

This chapter discussed the results of the main questionnaires, which were designed to assess the effectiveness of the following selected services - health protection, general cleaning, City construction, traffic systems, district and road naming and house numbering, drainage system, tree planting and City beautification - using the criteria developed in Chapter 4. The services were assessed by beneficiaries of the services, experts in local administration in Saudi Arabia, and staff from the relevant departments (Environmental Hygiene, Construction Planning, Roads Maintenance and Rain Drainage, Parks and Beautification). Identical questionnaires were sent to beneficiaries, and experts in Jeddah City, while questionnaires for staff were tailored for each department.

Both beneficiaries and experts rated the effectiveness of the selected services as low. However, the staff gave a slightly higher rating of medium.

Among these services, the researcher was able to measure the efficiency of only health protection and general cleaning services because the other departments did not provide the necessary data in sufficiently disaggregated form. The two departments whose efficiency could be assessed showed significant improvements, but their overall rating of effectiveness by both beneficiaries and experts was low or very low and staff's only medium.

To be able to evaluate the efficiency and the effectiveness of the services, it is suggested that each department should set clear goals and objectives. Objectives within JM should be cascaded and goals should be measurable. JM should introduce

standards of performance and perhaps the follow-up unit could be adapted to assess the effectiveness and efficiency of all departments within JM.

The chapter concluded with some suggestions made by the majority of the beneficiaries, experts and the staff for improving existing services. The next and final chapter is concerned with the main conclusion of the empirical studies and recommendations to improve the efficiency and effectiveness of JM's services in particular and public services in Saudi Arabia in general.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

Many OECD countries introduced public management reforms in the 1980s and early 1990s in order to deliver public services more efficiently and effectively (Northern Ireland Executive, 2004). The movement of managerialism that was taking place in the UK, New Zealand, Australia and Canada mainly influenced these reforms. This movement began in the UK and is known as the "New Public Management" (NPM). NPM calls for improving public service delivery and seeks to empower its employees and those it seeks to serve (Barry & Dent, 2001). It is concerned with results, performance, and outcomes (Pollitt, 1993, p1). NPM emphasises structural or organisational choices that lead to decentralised control by using wide variety of alternative service delivery mechanisms including quasi-markets with public and private service providers competing for resources from policy makers and donors (Manning, 2000).

As discussed in Chapter 3, OECD countries adopted a wide range of policies and a variety of measures and tools to improve performance management and its efficiency and effectiveness. Several initiatives have been taken to guarantee a more accountable and transparent public sector. These included reductions in public expenditure and public sector employment through privatisation, contracting out and decentralisation. Benchmarking was introduced as an efficiency tool to measure the performance of one organisation against a standard. Legislative steps were taken by governments to enhance and improve efficiency, effectiveness, and accountability. Information and communication technologies were employed to facilitate the delivery of services more efficiently. Performance evaluations of the public sector, by both internal and external performance review bodies were emphasised. The discussion also highlighted the significance of a democratic system in enhancing accountability, transparency, and public access to information.

In Britain, throughout the 1980s and the 1990s, managerialism in the public sector has gone through radical changes and reforms. Reform characteristics have been reduction in the size of the civil service; decentralisation (managerial and financial through the financial management initiative); extensive privatisation: introduction of market mechanisms to the public sector: purchaser provider split, Next Steps agencies, and competing for quality (Northern Ireland Executive, 2004). In addition, a wide range of changes took place in the governance and management of the Further Education, the curriculum, assessment and pedagogy, organisational structures and staff roles. These changes are traced largely to the Further Higher Education Act 1992 that took the colleges from local Education Authority control and gave them corporate status. The introduction of market principles has transformed the whole sector (Holloway, 1999).

A review of public management developments in a less developed country demonstrates that the NPM has not yet influenced the public management paradigm (Manning, 2000).The Saudi literature reviewed in Chapter 3 revealed that public reforms had no initiatives to integrate managerialism principles into public services. No initiatives were taken to improve performance management, efficiency and effectiveness of the public sector, or to enhance accountability or transparency. Nevertheless, one can say that recently there have been some steps towards managerialism. Currently, Saudi Arabia is committed to increase private sector participation in economic growth. Despite the urgent need to implement the privatization programme, there has been lack of a definite timeframe (SAGIA, 2005a). The Supreme Economic Council (SEC) was established in 1999 to speed up economic reforms. It has been officially responsible for the kingdom's privatisation efforts since early 2001. SEC later became responsible for privatisation programmes in the kingdom. Privatisation and economic diversification efforts have been strengthened since the creation of SEC (SAGIA, 2005a, 2005b & U.S.-Saudi Arabian Business Council, 2005). In 2003, the government sold its shares in Saudi Telecommunication Company (STC) to the public successfully. In the same year, a well-regulated capital market in Saudi Arabia was established to encourage privatisation and to establish and regulate Saudi Arabia's first formal stock market. A host of sectors are being opened to the private sector. Electricity, airlines, postal services, railways, port services and water utilities are some of the potential areas for investment. In addition, in 2002, the Saudi government approved the transfer of

postal services to the private sector, and studies are in process concerning the privatisation of the Saudi Railways Organisation and Saudi Arabian Airlines. In addition, the Saudi government has recently allowed the private sector to participate in various areas in social services, health services, education, and municipal services. Moreover, the Saudi government announced that the Presidency for Civil Aviation (PCA) would become an independent commission and would run its affairs on a commercial basis (U.S.– Saudi Arabian Buisness Council, 2005).

The Saudi government's step towards managerialism is selective, and is directed towards privatisation and minor step toward decentralisation. In order to provide the public services efficiently and effectively, the Kingdom should learn from the developed countries experience (discussed in this chapter and reviewed in chapter 3). It needs to establish a model which should suit the Saudi culture. It will be interesting to see whether privatization will function as a step taken by the Saudi government to improve the efficiency of the public services and to provide better quality of services to citizen. This study suggests that Saudi Arabia should adopt the same kind of policies, measures and tools as OECD countries to improve public sector efficiency and effectiveness. Assessment of the efficiency and effectiveness of public services in Saudi Arabia at the local level will contribute to accountable and transparent governance, which will in turn lead to better provision of services and ensure against any abuse of organisational power while still providing the effective and efficient use of resources.

The aims and the objectives of this research are as follows:

1. To develop a set of criteria that could be used for measuring the efficiency and the effectiveness of services provided by Jeddah Municipality.
2. To test the developed criteria by application to the practice of the municipality within the Saudi context.
3. To explore incentives for municipalities to be more efficient and effective.
4. To provide the officials of Jeddah Municipality and other concerned bodies with evidence of the level of efficiency and effectiveness of services provided by the Municipality.
5. To encourage government departments, municipalities in general and JM in particular to be more transparent and accountable.
6. To encourage higher levels in government to be accountable to the people.

It was recognised from the start that setting new criteria would require broad-based consensus techniques. It was also recognised that the input of the Saudi experts on local authorities would be invaluable in generating these criteria. The Delphi Technique has long been considered as one of the most systematic procedures for extracting experts' judgements as discussed in Chapter 4. To ensure broad representation, experts from various academic and other Public Administration Institutes with diverse geographical locations were included in the panel. Delphi Technique was used to develop consensus among the Saudi experts. The experts reached consensus in two rounds of the questionnaires on the meaning of the efficiency and effectiveness and on the criteria that should be used to assess the selected services along lines described in detail in Chapters 5 and 6. The fourth generation evaluation model was reviewed in chapter 3 as a method of public policy evaluation. However, in a strictly conservative and religious society like Saudi Arabian, the researcher would not have been allowed to arrange meetings with male stakeholders. In view of these constraints, fourth generation evaluation methodology was not considered.

This chapter considers the main conclusions of the empirical studies, the efficiency and the effectiveness of the services that were evaluated, methodological problems encountered in the research in the Saudi context, the thesis's contribution to the literature on the efficiency and effectiveness and makes recommendations.

7.2 Main Conclusion

7.2.1 The Efficiency of the Selected Services

The efficiency criteria that gained the highest grades in the Delphi Questionnaires are:

1. Best usage of material resources.
2. Best usage of the human resources.

These two criteria are in accordance with the standard international definition of efficiency (See sections 3.2.2 and 4.6.5.1) and were used to assess the efficiency of the selected services as described in Chapter 5. The researcher encountered numerous problems in obtaining the required data for evaluation. Problems of access to information are discussed under a separate heading in this chapter. Out of the JM's

four selected departments, only the General Department of Environmental Hygiene provided some data for the Health Protection Services and the Cleaning Services. It was therefore possible to assess only health protection and general cleaning services. The results showed a tendency towards an increase in efficiency. However, it must be stressed that this assessment was based upon very limited data and does not reflect the overall efficiency of Jeddah municipality. Problems of absence of a central database at the JM or indeed at any other local authority in Saudi Arabia have already been pointed out in Chapter 5.

Other efficiency criteria generated by using the Delphi Questionnaires, are expected to enhance the efficiency of the municipal services and are stated according to order of their importance to the experts:

1. Simplifying the procedures to provide the service needed.
2. Using appropriate methods to provide the service in the best way.
3. Motivating the employees to provide the service in the best way.
4. Employing the most qualified people to provide the service.
5. Effective training for the employees who are responsible for providing the service.
6. A co-operative relationship between individuals in the municipality.
7. The existence of clear and defined programmes which explain the needed process, how it works, its cost, its income, when to start, and when to end.
8. Making use of the most advanced technology available to improve performance and prevent mistakes.
9. The availability of a good system of control and observation.
10. The capability of the municipality to interact with the internal environment (rules/employees/machines…etc).
11. Using the minimum finance by reducing the cost of providing the service.
12. The ability of the municipality to convert inputs (human efforts, finance, rules…etc) into outputs efficiently and effectively.
13. Excellence of co-operation with the authorised bodies.
14. The intelligibility of internal rules and policies.
15. The existence of a strict system for rewards and discipline in the municipality.
16. Using consultants and learning from local and international experience to provide the service in the best way.
17. Decentralisation of decision-making.

7.2.2 The Effectiveness of the Selected Services

As with efficiency, there are no stated criteria for measuring the effectiveness of JM's services. In the Delphi process, the Saudi experts gave the highest grades to the following criteria:

1. The accomplished services fulfil clear objectives.
2. The accomplished services fulfil the national objectives.
3. The accomplished services fulfil the community's needs and desires.
4. The quality of the accomplished service.

These criteria are in accordance with the standard international definition of effectiveness that is concerned with the extent to which objectives are achieved (See sections 3.2.3 and 4.6.5.2). The effectiveness of the selected services was evaluated by questionnaires designed by using the above criteria. Identical questionnaires were sent to the Beneficiaries of the services and Saudi experts on local authorities and specially designed questionnaires to the staff of each department under study. The only department that did not respond to the questionnaire was the Department of Roads Maintenance and Rain Drainage System.

The results show that:

1. The beneficiaries' and the experts' assessments varied between medium and low, but the experts tended to rate more services as low than did beneficiaries.
2. The beneficiaries and the experts gave the same assessment for the following services:
    - Health protection - low.
    - City construction medium - low.
    - Traffic improvements - medium.
    - District and road naming and house numbering - low.
    - Road maintenance and drainage - very low.

    They differed over the following services:
    - General cleaning services - beneficiaries rated it as medium and experts rated it as low.
    - Tree planting and City beautification - beneficiaries rated it as medium and experts rated it as low.
3. Both the beneficiaries' and the experts' overall evaluation of the effectiveness of the selected services was low.

4. The staff's assessment varied between very high and low. They tended to rate more services as medium. They rated
    - Health protection - medium.
    - General cleaning - medium.
    - City construction - medium.
    - Traffic improvements - high.
    - District and road naming and house numbering - low
    - Tree planting and City beautification - high/very high.
5. The staff's overall evaluation of the effectiveness of all the selected services was medium.
6. The staff gave higher rating for the overall effectiveness of JM services than the beneficiaries and the experts'. Both the beneficiaries and the experts assessed the overall effectiveness of JM selected services as low whereas the staff rated them as medium.

Other effectiveness criteria generated by the use of Delphi Methodology are expected to enhance the effectiveness of the municipal services and are stated according to their importance to the experts:

1. The extent of employees' loyalty to and association with the organisation.
2. The efficiency of the organisation and work division methods.
3. The ability of the organisation to bring about changes to the service, and to face problems and changes in the environment.
4. The excellence of the communication system between the departments in the organisation.
5. The service is provided at the right time.
6. The extent of job satisfaction of the employees.
7. The service fulfils selective objectives.
8. The ability of the organisation to undertake organisational and administrative development.
9. The ability to put into practice "Total Quality Management."
10. The service fulfils the needs of the people who most want it.
11. The state of the municipality in the eyes of other government bodies.
12. The beneficiaries' assessment of the service as an effective service.
13. The extent of employees' satisfaction with their salary.

14. Minimising the service fees.

7.2.3 Comparison of the Efficiency and Effectiveness of the Selected Services

The researcher was able to compare efficiency and the effectiveness only for Health Protection and General Cleaning Services. This comparison shows that while the efficiency of most of the services has improved, their effectiveness was low. These results suggest that JM was more concerned with improving the efficiency of these services than improving their effectiveness.

7.3 Methodological Problems Encountered in this Research

The researcher faced numerous methodological problems during the course of this research work..

1. *Gender Issue:* One of the major problems that had a direct bearing on the data collection process was the researcher's gender. The researcher being a female was not allowed to meet or interview male officials, contact the JM's participants or approach JM departments directly. It is worth noting here that all JM employees are male. The researcher was only allowed to contact various individuals or departments through the JM's public relation (PR) department and the access to the PR department was by telephone only. The questionnaires had to be sent to the PR department which would then distribute them to the concerned individuals or departments, later collect the completed questionnaires, and return them to the researcher. Those who did not respond to the questionnaire had to be reminded via PR department. This was very time-consuming and unproductive as many of the respondents had to be reminded repeatedly to answer the questionnaire. The researcher faced hurdles at almost every step throughout this research on the grounds of her gender. However, this must not cloud the fact that the JM is deliberately following a policy of concealing data from the general public as well as academic researchers. The gender issue is significant in the Saudi context. Saudi Arabia is a male-dominated society. Saudi law forbids public mixing of men and women and does not allow them to work in the same establishment. Presently, hospitals are exceptions where men and women work together and the government is under intense pressure from

conservative clerics to segregate them also. Social and cultural constraints forbid women to appear in public alone. A close relative must accompany a woman if she has to meet another male. The practices of veiling and segregation are religiously sanctioned and institutionalised by the government. The premise that women, from a moral standpoint, should not associate with unrelated men, is the basis of all Saudi regulations on the behaviour of women. Consequently, women are not allowed to drive a car, cannot study abroad without a male guardian accompanying her or she must obtain a written permission from her male guardian before she could travel abroad and cannot obtain a commercial license without first hiring a male manager, preferably a relative. These restrictions influence adversely the education and employment of Saudi women and certainly, they had a direct bearing on the access of this researcher to the JM's data.

