

## إقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

The Extent of Applicability of  
Municipal Cooperative Service Provider  
Solid Waste Management Councils  
in Gaza Governorates

أقر بأن ما