2. *Participants and response:* Some government employees did not respond to questions concerning the assessment of the effectiveness of the selected municipal services in the areas where they live. Also for some unspecified reasons, some government departments refused to allow their employees to answer the main questionnaire. In addition, some of the staff and the experts in the JM refused to answer the questions concerning their departments. In general, the JM's staff were very slow in responding to the questionnaires. Some of the staff did not respond at all and those who did had to be reminded repeatedly. This I believe was mainly due to the absence of an environment conducive to research. In a secretive and undemocratic atmosphere, government employees find it difficult to give their view and opinion on the services provided by government. They believe that their views will be considered as criticism of the government and that they will be penalised for such views. Therefore, they refused to respond to the questionnaire.
3. The problems of obtaining the required data from the JM are discussed fully in Chapter 5. The main reason for incomplete data is that the JM does not keep proper records on input and output data. Lack of a central database, inconsistent record keeping and inaccessibility to information concerning the JM's activities were the major reasons why this researcher could not evaluate the efficiency of all the selected services.
4. JM has no clearly defined objectives. The copy of the JM's objectives supplied to this researcher by the JM was exact copy of the municipality functions as stated in article 5 "municipality functions" of Municipalities and Rural Ordinance of 1977

(See section 2.7). It appears that JM is interpreting "the municipality functions" as its objectives.

7.4 Distinctiveness of the Saudi Context

The drop in oil prices in the last decade has led to a growing budget deficit, economic recession and increased unemployment in Saudi Arabia, placing further pressure on the central government to call for comprehensive expenditure restraint and skilful expenditure management. The government has realised the importance of improving the public management, therefore the seventh Five-Year Development Plan launched in 2000 required central & local authorities to deliver services in an effective and efficient manner (Ministry of Planning, 2000).

Two of the holiest Moslem holy places, the holy Ka'abah in Makkaha and the prophet's Mosque in Al-Madinah are situated in Saudi Arabia. Moslem pilgrims and visitors to the two holy mosques from all over the world visit these places throughout the year. This yearly influx of pilgrims, in addition to the rapid increase in the Saudi population (average rate of Saudi population growth is about 3% (Re, 2005)) puts great demands on essential services such as health, transport, telecommunications, education, electricity, water and other municipal services (Ministry of planning, 2000). Since Jeddah is the gateway to Makkaha and Al-Madinah, JM has to bear the burden of providing the additional services. It is therefore more important that the JM find ways and means of providing its services more efficiently and effectively.

In democratic societies, political parties represent societal demands and express both saliency of perceived problems and the preferred direction of the solution of this problem (Pennings, 1998). Saudi Arabia, on the other hand, is an absolute monarchy with no legislature or political parties and the King makes all the major decisions of national importance (Umm-Ulqura, 1992b; Saudi Arabian Information Resources, 2003d). The Saudi government sets five-yearly development plans and provides finance to local authorities, mainly from oil revenues, to accomplish these plans. Saudi citizens do not pay taxes for the services they receive. Instead they pay Zakat, a voluntary modest wealth tax of 2.5% decreed by the religion (The Saudi Network, 2005). Non-Saudi businesses pay corporation tax of up to a maximum of 20% (Economist, 2005). Since the Saudi citizens do not pay taxes for the services they receive, and do not elect their officials (it should be noted that elections for 50% of

the municipal members are taking place currently for the first time in Saudi Arabia), they have no say in the way government spends money. There is virtually no participation of the citizens in decision-making. In comparison to Saudi Arabia, the citizens in the democratic countries pay taxes to their governments to finance public services. Therefore, they can express their views in elections and can hold the elected officials accountable for the way their money is spent. In Saudi Arabia, there is no parliamentary or public accountability. In comparison to the democratic countries, there are no independent bodies in Saudi Arabia that could hold public sector officials accountable for their decisions and actions. Consequently, too often government officials treat information as their personal property, rather than something they hold and maintain on behalf of the people.

It is widely recognised that the openness and accessibility of people to information about the functioning of the government is vital. Although there is now a trend among the Saudi leadership towards advocating more transparency of public organisations and better services, the process is not developing, fast enough as the Saudi bureaucracy is changing slowly. Therefore, attention must be given to regulations to make the accessibility of information a binding responsibility of local authorities. The disclosure of information concerning the functioning of local authorities must be the rule and secrecy an exception. It must be realised that transparency and accountability are the basis of good governance. In spite of the fact that the Five-Year Development Plans impose obligations on government departments in general and municipalities in particular (Ministry of Planning, 2000), JM has taken no initiative to introduce or enforce accountability and transparency in its working. In fact, very little thought is given to the evaluation of the efficiency and effectiveness of government departments. This is a typical example of government issuing orders without providing the appropriate legal framework for accomplishing its goals.

It is not enough for the government to claim that it is working towards improving public management. It must take and implement initiatives to improve the efficiency, effectiveness, transparency and accountability of the public sector. The first steps towards privatization and decentralisation to improve the public sectors are moving very slowly. The election of half of the municipal council members in 2005 is not going to ensure accountability of the officials. The municipal councils should be fully elected (by women as well as men) to be truly representative of the people.

Only then, we could expect a real movement towards a real accountability and transparency. The government should also take appropriate steps towards forming a fully elected Consultative Council. That will lead to weighty actions towards necessary political and economic reforms in the country that the government is claiming that it is seeking to implement.

Only 10 % of women are employed in Saudi Arabia (International Labour Organization, 1995). This means that Saudi Arabia is not using all the available work force in the country. Improving the efficiency and effectiveness of the public sector requires best usage of human resources and the Saudi government must work towards achieving this goal in the shortest possible time. The development policies of 1970s and 1980s on education, urbanization and modernization had profound effect on the society as a whole, and in particular, placed women in public positions where, culturally and traditionally, they were not supposed to be. Consequently, they brought closely held religious and cultural values into question. Nevertheless, the fact remains that because of religious and cultural barriers, female participation in the national development is very low. Saudi Arabia must face the challenge of accepting women as a viable economic force. Full utilisation of the female work force will reduce the dependence on the foreign work force, which will in turn reduce the burden on public agencies that provide essential services. Changes to women's rights are occurring but only at a snail's pace. As discussed in chapter 2, more women are speaking out for their involvement in decision-making processes and participation in the affairs of the nation (Arab Women Connect, 2004). However, the fact remains that most Saudi women are effectively voiceless and that has been confirmed with the exclusion of women from the limited municipal elections held in 2005 in the Kingdom.

7.5 Recommendations

In the light of changing social and economic conditions, local authorities are under increasing pressure to demonstrate transparent government practices and accountability, providing the community with access to information and delivering efficient and responsive customer services. For an effective method of managing the information, a database for comprehensive records and decision-making processes is essential for JM to achieve its commitments to the community and the Government. Improving efficiency and effectiveness depends on improving the quality of the JM management. In the light of the findings of this research, the following recommendations are made for the improvement of the efficiency and effectiveness of municipal services in particular and public services in Saudi Arabia in general:

1. Efficient and effective delivery of services requires a political culture characterised by transparency and accountability in the municipalities. Mismanagement and fraud harm economic development. Therefore, it is very important that Government officials should be accountable. Thus, a specified framework of accountability should be established. The government should introduce legislation and initiatives to enforce public officials to be accountable for their decisions and actions. Government bodies should be held responsible for their administrative and financial actions. It should be very clear who is going to be accountable, for what, to whom and how that accountability is to be discharged. Public hearings and committees should be introduced to assess the decisions and accomplishments of governmental departments as in most OECD countries. The Saudi Government's decision to hold elections for local council members and some of the members of Majlis Ash-Shura is an important first step towards accountable government. Elected Mayors of municipalities will be more sensitive to issues of public accountability that would lead to improvement of the efficiency and effectiveness of the municipalities.
2. Accountable government depends upon complete, accurate and legally verifiable records. Without reliable records, officials cannot be held accountable and fraud cannot be prosecuted. Transparency is a very important step towards having officials answerable and accountable for their decisions and actions. Government institutions in Saudi Arabia in general are highly influenced by very strong traditions of withholding information. Therefore, the Saudi Government should

introduce Freedom of Information Acts and commit itself to providing information to public as it is done in most OECD countries. The people should have a right of access to information about government departments' objectives, the way they are accomplished and statistical data. In addition, transparency will prevent delay or unjust handling of civil affairs, which will increase the credibility of the government. Thus, access to information should be the rule and secrecy the exception. JM suffers from lack of transparency. It must create an open and transparent policy-making process. Detailed data and statistics of activities, performance and comparative data for all municipalities in the Kingdom should be published. In addition, all public plans and results of ministerial performances, including expenditures records should be published.

3. The Saudi government should consider introducing taxes and some of the revenues should be used to improve public services. When people pay taxes, they would demand a say in the way their money is spent through their elected members. Thus, there would be an indirect pressure on the government to introduce democracy in Saudi Arabia.
4. Effective management of complex services requires proper financial records. These records should be available to academic researchers or other institutes. They could be used for evaluation of the efficiency of services, inter-period comparisons within a local authority and/or local authority to local authority financial performance comparisons.
5. JM has no system of assessing the efficiency and effectiveness of the services it provides to the citizens. JM - and indeed all municipalities - should create central databases that could be used for the evaluation of services. Improved information and technology management system would promote a knowledge-based community:
   a. JM should establish a management information system to monitor costs and outputs regularly.
   b. JM should keep complete and detailed data and statistics of its activities and performance if it is to improve its management functions, especially planning and controlling.
   c. Detailed data and statistics of JM's activities, performance data and comparative data for JM should be published annually.

6. In order to evaluate the effectiveness of JM's services, goals and objectives of each municipal service should be clear and the stated goals should be measurable.
7. The objectives within JM should be cascaded within departments so that the objectives of JM as a whole are converted into specific objectives for sub-units and then for individuals. Detailed and defined objectives of each department are very important for the purpose of effective evaluation of JM's services by the government and/or by the public.
8. All services should be meticulously planned so as to increase their efficiency and effectiveness.
9. Introduce Benchmarking tools by setting standards of performance which JM is expected to achieve. Each department of JM should set up performance indicators for measuring the achievements of its objectives and also to give responsible bodies an indication and overview of its performance. This could be used in setting policy and allocating resources. The standards of performance should be published. The publication of performance standards ought to motivate JM's staff and demonstrate commitment to improving the service provided. In addition, information of an organisation's performance against the standard can be used as monitoring tool by its principal ministers. Benchmarking can be used to assess the performance objectively, exposing areas where improvement is needed, by identifying other organisations with processes resulting in superior performance, with a view to their adoption. It can test whether improved programs have been successful. Therefore, the Benchmarking approach offers good prospects for identifying inefficiency and ineffectiveness in the areas investigated.
10. Delegation of service delivery makes officials and their departments more responsive to the needs of the people. Decentralization eliminates layers of bureaucracy and avoids the imposition of policies designed with only national political objectives. Thus, more authority should be delegated to the departments and to sub-municipalities, to make them more flexible as this will result in greater efficiency and effectiveness.
11. Competition should be introduced in the form of contracted-out services, because competition will bring down costs dramatically and should raise the quality of the provided services.

12. To increase the efficiency of the provided services JM should seek to minimise the resources needed to provide services to specified standards; internal rules and regulations should be simplified and human resources should be trained.
13. MOMARA[1] should establish an external specialised body to assess the efficiency and the effectiveness of services provided by the main municipalities (similar to the National Audit Office (NAO) and the Audit Commission (AC) in Britain).
14. The central follow-up unit in JM should start to look at efficiency and effectiveness as well as probity as audit bodies in UK experience, which were initially concerned only with probity and then extended their remits to efficiency and effectiveness. The National Audit Office (NAO) in the UK is the best example, which was established by the National Audit Act 1983 to replace the Exchequer and Audit Department (National Audit Office, 2004b). As discussed in Chapter 3, the follow-up unit can examine and report on the economy, efficiency and effectiveness of public spending.
15. JM should take the initiative to introduce e-government so that the citizens could monitor handling of their applications through the internet whenever they want, which will increase the efficiency and effectiveness of these departments.
16. In order to provide the inhabitants with good quality services, a research department at the JM should be established to carry out studies concerning inhabitants' needs and the development of municipal services. The municipality should base its objectives and plans upon these studies.

The researcher realises that some of these recommendations are very ambitious and require both political support and commitment at the highest level to put them into effect. The framework of transparency and accountability should be incorporated into laws and administrative practices. Political commitment must be accompanied by an operationally effective implementation agency with sufficient prestige and authority as well as the necessary intellectual and technical capacity to formulate and execute the reform programme.

There is a close relationship between democracy, accountability and transparency. Many of the answers to the questionnaires reflect aspirations for transparent, accountable and performance-based assessment of local authorities. Citizens expect their local authorities to conduct business in a correct and equitable

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[1] Ministry of Municipal and Rural Affairs which is responsible for all municipalities in the kingdom

manner. This study should serve as a wake-up call for local authorities in Saudi Arabia in general and Jeddah Municipality in particular, in terms of quality of services they provided for the citizens.

7.6 The Contribution of the Research

A survey of Saudi literature showed a glaring lack of any research work concerning the efficiency and effectiveness of services provided by the municipalities in Saudi Arabia. Saudi local authorities have no system of assessing the services they provide to the citizens. The dual problems of the absence of a standardised set of criteria and the lack of existing data for performance evaluation present a serious obstacle to improvements in services. Therefore, this is a pioneering study of efficiency and effectiveness in the Saudi context. In addition, this study is the first of its kind to use Delphi Technique in the Saudi administration environment in general to generate efficiency and effectiveness criteria for the assessment of services provided by a Saudi local authority. This research provides recommendations for the assessment of efficiency and effectiveness of the JM services in particular, other Saudi municipalities, public and private sectors in general. Local authorities in Saudi Arabia resemble each other in terms of their political, social and economic environments. Other key characteristics such as institutional history, demographics, resources and services provided are also similar. These similarities will facilitate the transferability of recommendations of this research work to other municipalities in the Kingdom. In addition to the Jeddah Municipality, several other public and private institutions would benefit from the established criteria that could be used to assess the efficiency and effectiveness of their services. This study highlights glaring deficiencies in the working of the JM and opens up the whole field for other researchers to engage themselves in finding ways to improve and maximise the efficiency and effectiveness of the delivery of the JM's services. Indeed other Arab countries could also benefit from such studies as the problem of inefficiency, ineffectiveness and lack of accountability and transparency in the working of most municipalities in the Arab world is common.

Delphi Technique could be used by the JM and other public and private organizations to facilitate problem-solving, planning, and decision-making, to generate consensus judgment among a panel of geographically scattered experts. It is

particularly useful when the problem is not susceptible to analytical techniques. Furthermore, this study proposes ways to enhance the efficiency and effectiveness of an organisations (see sections 7.2.2 and 7.2.3), which could be used to measure how well JM, other municipalities, organisations in the public or private sectors are working towards efficiency and effectiveness.

This study emphasises to JM and other government organisations, the importance of building effective, accountable, and transparent systems to deliver services efficiently and effectively by using different techniques of NPM that have been successfully introduced in OECD counties to improve their public sector (Chapter 3 section 3.4). This research shows the need for the JM to be more responsive to customers' needs. It encourages JM to adopt the private-sector techniques used in western democracies, particularly in Britain, in order to deliver services that are more efficient. It suggests setting up of benchmarking techniques that could be used to measure the standard of the efficiency and effectiveness of services and to use information and communication technologies to deliver services more efficiently. It encourages government to take initiatives to reduce costs and to establish external and independent audit bodies to evaluate, audit, and measure the efficiency and effectiveness of public organisations in order to ensure greater transparency and accountability. This research assumes a greater importance and intends to provide a stimulus for other researchers in the field to assess the efficiency and effectiveness of organisations that are providing essential services to the public.

This research exposes the absence of information on efficiency and effectiveness, and highlights the absence of a central database at the JM and proposes that the central government should introduce appropriate legislation as in OECD countries to enjoin local authorities to keep proper records that could be accessed by academic researchers, public officials and other experts in local administration. Records are an indispensable foundation for effective accountability. Without reliable records, local authorities cannot ensure transparency, guarantee accountability or exercise good governance. The success of the Government's current Seventh Five-Year Plan - and future development plans for that matter which call for greater efficiency in the delivery of services to the citizens - depends on an appropriate statutory framework for transparency and accountability.

Although, it is beyond the scope of this research to provide an exhaustive insight into the working of local authorities in Saudi Arabia, this case study has highlighted

a number of issues that policy makers should carefully consider in order to cut costs, improve services, and to satisfy public demands for responsive services.

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APPENDIX 1

The Main Questionnaire-Statistical Analysis

By using a statistical computer program (SPSS), a statistical analysis technique is used to analyse the research questionnaires, which were designed to collect the data from a random sample. These questionnaires are designed to assess the effectiveness of the municipal services by surveying:

a. Beneficiaries of the services.
b. Experts on local administration in Jeddah City.
c. Staff of the General Department for Environmental Hygiene.
d. Staff of the General Department for Construction Planning.
e. Staff of the General Department for Parks and Beautification.

The following methods were used to analyse the data collected by the questionnaires.

a. Frequency tables, which include the frequencies and percentages.
b. Calculating the Weighted Arithmetic Mean "W.A.M" for the parts which contain questions near to the "Likert Type Scale", by giving each concept a weight suitable to its importance namely;

- The concept "very large degree" takes a weight of 5
- The concept "large degree" takes a weight of 4
- The concept "reasonably large degree" takes a weight of 3
- The concept "small degree" takes a weight of 2
- The concept "not at all" takes a weight of 1

Also,

- The concept "excellent" takes a weight of 5
- The concept "very good" takes a weight of 4
- The concept "good" takes a weight of 3
- The concept "bad" takes a weight of 2
- The concept "very bad" takes a weight of 1

Also,

- The concept "very easy" takes a weight of 5
- The concept "easy" takes a weight of 4
- The concept "reasonably easy" takes a weight of 3
- The concept "difficult" takes a weight of 2
- The concept "very difficult" takes a weight of 1

Also,

- The concept "all districts" takes a weight of 5
- The concept "most of the districts" takes a weight of 4
- The concept "half of the districts" takes a weight of 3
- The concept "few districts" takes a weight of 2
- The concept "very few districts" takes a weight of 1

The assessments of services are divided into categories (first, second, third, fourth, and fifth) according to the "Weighted Arithmetic Mean" for each concept which reflect the assessment of the concerned service. If the "Weighted Arithmetic Mean" was:

- From 4.2 to 5 then the answer related to "very large degree", "excellent", "very easy" or "all districts".
- From 3.4 to 4.19 then the answer related to "large degree", "very good", "easy" or "most of the districts".
- From 2.6 to 3.39 then the answer related to "reasonably large degree", "good", "reasonably easy" or "half of the districts".
- From 1.8 to 2.59 then the answer related to "small degree", "bad", "difficult", or "few districts".
- From 1 to 1.79 then the answer related to "not at all", "very bad", "very difficult" or "very few districts".

The "Weighted Arithmetic Mean", was calculated using the following formula:

$$\bar{x}_w = \frac{\sum_{r=1}^{n} fw_r}{n}$$

Where:

f = Frequency for every measure.

w = Weight or importance.

n = Sample size.

APPENDIX 2

Results of the Questionnaire for Assessing the Effectiveness of JM Services by Beneficiaries of the Services

A. The Demographic Characteristics of the Sample

Table A2.1 The Sample Distributed by Gender

Gender	Freq.	%
Male	319	63.8
Female	174	34.8
Didn't say	7	1.4
Total	**500**	**100.0**

Table A2.2 The Sample Distribution by Age

Range	Freq.	%
20 – 25	103	20.6
26 – 30	139	27.8
31 – 35	72	14.4
36 – 40	63	12.6
41 – 45	67	13.4
46 – 50	29	5.8
51 – 55	7	1.4
56 – 60	2	.4
61 – 70	7	1.4
Didn't say	11	2.2
Total	**500**	**100.0**

Table A2.3 The Sample Distribution According to Marital Status

Status	Freq.	%
Married	346	69.2
Single	128	25.6
Didn't say	26	5.2
Total	**500**	**100**

Table A2.4 The Sample Distribution According to the Job

Job	Freq.	%
Employee	136	27.2
Teacher	113	22.6
University students	87	17.4
Engineer	11	2.2
Accountant	8	1.6
Housewife	8	1.6
Merchant	5	1.0
Librarian	4	.8
Others	128	25.6
Total	**500**	**100.0**

Table A2.5 The sample distribution according to area where they live

JM's Branch	Freq.	%
Al-Mattar	110	22.0
Al-Jamaa	84	16.8
Khuzam	60	12.2
Al-Azizia	54	10.8
Jeddah-Al-Jadida	50	10.0
Al-Janoubia	33	6.6
Ubhor[1]	28	5.6
Briman	28	5.6
Umm-Al-Sallam	27	5.4
Al-Balad[2]	13	2.6
Al-Shirafia[3]	11	2.2
Dhahban[4]	-	-
Towal[5]	-	-
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.6 The Sample Distribution According to the Type of Accommodation

Type of Accommodation	Freq.	%
Private accommodation	249	49.8
Private compound	85	17.0
Public compound	78	15.6
Other	72	14.4
Didn't say	16	3.2
Total	**500**	**100.0**

Table A2.7 The Sample Distribution According to Accommodation Ownership

Owner-ship of the accommodation	Freq.	%
Landlord	242	48.8
Tenant	242	48.8
Didn't say	16	3.2
Total	**500**	**100.0**

[1] Outskirts district.
[2] Mainly commercial area
[3] Residential and commercial area
[4] Outskirts district
[5] Outskirts district

B. Results of the Assessment

B.1 Maintaining Environmental Hygiene Safety

B.1.1 Health Protection Services

Table A2.8 The Opinions of the Sample as to the Extent to Which JM Adheres to Defined Criteria to Achieve Health Protection for Jeddah City

Opinion	Freq.	%
Very large degree	17	3.4
Large degree	58	11.6
Reasonably Large degree	246	49.2
Small degree	129	25.8
Not at all	47	9.4
Didn't say	3	.6
Total	**500**	**100.0**
W.A.M		**2.74**

Table A2.9 The Opinions of the Sample as to the Extent to Which JM Introduces Health Protection Criteria to the Inhabitants' of Jeddah City

Opinion	Freq.	%
Very large degree	6	1.2
Large degree	37	7.4
Reasonably large degree	135	27.0
Small degree	167	33.4
Not at all	153	30.6
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.15**

Table A2.10 The Opinion of the Sample about the Extent to Which the Services of Health Protection Achieved Their Objectives

Opinion	Spraying garbage		Elimination of rodents		Extermination of stray dogs and cats		Filling up of land depressions and ponds	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	30	6.0	21	4.2	72	14.4	26	5.2
Large degree	91	18.2	53	10.6	122	24.4	55	11.0
Reasonable large degree	167	33.4	126	25.2	119	23.8	126	25.2
Small degree	133	26.6	159	31.8	98	19.6	149	29.8
Did not achieve	77	15.4	138	27.6	85	17.0	141	28.2
Unknown	2	0.4	3	0.6	4	0.8	3	0.6
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.73**		**2.32**		**3.00**		**2.36**

Table A2.11 The Opinions of the Sample as to the Extent to Which the Health Protection Services Fulfil the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	7	1.4
Large degree	49	9.8
Reasonably Large degree	183	36.6
Small degree	169	33.8
Not at all	90	18.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.43**

Table A2.12 The Opinions of the Sample as to Whether They Think That There are Additional Services, Which Should Be Carried out by JM in Order to Achieve Health Protection for Jeddah City

Opinion	Freq.	%
Yes	339	67.8
No	159	31.8
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.13 The Services Which the Sample Think That They Should Be Carried out by JM in Order to Achieve Health Protection Services

The services which the sample think that they should be carried out by JM in order to achieve health protection services
• Introduce hygiene awareness among the public.
• Supervise all the provided health protection services and all general cleaning services to ensure that these services are carried out properly and to ensure as well that they are provided to all districts, particularly the areas in most need of these services.
• Improve the standard of the existing health protection services and ensure that they are of a good enough standard to deal with the areas which the service is directed at such as (elimination of rats, crows, stray animals and insects / filling up all land depressions & ponds / supervision of all restaurants, food substances, butchery shops & vegetable markets / spray garbage containers).
• Close up open sewers.
• Maintain environmental hygiene by stopping the use of drain water to irrigate trees in Jeddah City and stop the dumping of drainage water into the sea.
• Maintain the existing drainage system and establish a drainage system network, which would cover all of Jeddah City.

Table A2.14 The Sample's Overall Assessment concerning Health Protection Services

Opinion	Freq.	%
Excellent	4	0.8
Very good	51	10.2
Good	218	43.6
Bad	164	32.8
Very bad	61	12.2
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.54**

B.1.2 General Cleaning Services

Table A2.15 The Opinions of the Sample as to the Extent to Which JM Adheres Defined Criteria to Maintain Cleanliness of Jeddah City

Opinion	Freq.	%
Very large degree	13	2.6
Large degree	86	17.2
Reasonably Large degree	231	46.2
Small degree	133	26.6
Not at all	35	7.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.82**

Table A2.16 The Opinions of the Sample as to How Often JM Carries out the Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construction waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Daily	336	67.2	130	26.0	15	3.0	14	2.8	228	45.6	58	11.6
Weekly	67	13.4	78	15.6	43	8.6	20	4.0	90	18.0	86	17.6
Monthly	77	15.4	90	18.0	151	30.2	219	43.8	128	25.6	202	40.4
Yearly	6	1.2	14	2.8	155	31.0	160	32.0	15	3.0	111	22.2
Didn't know	11	2.2	182	36.4	131	26.2	83	16.6	33	6.6	41	8.2
Didn't say	3	0.6	6	1.2	5	1.0	4	0.8	6	1.2	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**

Table A2.17 The Opinions of the Sample as to Whether They Think That There Are Additional Services That Should Be Carried out by JM to Improve the Cleanliness of the City

Opinion	Freq.	%
Yes	303	60.6
No	195	93.0
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.18 The Additional Services That the Sample Suggested to Improve the Cleanliness of Jeddah City

The additional important activities that the sample suggested to improve the cleanliness of Jeddah City
a. Improve the standard of existing general cleaning services such as collection of garbage, cleaning main roads & streets. These services should be provided daily and services such as the removal of scrapped vehicles, trees waste and construction waste should not be neglected.
b. Re-organise the way general cleaning services are provided.
c. Provide bigger containers, increase the number of containers and provide specialised containers for each type of garbage and waste. Provide covers for garbage containers.
d. Penalise people who throw litter on roads and streets.
e. Reward clean districts.
f. Provide ways or means of using providers of general cleaning services in emergency cases.
g. Provide a channel for inhabitants to voice their complaints if any.
h. JM should be more concerned with slum areas and the same services as other areas in the city should be provided to these areas.

Table A2.19 The Opinions of the Sample as to Whether the Provided Services Fulfilled the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	4	0.8
Large degree	62	12.4
Reasonably Large degree	242	48.4
Small degree	146	29.2
Not at all	43	8.6
Didn't say	3	0.6
Total	**500**	**100.0**
W.A.M		**2.67**

Table A2.20 The Opinions of the Sample as to the Extent to Which the Inhabitants Are Satisfied with the General Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construction waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	65	13.0	21	4.2	9	1.8	12	2.4	91	18.2	25	5.0
Large degree	107	21.4	76	15.2	32	6.4	29	5.8	117	23.4	71	14.2
Reason-ably large degree	144	28.8	155	31.0	93	18.6	91	18.2	155	31.0	88	17.6
Small degree	123	24.6	176	35.2	167	33.4	180	36.0	86	17.2	167	33.4
Not at all	59	11.8	68	13.6	194	38.8	183	36.6	48	9.6	147	29.4
Didn't say	2	0.4	4	0.8	5	1.0	5	1.0	3	0.6	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.99**		**2.61**		**1.98**		**2.00**		**3.24**		**2.32**

Table A2.21 The Sample's Overall Assessment concerning the General Cleaning Services

Opinion	Freq.	%
Excellent	9	1.8
Very good	83	16.6
Good	267	53.4
Bad	119	23.8
Very bad	20	4.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.88**

Table A2.22 The Opinions of the Sample as to the Extent to Which JM Supervises the General Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construction waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	26	5.2	15	3.0	8	1.6	12	2.4	73	14.6	12	2.4
Large degree	97	19.4	78	15.6	31	6.2	32	6.4	164	32.8	63	12.6
Reason-ably large degree	196	39.2	190	38.0	131	26.2	126	25.2	140	28.0	139	27.8
Small degree	126	25.2	164	32.8	211	42.2	188	37.6	87	17.4	180	36.0
Not at all	53	10.6	50	10.0	114	22.8	137	27.4	32	6.4	104	20.8
Didn't say	2	0.4	3	0.6	5	1.0	5	1.0	4	0.8	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.83**		**2.69**		**2.21**		**2.18**		**3.32**		**2.40**

Table A2.23 The Opinions of the Sample as to the Extent to Which the Supervision of the General Cleaning Services Fulfil the Inhabitants' Needs

Opinion	Collecting garbage		Collecting commercial waste		Collecting construction waste		Removal of scrapped vehicles		Cleaning main roads		Cleaning streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	41	8.2	16	3.2	9	1.8	11	2.2	67	13.4	15	3.0
Large degree	114	22.8	89	17.8	26	5.2	27	5.4	154	30.8	66	13.2
Reason-ably large degree	166	33.2	166	33.2	134	26.8	130	26.0	153	30.6	125	25.0
Small degree	109	21.8	151	30.2	167	33.4	163	32.6	76	15.2	136	27.2
Not at all	68	13.6	75	15.0	159	31.8	163	32.6	47	9.4	155	31.0
Didn't say	2	0.4	3	0.6	5	1.0	6	1.2	3	0.6	3	0.6
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.90**		**2.64**		**2.11**		**2.11**		**3.24**		**2.30**

Table A2.24 The Sample's Overall Assessment concerning the Supervision of General Cleaning Services

Opinion	Freq.	%
Excellent	8	1.6
Very good	75	15.0
Good	255	51.0
Bad	141	28.2
Very bad	19	3.8
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.82**

B.2 Construction Planning of Jeddah City

B.2.1 Construction of the City

Table A2.25 The Opinions of the Sample as to How Jeddah City Is Built

Opinion	Freq.	%
According to clear and defined construction plans	110	22.0
Unplanned construction plans	32	6.4
Some areas are built according to defined and clear plans. Some areas are built without following any plan	358	71.6
Total	**500**	**100.0**

Table A2.26 The Opinions of the Sample as to the Essential Services Which Are Provided in the District Where the Sample Live

Opinion	Electricity		Water		Drainage system	
	Freq.	%	Freq.	%	Freq.	%
Yes	487	97.4	405	81.0	206	41.2
No	11	2.2	93	18.6	292	58.4
Didn't say	2	0.4	2	0.4	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**

Table A2.27 The Opinions of the Sample as to the Other Services That Are Provided Where the Sample Live

Opinion	Mosque		Clinic		Pharmacy		Girls' schools		Boys' schools		Parks and children's playground		Post- office		Super-market	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	486	97.2	351	70.2	421	84.2	428	85.6	415	83.0	101	20.2	158	31.6	439	87.8
No	12	2.4	147	29.4	77	15.4	70	14 0	83	16.6	397	79.4	340	68 0	59	11.8
Didn't say	2	0.4	2	0.4	2	0.4	2	0.4	2	0.4	2	0.4	2	0.4	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**

Table A2.28 The Opinions of the Sample as to Whether There Are Other Services Which JM Should Provide for All Districts

Opinion	Freq.	%
Yes	261	52.2
No	236	47.2
Didn't say	3	0.6
Total	**500**	**100.0**

Table A2.29 Services Which are Suggested by the Sample to Be Provided in All Districts

Services which are suggested by the sample to be provided in all districts
• Complete naming of all streets, roads and districts and numbering all houses and buildings in Jeddah City.
• Use simple and logical schemes for numbering houses and buildings.
• Naming and numbering schemes should make it easier for people to achieve target addresses and to deliver letters.
• Names and numbers should be visible to the inhabitants.
• Benefit from naming and numbering schemes used in the developed countries.
• Provide all essential services to all districts equally (electricity, water, drainage systems and mosques).
• Establish co-ordination between the providers of the essential services such as electricity, water, drainage systems and telephones.
• To maintain the good shape and look of the construction of Jeddah City, colours and heights of all buildings in an area should be similar.
• All construction in the city should be according to defined plans.
• Construction plans for any area should first provide the essential services before allowing building in these areas.
• Construction plans should include the provision of car and bus parks.
• Provide areas for walking and for sports for inhabitants.
• Complete building road network in the city.
• Improve the existing road network of the city
• Enlarge streets where needed, maintain broken roads & streets, and pave all main roads and streets.
• Build bridges where needed.

Table A2.30 The Opinions of the Sample as to the Extent to Which the Construction Plan of Jeddah City Fulfils the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	9	1.8
Large degree	95	19.0
Reasonably Large degree	227	45.4
Small degree	120	24.0
Not at all	47	9.4
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.8**

Table A2.31 The Sample's Overall Assessment concerning the Construction Plan of the Districts Where They Live

Opinion	Freq.	%
Excellent	27	5.4
Very good	103	20.6
Good	225	45.0
Bad	113	22.6
Very bad	30	6.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.97**

Table A2.32 The Overall Assessment of the Sample concerning the Jeddah City Construction Plan

Opinion	Freq.	%
Excellent	28	5.6
Very good	138	27.6
Good	240	48.0
Bad	75	15.0
Very bad	17	3.4
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**3.17**

B.2.2 Traffic Improvements

Table A2.33 The Sample's Assessment concerning Traffic Improvements Services in Jeddah City

Opinion	Providing traffic lights at cross roads		Maintaining the existing traffic lights		Improving cross roads		Improving bends		Improving traffic flow	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Excellent	114	22.8	109	21.8	51	10.2	44	8.8	52	10.4
Very good	142	28.4	135	27.0	104	20.8	87	17.4	107	21.4
Good	182	36.4	186	37.2	202	40.4	205	41.0	193	38.6
Bad	54	10.8	60	12.0	112	22.4	127	25.4	109	21.8
Very bad	4	0.8	6	1.2	27	5.4	30	6.0	37	7.4
Didn't say	4	0.8	4	0.8	4	0.8	7	1.4	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**3.26**		**3.57**		**3.08**		**2.98**		**3.06**

Table A2.34 The Opinions of the Sample as to the Extent to Which the Traffic Improvements Fulfil the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	18	3.6
Large degree	116	23.2
Reasonably Large degree	208	41.6
Small degree	108	21.6
Not at all	48	9.6
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.90**

Table A2.35 The Sample's Overall Assessment concerning the Traffic Improvements

Opinion	Freq.	%
Excellent	35	7.0
Very good	138	27.6
Good	226	45.2
Bad	78	15.6
Very bad	21	4.2
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**3.18**

B.2.3 District and Road Naming & House Numbering

Table A2.36 The Extent to Which the Sample Agree That the Most Important Characteristics for Any Scheme for District and Road Naming & House Numbering Is to Make It Easier to Reach a Target Address and to Deliver Letters

Opinion	Freq.	%
Yes	474	94.8
No	24	4.8
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.37 The Opinions of the Sample as to the Extent to Which the Way the District and Road are Named and the Way Houses Are Numbered Made It Easier to Find a Target Address

Opinion	Naming roads & districts		Numbering houses	
	Freq.	%	Freq.	%
Very easy	35	7.0	33	6.6
Easy	88	17.6	75	15.0
reasonably easy	148	29.6	127	25.4
Difficult	104	20.8	86	17.2
Very difficult	123	24.6	177	35.4
Didn't say	2	0.4	2	0.4
Total	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.61**		**2.40**

Table A2.38 The Opinions of the Sample as to Whether There Are Additional Characteristics Which Any Scheme for District and Road Naming and House Numbering Should Have

Opinion	Freq.	%
Yes	223	44.6
No	275	55.0
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.39 The Opinions of the Sample as to Whether All Districts and Roads in Jeddah City Are Named and Whether All Houses Are Numbered

Opinion	Naming districts & roads		Numbering houses	
	Frequency	%	Frequency	%
Yes	39	7.8	14	2.8
No	219	43.8	253	50.6
Did not know	239	47.8	230	46.0
Didn't say	3	0.6	3	0.6
Total	500	100.0	500	100.0

Table A2.40 The Opinions of the Sample as to the Extent to Which District and Road Naming and House Numbering in Jeddah City Fulfils the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	15	3.0
Large degree	72	14.4
Reasonably Large degree	146	29.2
Small degree	139	27.8
Not at all	126	25.2
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**2.42**

Table A2.41 The sample's overall assessment concerning district and road naming and house numbering in Jeddah City

Opinion	Naming districts & roads		Numbering houses	
	Freq.	%	Freq.	%
Excellent	26	5.2	26	5.2
Very Good	100	20.0	57	11.4
Good	201	40.2	186	37.2
Bad	121	24.2	152	30.4
Very bad	50	10.0	76	15.2
Didn't say	2	0.4	3	0.6
Total	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.86**		**2.61**

B.3 Maintaining Roads and Drainage System

Table A2.42 The Opinions of the Sample as to Whether There Is a Draining System for Rainwater in the Districts Where the Sample Live

Opinion	Freq.	%
Yes	259	51.8
No	239	47.8
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.43 The Opinions of the Sample as to Whether Rainwater Accumulates on Roads and Streets in Jeddah City

Opinion	Freq.	%
Yes	493	98.6
No	5	1.0
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.44 The Opinions of the Sample as to the Amount of Rainwater Which Accumulates on Roads and Streets in Jeddah City

Opinion	Freq.	%
Too much water that affects the traffic flow	360	73.0
Too much water but does not accumulate or affect traffic flow	113	22.9
Little water	9	1.8
Very little	11	2.3
Total	**500**	**100.0**

Table A2.45 The Opinions of the Sample as to Whether Rainwater Accumulates in the Area Where They Live

Opinion	Freq.	%
Yes	444	88.8
No	54	10.8
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.46 The Opinions of the Sample as to Whether JM Clears the Rainwater Which Accumulates in the Area Where They Live

Opinion	Freq.	%
Yes	355	71.0
No	143	28.6
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.47 The Opinions of the Sample as to How Quickly JM Clears Accumulated Water

Opinion	Freq.	%
Very short time	8	2.3
Short time	83	23.4
Long time	176	49.5
Very long Time	88	24.8
Total	**355**	**100.0**

Table A2.48 The Opinions of the Sample as to Whether Rain Damages Roads and Streets in Jeddah City

Opinion	Freq.	%
yes	483	96.6
No	15	3.0
Didn't say	2	0.4
Total	**500**	**100.0**

Table A2.49 The Opinions of the Sample as to the Extent to Which the Drainage System in Jeddah City Fulfils the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	3	0.6
Large degree	12	2.4
Reasonably Large degree	75	15.0
Small degree	133	26.6
Not at all	275	55.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**1.66**

Table A2.50 The Overall Assessment of the Sample concerning the Services of the Drainage System in Jeddah City

Opinion	Freq.	%
Excellent	3	0.6
Very good	19	3.8
Good	97	19.4
Bad	191	38.2
Very bad	188	37.6
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**1.91**

B.4 Tree Planting and City Beautification

Table A2.51 The Opinions of the Sample as to Whether JM Follows Clear and Defined Programs to Provide Tree Planting & City Beautification Services

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	19	3.8	17	3.4	54	10.8	8	1.6	42	8.4	27	5.4
Large degree	89	17.8	75	15.0	169	33.8	36	7.2	130	26.0	60	12.0
Reasonably Large degree	204	40.8	178	35.6	164	32.8	109	21.8	168	33.6	176	35.2
Small degree	95	19.0	128	25.6	84	16.8	164	32.8	110	22.0	137	27.4
Not at all	90	18.0	100	20.0	27	5.4	181	36.2	47	9.4	98	19.6
Didn't say	3	0.6	2	0.4	2	0.4	2	0.4	3	0.6	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.70**		**2.56**		**3.28**		**2.05**		**3.02**		**2.56**

Table A2.52 The Opinions of the Sample as to the Extent to Which Tree Planting & City Beautification Services Fulfil the Inhabitants' Needs

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	19	3.8	16	3.2	42	8.4	9	1.8	38	7.6	28	5.6
Large degree	82	16.4	69	13.8	140	28.0	33	6.6	116	23.2	53	10.6
Reasonably Large degree	193	38.6	177	35.4	178	35.6	126	25.2	163	32.6	154	30.8
Small degree	108	21.6	130	26.0	97	19.4	145	29.0	121	24.2	156	31.2
Not at all	96	19.2	105	21.0	36	7.2	183	36.6	57	11.4	106	21.2
Didn't say	2	0.4	3	0.6	7	1.4	4	0.8	5	1.0	3	0.6
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.64**		**2.52**		**3.11**		**2.07**		**2.91**		**2.48**

Table A2.53 The Assessment of the Sample of Tree Planting & City Beautification Services

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	26	5.2	24	4.8	45	9.0	14	2.8	49	9.8	30	6.0
Large degree	95	19.0	68	13.6	156	31.2	38	7.6	115	23.0	66	13.2
Reasonably Large degree	222	44.4	222	44.4	215	43.0	142	28.4	222	44.4	204	40.8
Small degree	90	18.0	119	23.8	53	10.6	179	35.8	73	14.6	120	24.0
Not at all	64	12.8	65	13.0	26	5.2	124	24.8	36	7.2	78	15.6
Didn't say	3	0.6	2	0.4	5	1.0	3	0.6	5	1.0	2	0.4
Total	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**	**500**	**100.0**
W.A.M		**2.86**		**2.73**		**3.28**		**2.27**		**3.14**		**2.7**

Table A2.54 The Opinions of the Sample as to Whether There are Additional Tree Planting & City Beautification Services That Should be Carried out by JM

Opinion	Freq.	%
Yes	260	52.0
No	237	47.4
Didn't say	3	0.6
Total	**500**	**100.0**

Table A2.55 Services Which the Sample Thought Should be Carried out by JM to Achieve the Objectives of Tree Planting and City Beautification

Services which the sample thought should be carried out by JM to achieve the objectives of tree planting & city beautification
• Educate people about the importance of planting trees in the city.
• Establish more parks and children's playgrounds, enlarge the existing parks and maintain them.
• Provide parks with toilets, lights and seats.
• Plant trees in all roads and streets.
• Expand green and planted areas in the city and maintain them.
• Prune trees on roadsides and in districts and parks.
• Invite the private sector to help in beautifying and planting trees in the city.
• Invite inhabitants to plant trees in front of their houses.
• Penalise people who misuse public parks.

Table A2.56 The Sample's Overall Assessment Concerning Tree Planting & City beautification Services

Opinion	Freq.	%
Excellent	27	5.4
Very good	108	21.6
Good	244	48.8
Bad	99	19.8
Very bad	20	4.0
Didn't say	2	0.4
Total	**500**	**100.0**
W.A.M		**3.05**

APPENDIX 3

Results of the Questionnaire for Assessing the Effectiveness of JM Services by Experts on Local Administration

A. The Demographic Characteristics of the Sample

Table A3. 1 The Sample Distributed According to Their Current Jobs

Job	Freq.	%
Professor	1	9.1
Associate professor	2	18.2
Assistant professor	3	27.2
Confidential affairs manager	1	9.1
Public relations manager	1	9.1
District services general manager	1	9.1
Civil engineer	1	9.1
Didn't say	1	9.1
Total	**11**	**100.0**

Table A3. 2 The Sample Distribution According to the District Where They Live

JM's Branch	Freq.	%
Al-Mattar	4	36.3
Al-Balad	1	9.1
Al-Janoubia	2	18.2
Khuzam	1	9.1
Briman	2	18.2
Didn't say	1	9.1
Total	**11**	**100.0**

B. Results of the Assessment

B.1 Maintaining Environmental Hygiene Safety

B.1.1 Health Protection Services

Table A3. 3 The Opinions of the Sample as to the Extent to Which JM Adheres to Defined Criteria to Achieve Health Protection in Jeddah City

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	7	63.6
Small degree	4	36.4
Not at all	-	-
Total	**11**	**100.0**
W.A.M.		**2.64**

Table A3. 4 The Opinions of the Sample as to the Extent to Which JM Introduces Health Protection Criteria to the Inhabitants

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	-	-
Small degree	6	64.5
Not at all	5	45.5
Total	**11**	**100.0**
W.A.M.		**1.56**

Table A3. 5 The Opinion of the Sample about the Extent to Which the Services of Health Protection Achieved Their Objectives

Opinion	Spraying garbage		Elimination of rodents		Extermination of stray dogs and cats		Filling up of land depressions and ponds	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	-	-	-	-	-	-	-	-
Large degree	1	9.1	1	9.1	5	45.4	1	9.1
Reasonable large degree	3	27.3	4	36.3	3	27.3	5	45.4
Small degree	5	45.4	3	27.3	2	18.2	3	27.3
Did not achieve	2	18.2	3	27.3	1	9.1	2	18.2
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**2.27**		**2.27**		**3.09**		**2.45**

Table A3. 6 The Opinions of the Sample as to the Extent to Which the Health Protection Services Fulfilled the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	2	18.2
Small degree	7	63.6
Not at all	2	18.2
Total	**11**	**100.0**
W.A.M.		**2.00**

Table A3. 7 The Opinions of the Sample as to Whether They Think That There Are Additional Services, Which Should Be Carried out by JM in Order to Achieve Health Protection

Opinion	Freq.	%
Yes	10	90.9
No	1	9.1
Total	**11**	**100.0**

The experts' suggestions about the important services that should be carried out by JM to achieve health protection for Jeddah City are the same as the suggestions of the beneficiaries of the services.

Table A3. 8 The Sample's Overall Assessment of Health Protection Services

Opinion	Freq.	%
Excellent	-	-
Very Good	-	-
Good	3	27.3
Bad	7	63.6
Very bad	1	9.1
Total	**11**	**100.0**
W.A.M.		**2.18**

B.1.2 General Cleaning Services

Table A3. 9 The Opinions of the Sample as to the Extent to Which JM Follow Defined Criteria to Maintain Cleanliness of Jeddah City

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	7	63.6
Small degree	4	36.4
Not at all	-	-
Total	**11**	**100.0**
W.A.M.		**2.69**

Table A3. 10 The Opinions of the Sample as to How Often JM Carries out Cleaning Services

Opinion	Collecting garbage		Collecting commercial waste		Collecting construction waste		Removal of scrapped vehicles		Cleaning main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Daily	7	63.6	4	36.4	-	-	-	-	3	27.2	2	18.2
Weekly	3	27.3	1	9.1	-	-	-	-	3	27.3	1	9.1
Monthly	1	9.1	2	18.1	5	45.5	6	54.5	5	45.5	1	9.1
Yearly	-	-	1	9.1	4	36.4	5	45.5	-	-	5	45.5
Did not know	-	-	3	27.3	2	18.1	-	-	-	-	2	18.1
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**

Table A3. 11 The Opinions of the Sample as to the Extent to Which the Accomplished General Cleaning Services Fulfil the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	1	9.1
Reasonably large degree	4	36.4
Small degree	4	36.3
Not at all	2	18.2
Total	**11**	**100.0**
W.A.M.		**2.36**

Table A3. 12 The Opinions of the Sample as to Whether They Think That There Are Additional Services That Should Be Carried out by JM to Improve the Cleanliness of the City

Opinion	Freq.	%
Yes	6	54.5
No	5	45.5
Total	**11**	**100.0**

The experts' suggestions about the important services that should be carried out by JM to achieve the cleanliness of Jeddah City are similar to the suggestions of the beneficiaries of the services.

Table A3. 13 The Opinions of the Sample as to the Extent to Which the Inhabitants Are Satisfied with the Cleaning Services

Opinion	Collecting garbage		Collecting commercial waste		Collecting construction waste		Removal of scrapped vehicles		Cleaning main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	1	9.1	-	-	-	-	-	-	1	9.0	-	-
Large degree	4	36.4	4	36.4	-	-	-	-	3	27.3	2	18.2
Reason-ably large degree	2	18.1	2	18.1	1	9.0	1	9.0	3	27.3	1	9.1
Small degree	4	36.4	4	36.4	5	45.5	5	45.5	2	18.2	2	18.2
Not at all	-	-	1	9.1	5	45.5	5	45.5	2	18.2	6	45.5
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**3.18**		**2.82**		**1.64**		**1.64**		**2.91**		**1.90**

Table A3. 14 The Sample's Overall Assessment concerning the General Cleaning Services

Opinion	Freq.	%
Excellent	-	-
Very Good	1	9.1
Good	6	54.5
Bad	3	27.3
Very bad	1	9.1
Total	**11**	**100.0**
W.A.M.		**3.30**

Table A3. 15 The Opinions of the Sample as to the Extent to Which JM Supervises the General Cleaning Services

Opinion	Collecting garbage		Collecting commercial waste		Collecting construction waste		Removal of scrapped vehicles		Cleaning main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	1	9.1	-	-	-	-	-	-	1	9.1	-	-
Large degree	1	9.1	-	-	-	-	-	-	3	27.3	1	9.1
Reasonably large degree	5	45.4	7	63.3	4	36.4	2	18.2	4	36.4	1	9.1
Small degree	2	18.2	2	18.2	4	36.4	6	54.5	1	9.1	3	27.3
Not at all	2	18.2	2	18.2	3	27.3	3	27.3	2	18.2	6	54.5
Didn't say	-	-	-	-	-	-	-	-	-	-	-	-
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**Freq.**	**100.0**	**11**	**100.0**
W.A.M.		**2.73**		**24.5**		**2.09**		**1.91**		**3.00**		**1.73**

Table A3. 16 The Opinions of the Sample as to the Extent to Which the Supervision of the General Cleaning Services Fulfils the Inhabitants' Needs

Opinion	Collecting garbage		Collecting commercial waste		Collecting construction waste		Removal of scrapped vehicles		Cleaning main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	1	9.0	-	-	-	-	-	-	1	9.0	-	-
Large degree	3	27.3	-	-	-	-	-	-	3	27.3	1	9.1
Reasonably large degree	3	27.3	7	63.6	4	36.4	3	27.3	4	36.4	1	9.1
Small degree	2	18.2	2	18.2	1	9.1	3	27.3	1	9.1	4	36.4
Not at all	2	18.2	2	18.2	6	54.5	5	45.4	2	18.2	5	45.4
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**2.91**		**2.45**		**1.82**		**1.82**		**3.00**		**1.82**

Table A3. 17 The Sample's Overall Assessment of JM's Supervision of General Cleaning Services

Opinion	Freq.	%
Excellent	-	-
Very Good	-	-
Good	4	36.4
Bad	5	45.5
Very bad	1	9.1
Didn't say	1	9.0
Total	**11**	**100.0**
W.A.M.		**2.30**

B.2 Construction Planning of Jeddah City

B.2.1 Construction of the City

Table A3. 18 The Opinions of the Sample as to How Jeddah City is Built

Opinion	Freq.	%
According to clear and defined construction plans	1	9.1
Unplanned construction plans	1	9.1
Some areas are built according to defined and clear plans. Some areas are built without following any plan	9	81.8
Total	**11**	**100.0**

Table A3. 19 The Opinions of the Sample as to the Essential Services Which are Provided in the District Where They Live

Service	Freq.	Rank
Electricity	11	1
Water	10	2
Drainage system	2	3

Table A3. 20 The Opinions of the Sample as to the Other Services That Provided Where They Live

Service	Freq.	Rank
Mosque	10	1
Supermarket	10	1
Pharmacy	9	2
Female school	8	3
Male school	8	3
Clinic	7	4
Parks and children's playgrounds	3	5
Post- office	2	6

Table A3. 21 The Opinions of the Sample as to Whether There are Additional Services Which JM Should Provide for All Districts

Opinion	Freq.	%
Yes	7	63.6
No	4	36.4
Total	**11**	**100.0**

The experts' suggestion about the important services that should be carried out by JM to achieve the objectives of construction services is similar to the suggestions of the beneficiaries of the services.

Table A3. 22 The Opinions of the Sample as to the Extent to Which the Construction Plans of Jeddah City Fulfil the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	1	9.1
Reasonably large degree	6	54.5
Small degree	2	18.2
Not at all	2	18.2
Total	**11**	**100.0**
W.A.M.		**2.55**

Table A3. 23 The Sample's Overall Assessment concerning Construction Plan for the Districts Where They Live

Opinion	Freq.	%
Excellent	-	-
Very Good	4	36.4
Good	5	45.4
Bad	2	18.2
Very bad	-	-
Total	**11**	**100.0**
W.A.M.		**3.18**

Table A3. 24 The Opinions of the Sample as to the Overall Assessment of the Construction Plans of Jeddah City

Opinion	Freq.	%
Excellent	-	-
Very Good	3	27.3
Good	4	36.4
Bad	3	27.3
Very bad	-	-
Didn't say	1	9.0
Total	**11**	**100.0**
W.A.M.		**3.00**

B.2.2 Traffic Improvements

Table A3. 25 The Sample's Assessment concerning the Traffic Improvements Services in Jeddah City

Opinion	Providing traffic lights at cross roads		Maintaining the existing traffic lights		Improving cross roads		Improving bends		Improving traffic flow	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Excellent	2	18.2	4	36.4	1	9.0	-	-	-	-
Very good	3	27.3	3	27.2	3	27.3	2	18.2	2	18.2
Good	5	45.4	4	36.4	5	45.5	6	54.5	5	45.5
Bad	-	-	-	-	2	18.2	2	18.2	2	18.2
Very bad	1	9.1	-	-	-	-	-	-	1	9.1
Didn't say	-	-	-	-	-	-	1	9.1	1	9.0
Total	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**3.45**		**4.00**		**3.27**		**3.00**		**2.80**

Table A3. 26 The Opinions of the Sample as to the Extent to Which the Traffic Improvements Fulfil the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	2	18.2
Reasonably large degree	7	63.6
Small degree	1	9.1
Not at all	1	9.1
Total	**11**	**100.0**
W.A.M.		**2.91**

Table A3. 27 The Sample's Overall Assessment concerning Traffic Improvements

Opinion	Freq.	%
Excellent	-	-
Very Good	2	18.2
Good	8	72.7
Bad	-	-
Very bad	1	9.1
Total	**11**	**100.0**
W.A.M.		**3.00**

B.2.3 District and Road Naming & House Numbering

Table A3. 28 The Extent to Which the Sample Agree That the Most Important Characteristics for Any Scheme for District and Road Naming and House Numbering Is to Make It Easier to Reach A Target Address and to Deliver Letters

Opinion	Freq.	%
Yes	11	100.0
No	-	-
Total	**11**	**100.0**

Table A3. 29 The Opinions of the Sample as to the Extent to Which the Way the Districts and Roads Are Named and the Way Houses Are Numbered Make It Easier to Find A Target Address

Opinion	Naming roads & districts		Numbering houses	
	Freq.	%	Freq.	%
Very easy	-	-	-	-
Easy	1	9.1	1	9.1
Reasonably easy	1	9.1	2	18.2
Difficult	3	27.3	2	18.2
Very difficult	5	45.5	6	54.5
Didn't say	1	9.0	-	-
Total	**11**	**100.0**	**11**	**100.0**
W.A.M.		**1.80**		**1.82**

Table A3. 30 The Opinions of the Sample as to Whether There Are Other Characteristics Which Any Scheme for District and Road Naming and House Numbering Should Have

Opinion	Freq.	%
Yes	8	72.7
No	3	27.3
Total	**11**	**100.0**

The sample who thought that there are other characteristics which any scheme for district and road naming and house numbering should have, did not say what these characteristics are.

Table A3. 31 The Opinions of the Sample as to Whether All Districts and Roads in Jeddah City Are Named and Whether All Houses Are Numbered

Opinion	Naming districts & roads		Numbering houses	
	Freq.	%	Freq.	%
Yes	-	-	-	-
No	5	45.5	8	72.7
Didn't say	6	54.5	3	27.3
Total	**11**	**100.0**	**11**	**100.0**

Table A3. 32 The Opinions of the Sample as to the Extent to Which the District and Road Naming, and House Numbering in Jeddah City Fulfils the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	2	18.2
Small degree	3	27.3
Not at all	6	54.5
Total	**11**	**100.0**
W.A.M.		**1.64**

Table A3. 33 The Sample's Overall Assessment concerning District and Road Naming and House Numbering In Jeddah City

Opinion	Naming districts & roads		Numbering houses	
	Freq.	%	Freq.	%
Excellent	-	-	-	-
Very Good	1	9.1	1	9.1
Good	2	18.2	3	27.3
Bad	5	45.4	4	36.3
Very bad	3	27.3	3	27.3
Total	**11**	**100**	**11**	**100.0**
W.A.M.		**2.09**		**2.18**

B.3 Maintaining Roads and Drainage System

Table A3. 34 The Opinions of the Sample as to Whether There is A Drainage System for Rainwater in the Districts Where the Sample Live

Opinion	Freq.	%
Yes	1	9.1
No	10	90.9
Total	**11**	**100.0**

Table A3. 35 The Opinions of the Sample as to Whether the Rainwater Accumulates on Roads and Streets in Jeddah City

Opinion	Freq.	%
Yes	11	100.0
No	-	-
Total	**11**	**10.0**

Table A3. 36 The Opinions of the Sample as to the Whether the Amount of Accumulated Rainwater Affects the Traffic Flow in Jeddah City

Opinion	Freq.	%
Too much water and affects the traffic flow	9	81.8
Too much water but does not affect traffic flow	2	18.2
Little water	-	-
Very little water	-	-
Total	**11**	**100.0**

Table A3. 37 The Opinions of the Sample as to Whether the Rainwater Accumulates in the Area Where They Live

Opinion	Freq.	%
Yes	11	100.0
No	-	-
Total	**11**	**100.0**

Table A3. 38 The Opinions of the Sample as to Whether JM Clears this Accumulated Rainwater

Opinion	Freq.	%
Yes	8	72.7
No	3	27.3
Total	**11**	**100.0**

Table A3. 39 The Opinions of the Sample as to How Quickly JM Clears the Accumulated Water

Opinion	Freq.	%
Very short time	-	-
Short time	5	45.4
Long time	2	18.2
Very long Time	1	9.1
Didn't say	3	27.3
Total	**11**	**100.0**

Table A3. 40 The Opinions of the Sample as to Whether Rains Damage Roads and Streets in Jeddah City

Opinion	Freq.	%
Yes	11	100.0
No	-	-
Total	**11**	**100.0**

Table A3. 41 The Opinions of the Sample as to the Extent to Which the Drainage System in Jeddah City Fulfils the Inhabitants' Needs

Opinion	Freq.	%
Very large degree	-	-
Large degree	-	-
Reasonably large degree	-	-
Small degree	5	45.5
Not at all	6	54.5
Total	**11**	**100.0**
W.A.M.		**1.45**

Table A3. 42 The Overall Assessment of the Sample concerning the Drainage System Services in Jeddah City

Opinion	Freq.	%
Excellent	-	-
Very Good	-	-
Good	1	9.1
Bad	5	45.5
Very bad	4	36.4
Didn't say	1	9.0
Total	**11**	**100.0**
W.A.M.		**1.70**

B.4 Tree Planting and City Beautification

Table A3. 43 The Opinions of the Sample as to Whether JM Follows Clear and Defined Programs to Provide Tree Planting & City Beautification Services

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very Large degree	-	-	-	-	1	9.1	-	-	-	-	-	-
Large degree	1	9.0	-	-	1	9.1	1	9.1	3	27.3	1	9.1
Reasonably large degree	4	36.4	3	27.3	5	45.5	-	-	3	27.3	3	27.3
Small degree	3	27.3	5	45.4	2	18.2	2	18.2	5	45.4	4	36.3
Not at all	3	27.3	3	27.3	2	18.2	8	72.7	-	-	3	27.3
Total.	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**2.27**		**2.00**		**2.73**		**1.45**		**2.82**		**2.18**

Table A3. 44 The Opinions of the Sample as to the Extent to Which the Provided Services of Tree Planting & City Beautification Fulfil the Inhabitants' Needs

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very Large degree	-	-	-	-	-	-	-	-	-	-	-	-
Large degree	1	9.1	-	-	2	18.2	1	9.1	3	27.3	1	9.1
Reasonably large degree	3	27.3	4	36.4	6	54.5	-	-	4	36.3	2	18.2
Small degree	3	27.3	4	36.4	1	9.1	2	18.2	2	18.2	5	45.4
Not at all	4	36.3	3	27.2	2	18.2	8	27.7	2	18.2	3	27.3
Total.	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**2.09**		**2.09**		**2.73**		**1.45**		**2.73**		**2.09**

Table A3. 45 The Assessment of the Sample of Each Service concerning Tree Planting & City Beautification

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Excellent	1	9.1	-	-	2	18.2	-	-	1	9.1	-	-
Very good	-	-	1	9.1	2	18.2	1	9.1	3	27.3	1	9.1
Good	3	27.3	2	18.2	3	27.3	1	9.1	5	45.5	4	36.4
Bad	6	54.6	6	54.5	3	27.3	3	27.3	1	9.1	4	36.4
Very Bad	-	-	1	9.1	-	-	5	45.5	-	-	1	9.1
Didn't say	1	9.1	1	9.1	1	9.0	1	9.0	1	9.0	1	9.0
Total.	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**	**11**	**100.0**
W.A.M.		**2.60**		**2.30**		**3.30**		**1.8**		**3.40**		**2.5**

Table A3. 46 The Opinions of the Sample as to Whether There Are Additional Services of Tree Planting & City Beautification That Should Be Carried out By JM

Opinion	Freq.	%
Yes	8	72.7
No	3	27.3
Total	**11**	**100.0**

The expert's opinions correspond with the beneficiaries of the services about the services which they thought that JM should provide to achieve the objectives of the beautification and planting trees in Jeddah City[1]

Table A3. 47 The Sample's Overall Assessment concerning of Tree Planting & City Beautification Services

Opinion	Freq.	%
Excellent	-	-
Very Good	1	9.1
Good	6	
Bad	3	54.6
Very bad	-	27.3
Didn't say	1	-
Total	**11**	**9.0**
W.A.M.		**2.8**

[1] See table A2.55 appendix 2

APPENDIX 4

Results of the Questionnaire for Assessing the Effectiveness of JM Services by JM Staff

A. The General Department for Environmental Hygiene

A.1 The Demographic Characteristics of the Sample

Table A4. 1 The Sample Distribution According to Their Job Title

Job	Freq.	%
General Manager for Environmental Hygiene	1	7.7
Assistant Manager	1	7.7
Supervisor	3	23.0
Hygiene Supervisor	2	15.4
Didn't say	6	46.2
Total	**13**	**100.0**

Table A4. 2 The Sample Distribution According to Their Job Rank

Job Rank	Freq.	%
Sixth (Hygiene Supervisor)	1	7.7
Seventh (Assistant Manager)	1	7.7
Twelve (General Manager for Environmental Hygiene)	1	7.7
Didn't say	10	76.9
Total	**13**	**100.0**

Table A4. 3 The Sample Distribution Accordion to Their Years of Experience

Years of Experience	Freq.	%
1-5	3	23.1
6-10	2	15.4
11-15	1	7.7
16-20	1	7.7
21-25	1	7.7
Didn't say	5	38.4
Total	**13**	**100.0**

Table A4. 4 The Sample Distribution According to Their Years of Experience in Current Job

Years of Experience in current job	Freq.	%
1-5	4	30.8
6-10	2	15.4
11-15	2	15.4
Didn't say	5	38.4
Total	**13**	**100.0**

Table A4. 5 The Sample Distribution as to Whether There is Formal Description of Current Job

Opinion	Freq.	%
Yes	6	46.2
No	6	46.2
Didn't say	1	7.6
Total	**13**	**100.0**

Table A4. 6 The Sample's Awareness of the Objectives of Their Jobs

Opinion	Freq.	%
Yes	10	76.9
No	3	23.1
Total	**13**	**100.0**

A.2 Formal Descriptions and Objectives of Current Jobs of the Sample

Table A4. 7 The Opinions of the Sample as to Whether Their Department Has Defined Objectives

Opinion	Freq.	%
Yes	8	61.5
No	5	38.5
Total	**13**	**100.0**

Table A4. 8 The Objectives of the General Department of Environmental Hygiene as Were Stated by the Sample

The Objectives of the General Department of Environmental Hygiene as Were Stated by the Sample
• Achieve maximum hygiene in Jeddah City.
• Get rid of rats, crows, stray animals and insects.
• Fill up land depressions and ponds.
• Supervise slaughterhouses.
• Supervise companies, which are responsible for accomplishing the cleaning of Jeddah City.
• Establish grave yards.

Table A4. 9 The Opinions of the Sample as to Whether There Is Regular Assessment of the Department's Objectives

Opinion	Freq.	%
Yes	5	38.5
No	7	53.8
Didn't say	1	7.7
Total	**13**	**100.0**

Table A4. 10 The Opinions of the Sample as to the Way That the Achieved Objectives Are Measured

The opinions of the sample as to the way that the achieved objectives are measured
• Through JM follow-up department.
• Through periodical reports.
• Through supervision of the services.

A.3 Results of the Assessment of Services Concerning Maintaining Environmental Hygiene Safety

A.3.1 Health Protection Services

Table A4. 11 The Opinions of the Sample as to the Extent to Which JM Adheres to Defined Criteria to Achieve Health Protection in Jeddah City

Opinion	Freq.	%
Very large	2	15.4
Large	2	15.4
Reasonably large	5	38.4
Small	4	30.8
Not at all	-	-
Total	**13**	**100.0**
W.A.M		**3.15**

Table A4. 12 The Opinions of the Sample as to the Extent to Which JM Introduces Health Protection Criteria to the Inhabitants

Opinion	Freq.	%
Very large	-	-
Large	2	15.4
Reasonably large	5	38.4
Small	4	30.8
Not at all	2	15.4
Total	**13**	**100.0**
W.A.M		**2.54**

Table A4. 13 The Opinions of the Sample as to the Extent to Which the Health Protection Services Achieved Their Objectives

Opinion	Spraying garbage		Elimination of rodents		Extermination of stray dogs and cats		Filling up of land depressions and ponds	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large	3	23.0	2	15.4	3	23.1	2	15.4
Large	4	30.8	3	23.1	6	46.1	4	30.8
Reasonably large	4	30.8	4	30.7	1	7.7	3	23.0
Small	2	15.4	3	23.1	3	23.1	4	30.8
Not at all	-	-	1	7.7	-	-	-	-
Total	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**
W.A.M		**3.62**		**3.15**		**3.96**		**3.31**

Table A4. 14 The Opinions of the Sample as to Whether They Think That There Are Additional Activities Which Should Be Carried Out by JM in Order to Achieve Health Protection in Jeddah City

Opinion	Freq.	%
Yes	8	61.5
No	5	38.5
Total	**13**	**100.0**

Table A4. 15 The Services Which the Sample Think That They Should Be Carried Out to Achieve Health Protection Services

The Services Which the Sample Think That They Should Be Carried Out to Achieve Health Protection Services
• Educate the public in health awareness.
• Establish an independent hygiene department.
• Collect rainwater in a short period of time.
• Control and prevent air, water and soil pollution and all other environmental pollution.
• Stop evacuating drainage water into the sea.
• Get rid of rats, crows, stray animals and insects.
• Establish a drainage system network, which covers all of Jeddah City.
• Open main roads in slum areas and demolish old buildings to prevent rats from multiplying in these areas.

Table A4. 16 The Sample's Overall Assessment concerning Health Protection Services

Opinion	Freq.	%
Excellent	-	-
Very good	4	30.8
Good	6	46.1
Bad	2	15.4
Very bad	1	7.7
Total	**13**	**100.0**
W.A.M		**3.00**

A.3.2 General Cleaning Services

Table A4. 17 The Opinions of the Sample as to the Extent to Which JM Adhere to Defined Criteria to Maintain the Cleanliness of Jeddah City

Opinion	Freq.	%
Very large	3	23.1
Large	2	15.4
Reasonably large	5	38.4
Small	3	23.1
Not at all	-	-
Total	**13**	**100.0**
W.A.M		**3.38**

Table A4. 18 The Opinions of the Sample as to How Often JM Carries Out the Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construct-ion waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Daily	11	84.1	8	61.5	4	30.8	8	61.5	10	76.9	6	46.2
Weekly	-	-	-	-	-	-	2	15.4	2	15.4	1	7.6
Monthly	2	15.4	1	7.7	7	53.8	3	23.1	1	7.7	6	46.2
Yearly	-	-	2	15.4	-	-	-	-	-	-	-	-
Did not know	-	-	2	15.4	2	15.4	-	-	-	-	-	-
Total	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**

Table A4. 19 The Opinions of the Sample as to Whether They Think That There Are Other Services That Should Be Carried Out by JM to Improve the Cleanliness of Jeddah City

Opinion	Freq.	%
Yes	7	53.8
No	6	46.2
Total	**13**	**100.0**

The sample did not state the additional services which they thought should be carried out by JM but they suggested that JM should introduce more cleanliness awareness among the public to improve the cleanliness of Jeddah City.

Table A4. 20 The Opinions of the Sample as to Whether the General Cleaning Services Which Are Carried Out by JM, Achieved the Defined Objective

Opinion	Freq.	%
Very large	1	7.7
Large	3	23.1
Reasonably large	6	46.1
Small	3	23.1
Not at all	-	-
Total	**13**	**100.0**
W.A.M		**3.15**

Table A4. 21 The Opinions of the Sample as to the Extent to Which the Inhabitants Are Satisfied With the Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construction waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large	-	-	1	7.7	-	-	1	7.7	4	30.8	-	-
Large	3	23.1	2	15.4	-	-	2	15.4	1	7.7	3	23.1
Reasonably large	5	38.4	4	30.8	4	30.8	3	23.1	3	23.1	3	23.1
Small	4	30.8	5	38.4	8	61.5	7	53.8	5	38.4	7	53.8
Not at all	1	7.7	1	7.7	1	7.7	-	-	-	-	-	-
Total	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**
W.A.M		**2.77**		**2.77**		**2.23**		**2.77**		**3.31**		**2.69**

Table A4. 22 The Sample's Overall Assessment concerning the General Cleaning Services

Opinion	Freq.	%
Excellent	-	-
Very good	3	23.1
Good	8	61.5
Bad	2	15.4
Very bad	-	-
Total	**13**	**100.0**
W.A.M		**3.08**

Table A4. 23 The Opinions of the Sample as to the Extent to Which JM Supervise the General Cleaning Services

Opinion	Collecting Garbage		Collecting Commercial waste		Collecting Construct-ion waste		Removal of scrapped vehicles		Cleaning Main roads		Cleaning Streets	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large	2	15.4	2	15.4	1	7.7	1	7.7	4	30.8	2	15.4
Large	4	30.8	4	30.8	3	23.1	5	38.4	3	23.0	3	23.1
Reasonably large	3	23.1	3	23.1	5	38.4	3	23.1	4	30.8	5	38.4
Small	3	23.0	3	23.0	4	30.8	4	30.8	1	7.7	2	15.4
Not at all	1	7.7	1	7.7	-	-	-	-	1	7.7	1	7.7
Total	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**	**13**	**100.0**
W.A.M		**2.23**		**2.23**		**3.08**		**3.23**		**3.62**		**3.23**

Table A4. 24 The Opinions of the Sample as to the Extent to Which the Supervision of the General Cleaning Services Achieved the Defined Objectives

Opinion	Freq.	%
Very large	-	-
Large	5	38.5
Reasonably large	5	38.5
Small	2	15.5
Not at all	1	7.7
Total	**13**	**100.0**
W.A.M		**3.08**

Table A4. 25 The Sample's Overall Assessment concerning General Cleaning Services

Opinion	Freq.	%
Excellent	-	-
Very good	5	38.5
Good	5	38.5
Bad	3	23.0
Very bad	-	-
Total	**13**	**100.0**
W.A.M		**3.15**

B. The General Department for Construction Planning

B.1 Demographic Characteristics of the Sample

Table A4. 26 The Sample Distribution According to Their Job Title

Job	Freq.	%
Land Grant Department Manager	1	5.9
Planning Department Manager	1	5.9
Architect	1	5.9
Planning Engineer	6	35.5
Architecture Engineer	6	35.5
Electrical Engineer	1	5.9
Didn't say	1	5.8
Total	**17**	**100.0**

Table A4. 27 The Sample Distribution According to Their Job Rank

Job Rank	Freq.	%
Ninth (Planning Department manager & Architecture Engineer)	2	11.8
Eighth (5 Architecture Engineers, Electrical Engineer & Architect)	7	41.2
Seventh (2 Architecture Engineers, 3 Planning Engineer & Grant Department Manager)	6	35.2
Didn't say	2	11.8
Total	**17**	**100.0**

Table A4. 28 The Sample Distribution According to Their Years of Experience

Years of Experience	Freq.	%
1-5	4	23.5
6-10	2	11.8
11-15	6	35.3
16-20	4	23.5
21-25	-	-
26-30	-	-
31-35	1	5.9
36-40	-	-
Total	**17**	**100.0**

Table A4. 29 The Sample Distribution According to Their Years of Experience in Current Job

Years of Experience in current job	Freq.	%
1-5	10	58.8
6-10	4	23.5
11-15	2	11.8
16-20	-	-
21-25	-	-
26-30	-	-
31-35	1	5.9
36-40	-	-
Total	**17**	**100.0**

B.2 Formal Descriptions and Objectives of Current Jobs of the Sample

Table A4. 30 The Sample Distribution as to Whether There is Formal Description of Current Job

Opinion	Freq.	%
Yes	12	70.6
No	5	29.4
Total	**17**	**100.0**

Table A4. 31 The Sample's Awareness of the Objectives of Their Jobs

Opinion	Freq.	%
Yes	12	70.6
No	5	29.4
Total	**17**	**100.0**

Table A4. 32 The Opinions of the Sample as to Whether Their Department Has Defined Objectives

Opinion	Freq.	%
Yes	12	70.6
No	5	29.4
Total	**17**	**100.0**

Table A4. 33 The Objectives of the General Department of Construction Planning as Stated by the Sample

The objectives of the General Department of Construction Planning as stated by the sample
• Apply the criteria for construction.
• Provide essential services to the entire city.
• Make plans for city development.
• Name districts and roads and number houses and buildings.
• Complete building road networks in the city.
• Improve the road networks in the city
• Establish signboards for all new areas.
• Approve architecture of buildings.

Table A4. 34 The Regular Assessment of the Department's Objectives

Opinion	Freq.	%
Yes	6	35.3
No	11	64.7
Total	**17**	**100.0**

Table A4. 35 The Opinions of the Sample as to the Way That the Achieved Objectives Are Measured

The opinions of the sample as to the way that the achieved objectives are measured
• Revision of construction criteria, which were applied to construction plans.
• Accumulation of works.
• Time taken by the person to finish a work.
• Questionnaires sent to the inhabitants and teachers.
• Questionnaires sent to taxi drivers about roads networks.
• Studies done by private specialist bodies.
• How well the job is done.
• Through reports about the quantity of the done job
• Through periodical reports about the accomplishments of long and short term plans
• Through ministerial reports.

B.3 Analysis of the Results of the Assessment of Services Concerning Construction of Jeddah City

B.3.1 Construction of the City

Table A4. 36 The Opinions of the Sample as to the Construction Plan of Jeddah City

Opinion	Freq.	%
Comprehensive plans	10	58.8
Detailed plans	2	11.8
Comprehensive and detailed plans	5	29.4
Total	**17**	**100.0**

Table A4. 37 The Opinions of the Sample as to the Essential Services Which Are Provided in the District

Opinion	Electricity		Water		Drainage system	
	Freq.	%	Freq.	%	Freq.	%
All districts	4	23.5	-	-	-	-
Most districts	9	53.0	3	17.6	-	-
Half of the districts	4	23.5	9	53.0	1	5.9
Few districts	-	-	3	17.6	4	23.5
Very few districts	-	-	2	11.8	12	70.6
Total	**17**	**100.0**	**17**	**100.0**	**17**	**100.0**
W.A.M		**4.00**		**2.8**		**1.4**

Table A4. 38 The Reasons for Not Providing the Essential Services to All Districts

The reasons for not providing these services to all districts
• Lack of financial resources.
• High cost involved in providing these services.
• Expansion of unplanned construction.
• Lack of co-ordination between bodies who are responsible for providing these services.
• The rapid and unplanned expansion of the city.
• Remoteness of districts needing these services.
• Lack of supervision.
• Type of ground.
• The problem of the high level of underground water.
• Lack of studies of the needs of the city for drainage systems.
• Not enough sources of water.

Table A4. 39 The Opinions of the Sample as to the Other Services That Are Provided in the Districts

Opinion	Mosque		clinic		Pharmacy		Girls' schools		Boys' schools		Parks and children's playgrounds		Post-office		Supermarket	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
All districts	10	58.8	4	23.5	11	64.7	6	35.3	6	35.3	3	17.6	1	5.9	8	47.0
Most districts	5	29.4	6	35.3	3	17.6	4	23.5	4	23.5	2	11.8	4	23.5	5	29.4
Half of the districts	2	11.8	6	35.3	1	5.9	6	35.3	6	35.3	2	11.8	-	-	2	11.8
Few districts	-	-	1	5.6	1	5.9	-	-	1	5.9	8	47.0	6	35.3	1	5.9
Very few districts	-	-	-	-	1	5.9	1	5.9	-	-	2	11.8	6	35.3	1	5.9
Total	17	100.0	17	100.0	17	100.0	17	100.0	17	100.0	17	100.0	17	100.0	17	100.0
W.A.M		3.9		3.8		4.3		3.8		3.9		2.8		2.5		4.1

Table A4. 40 The Opinions of the Sample as to the Extent to Which the Construction Plan of Jeddah City Achieved the Defined Objectives

Opinion	Freq.	%
Very large degree	1	5.9
Large degree	4	23.5
Reasonably large degree	11	64.7
Small degree	1	5.9
Not at all	-	-
Total	**17**	**100.0**
W.A.M		**3.9**

Table A4. 41 The Sample's Overall Assessment concerning the Construction Plans for the Districts in Jeddah City

Opinion	Freq.	%
Excellent	1	5.9
Very good	5	29.4
Good	10	58.8
Bad	1	5.9
Very bad	-	-
Total	**17**	**100.0**
W.A.M		**3.35**

B.3.2 Traffic Improvements

Table A4. 42 The Sample's Overall Assessment of the Traffic Improvements of Jeddah City

Opinion	Providing traffic lights at cross roads		Maintaining the existing traffic lights		Improving cross roads		Improving bends		Improving traffic flow	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Excellent	5	29.4	1	5.9	2	11.8	3	17.6	2	11.8
Very good	5	29.4	6	35.3	6	35.3	4	23.5	5	29.4
Good	6	35.3	9	52.9	7	41.1	8	47.1	8	47.0
Bad	1	5.9	1	5.9	2	11.8	1	5.9	2	11.8
Very bad	-	-	-	-	-	-	1	5.9	-	-
Total	**17**	**100.0**	**17**	**100.0**	**17**	**100.0**	**17**	**100.0**	**17**	**100.0**
W.A.M		**3.82**		**3.59**		**3.47**		**3.41**		**3.41**

Table A4. 43 The Opinions of the Sample as to the Extent to Which the Traffic Improvements Achieved Its Objectives

Opinion	Freq.	%
Very large degree	-	-
Large degree	3	17.6
Reasonably large degree	11	64.7
Small degree	2	11.8
Not at all	1	5.9
Total	**17**	**100.0**
W.A.M		**2.94**

Table A4. 44 The Sample's Overall Assessment concerning Traffic Improvements in Jeddah City

Opinion	Freq.	%
Excellent	-	-
Very good	-	-
Good	2	11.8
Bad	14	82.3
Very bad	1	5.9
Total	**17**	**100.0**
W.A.M		**3.06**

B.3.3 District and Road Naming & House Numbering

Table A4. 45 The Opinions of the Sample as to Whether JM Applies Clear and Established Scheme for District and Road Naming and House Numbering in Jeddah City

Opinion	Freq.	%
Yes	9	52.9
No	8	47.1
Total	**17**	**100.0**

Table A4. 46 The Opinions of the Sample as to the Extent to Which Districts, Roads and Streets Are Named Make It Easy for People to Find A Target Address

Opinion	Freq.	%
Very easy	-	-
Easy	2	11.8
Reasonably easy	7	41.1
Difficult	2	35.3
Very difficult	6	11.8
Total	**17**	**100.0**
W.A.M		**2.47**

Table A4. 47 The Opinions of the Sample as to the Extent to Which Houses Are Numbered In Jeddah City Made It Easy for People to Find A Target Address

Opinion	Freq.	%
Very easy	-	-
Easy	2	11.8
Reasonably easy	5	29.4
Difficult	7	41.2
Very difficult	3	17.6
Total	**17**	**100.0**
W.A.M		**2.35**

Table A4. 48 The Opinions of the Sample as to Whether There Are Additional Characteristics Which Any Scheme for District and Road Naming and House Numbering Should Have

Opinion	Freq.	%
Yes	12	70.6
No	5	29.4
Total	**17**	**100.0**

Table A4. 49 The Characteristics, Which the Sample Thinks That Any Scheme for District and Road Naming and House Numbering Should Have

The characteristics, which the sample thinks that any scheme for naming districts and roads and for numbering houses should have
• Name all streets and roads in Jeddah City.
• Give districts and roads easier names by naming them alphabetically or numbering them.
• Numbering all houses and buildings in Jeddah City.
• Use a simple and logical scheme for numbering houses and buildings.
• Use a similar naming and numbering schemes to that which is used in developed countries.

Table A4. 50 The Opinions of the Sample as to Whether All Districts and Roads in Jeddah City Are Named and Whether All Houses Are Numbered

Opinion	Naming districts and roads		Numbering houses	
	Freq.	%	Freq.	%
Yes	3	17.3	3	17.6
No	-	-	-	-
Didn't say	14	82.4	14	82.4
Total	**17**	**100.0**	**17**	**100.0**

Table A4. 51 The Opinions of the Sample as to Whether the Way That Districts and Roads Are Named and the Way That Houses Are Numbered, Achieves the Defined Objectives

Opinion	Freq.	%
Very large degree	-	-
Large degree	1	5.9
Reasonably large degree	7	41.2
Small degree	6	35.3
Not at all	3	17.6
Total	**17**	**100.0**
W.A.M		**2.35**

Table A4. 52 The Sample's Overall Assessment concerning District and Road Naming in Jeddah City

Opinion	Freq.	%
Excellent	-	-
Very good	1	5.9
Good	10	58.8
Bad	5	29.4
Very bad	1	5.9
Total	**17**	**100.0**
W.A.M		**2.65**

Table A4. 53 The Sample's Overall Assessment concerning House Numbering in Jeddah City

Opinion	Freq.	%
Excellent	-	-
Very good	2	11.8
Good	8	47.0
Bad	6	35.3
Very bad	1	5.9
Total	**17**	**100.0**
W.A.M		**2.65**

C. The General Department for Parks and Beautification

C.1 The Demographic Characteristics of the Sample

Table A4. 54 The Sample Distribution According to Their Job Title

Job	Freq.	%
General Manager	1	25.5
General Manager of the Department	1	25.5
Agriculture Engineer	1	25.5
Architecture Engineer	1	25.5
Total	**4**	**100.0**

Table A4. 55 The Sample Distribution According to Their Job Rank

Job Rank	Freq.	%
Eighth (General Manager of the Department, General Manager & Architecture Engineer)	1	25.5
Ninth (Agriculture Engineer)	3	75.5
Total	**4**	**100.0**

Table A4. 56 The Sample Distribution According to Their Years of Experience

Years of Experience	Freq.	%
1-5	-	-
6-10	-	-
11-15	-	-
16-20	4	100.0
21-25	-	-
Didn't say	-	-
Total	**4**	**100.0**

Table A4. 57 The Sample Distribution According to Their Years of Experience in Current Job

Years of Experience	Freq.	%
1-5	2	50.0
6-10	1	25.5
11-15	-	-
16-20	1	25.5
21-25	-	-
26-30	-	-
31-35	-	-
36-40	-	-
Total	**4**	**100.0**

C.2 Formal Descriptions and Objectives of Current Jobs of the Sample

Table A4. 58 The Sample Distribution as to Whether There Is Formal Description of Current Job

Opinion	Freq.	%
Yes	2	50.0
No	1	25.0
Didn't say	1	25.0
Total	**4**	**100.0**

Table A4. 59 The Sample's Awareness of the Objectives of Their Jobs

Opinion	Freq.	%
Yes	4	100.0-
No	-	
Total	**-**	**100.0**

Table A4. 60 The Opinions of the Sample as to Whether Their Department Has Defined Objectives

Opinion	Freq.	%
Yes	4	100.0
No	-	-
Total	**4**	**100.0**

Table A4. 61 The Objectives of the General Department of Parks and Beautification as Were Stated by the Sample

The objectives of the General Department of Parks and Beautification as were stated by the sample
• Establish and maintain public parks.
• Plant trees on the roads, streets, public parks and squares.
• Expand the green and planted areas in the city.
• Beautify the city.
• Provide sub-municipalities with necessary plants from the municipality's nursery.
• Provide an irrigation network for the responsible bodies to provide water for the city.
• Establish leisure places inside and outside the city.

Table A4. 62 The Opinions of the Sample as to Whether the Objectives of Their Department Are Assessed Regularly

Opinion	Freq.	%
Yes	4	100.0
No	-	-
Total	**4**	**100.0**

Table A4. 63 The Opinions of the Sample as to the Way the Achieved Objectives Are Measured

The opinions of the sample as to the way the achieved objectives are measured
• The amount of green land in the city.
• The number of public parks.
• The number of plants produced in JM's nursery.
• The amount of water which is used to irrigate parks and trees in Jeddah City.
• The number of times the public communicate with the municipality to give an opinion on planting trees and beautifying Jeddah City.

C.3 Analysis of the Results of the Assessment of Services Concerning Tree Planting and City Beautification

Table A4. 64 The Opinions of the Sample as to Whether JM Follows Clear and Defined Programs to Provide Tree Planting & City Beautification Services

Opinion	Establishing and operating public parks		Maintaining public parks		planting trees on main roads		Establishing children's play-grounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Very large degree	1	25.0	2	50.0	3	75.0	-	-	4	100.0	3	75.0
Large degree	2	50.0	1	25.0	1	25.0	-	-	-	-	1	25.0
Reasonably large degree	1	25.0	1	25.0	-	-	3	75.0	-	-	-	-
Small degree	-	-	-	-	-	-	1	25.0	-	-	-	-
Not at all	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	100.0	4	100.0	4	100.0	4	100.0	4	100.0	4	100.0

Table A4. 65 The Opinions of the Sample as to the Extent to Which the Provided Tree Planting & City Beautification Services Achieved Their Defined Objectives

Opinion	Freq.	%
Very large degree	-	-
Large degree	1	25.0
Reasonably large degree	3	75.0
Small degree	-	-
Not at all	-	-
Total	4	100.0

Table A4. 66 The Sample's Assessment concerning Tree Planting & City Beautification Services

Opinion	Establishing and operating public parks		Maintaining public parks		Planting trees on main roads		Establishing children's playgrounds		Planting trees in squares		Establishing green spaces	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Excellent	-	-	-	-	3	75.0	-	-	3	75.0	3	75.0
Very good	3	75.0	2	50.0	1	25.0	-	-	1	25.0	1	25.0
Good	1	25.0	2	50.0	-	-	3	75.0	-	-	-	-
Bad	-	-	-	-	-	-	1	25.0	-	-	-	-
Very bad	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	100.0	4	100.0	4	100.0	4	100.0	4	100.0	4	100.0

Table A4. 67 The Sample's Overall Assessment concerning Tree Planting & City Beautification Services

Opinion	Freq.	%
Excellent	-	-
Very good	3	75.0
Good	1	25.0
Bad	-	-
Very bad	-	-
Total	4	100.0

Table A4. 68 The Opinions of the Sample as to Whether There Are Additional Services That Should Be Carried Out by JM to Achieve the Objectives of Tree Planting & City Beautification

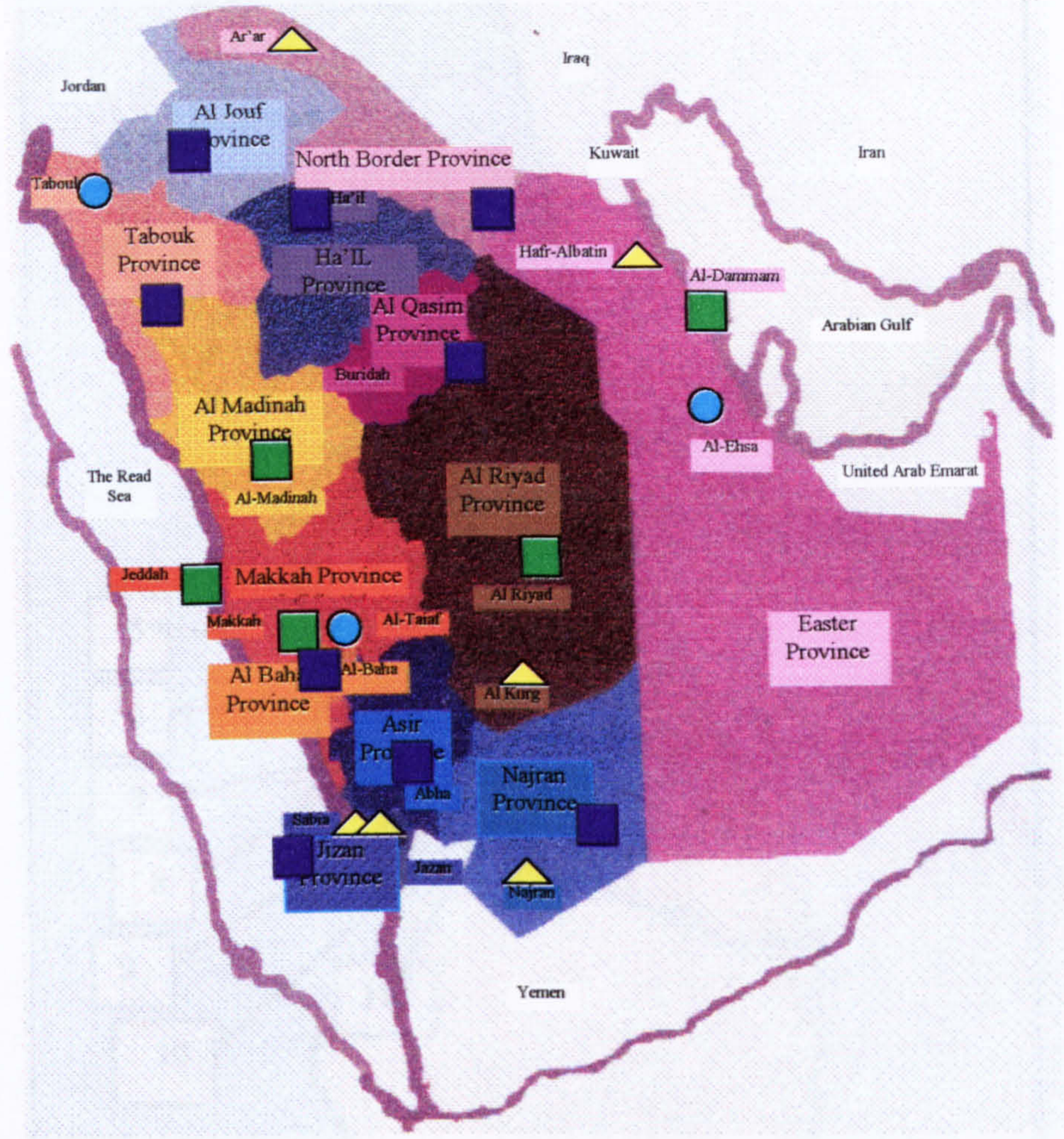
Opinion	Freq.	%
Yes	4	100.0
No	-	-
Total	**4**	**100.0**

Table A4. 69 The Services, Which the Sample Thought That Should Be Carried Out by JM to Achieve the Objectives of Tree Planting & City Beautification

The services, which the sample thought that should be carried out by JM to achieve the objectives of beautifying and planting trees in Jeddah City
• Establish parks with restaurants, toilets and other services.
• Invite the private sector to help with beautifying and planting trees in the city.

APPENDIX 5

Map 1- Administrative Districts and Main Municipalities in Saudi Arabia*



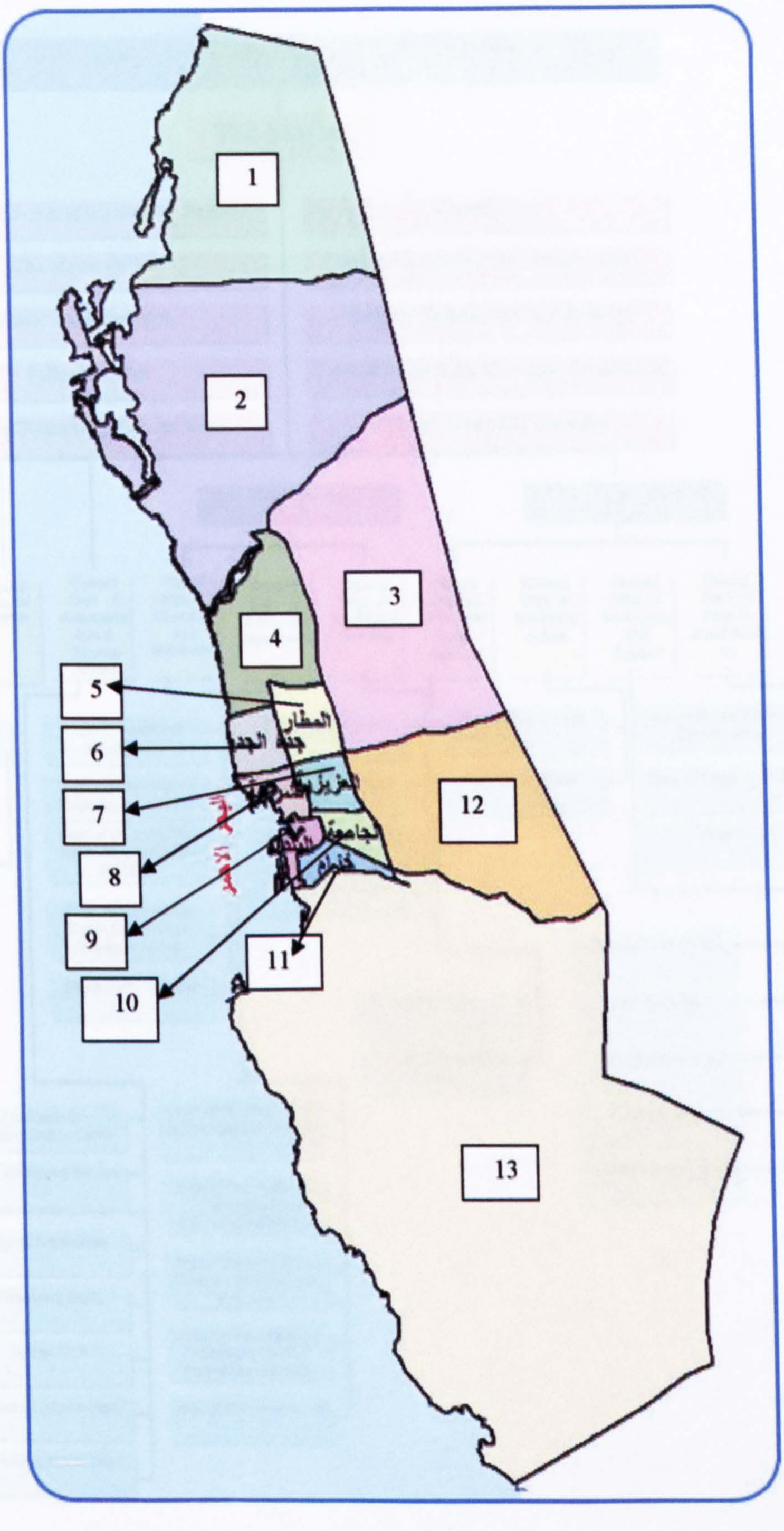
- ‘A’ Municipalities of main cities (Amanat)
- New ‘A’ Munnicipalities (Amanat). See section 2.7.2.3.1
- Other ‘A’ Municipalities
- ‘B’ Municipalities

* Services and Municipal Utilities in One Hundred years. 1999 & Seventh Development Plan (2000-2004), 2000.

APPENDIX 6

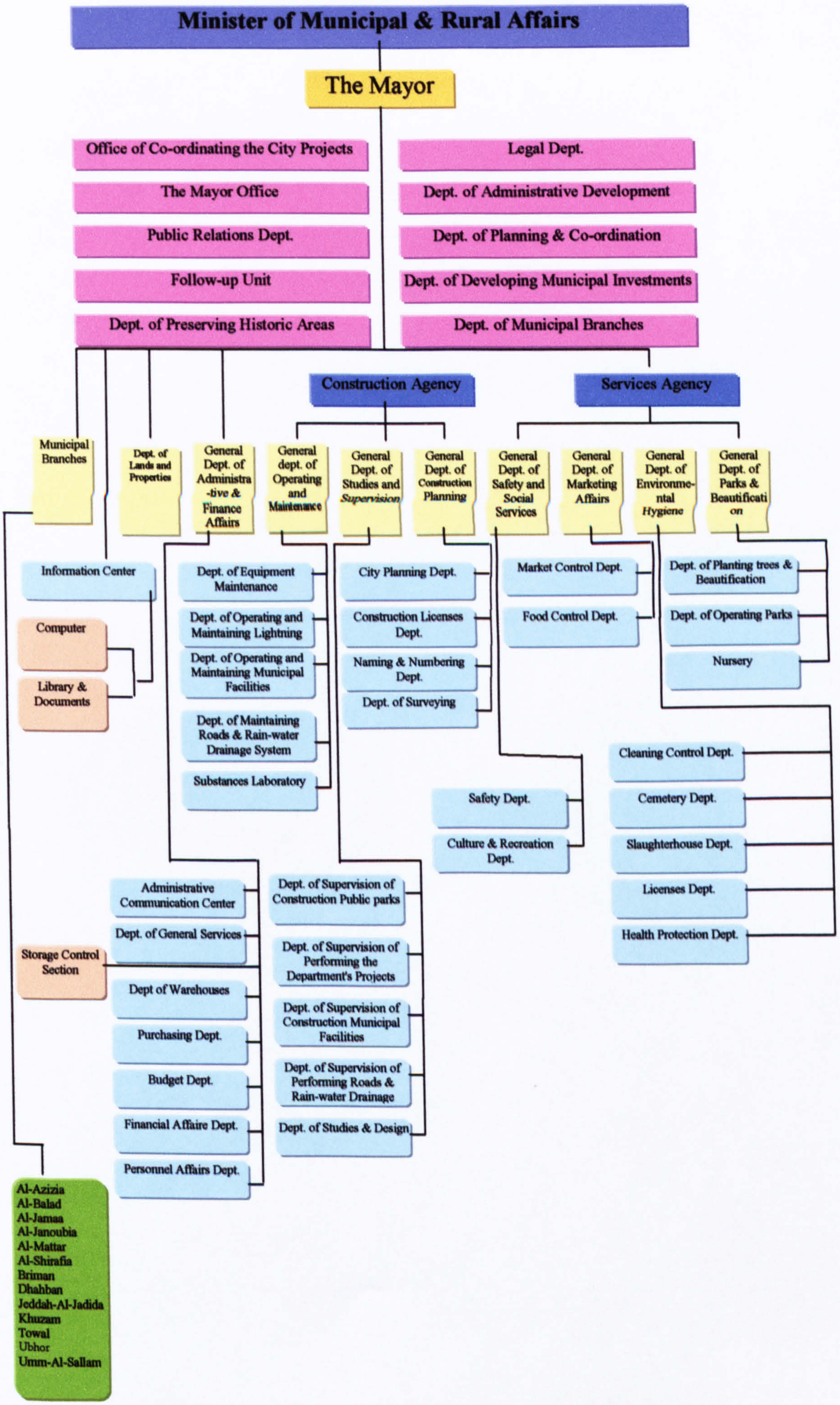
Map 2-Jeddah's Districts & Municipal Branches

1. Towal
2. Dhahban
3. Briman
4. Ubhor
5. Al-Mattar
6. Jeddah-Al-Jadida
7. Al-Azizia
8. Al-Shirafia
9. Al-Balad
10. Al-Jamaa
11. Khuzam
12. Umm-Al-Sallam
13. Al-Janoubia



APPENDIX 7

Organisational Structure of Jeddah Municipality*



*Jeddah Municipality, Accomplishments and Ambitions: Yearly Report (1998/1999).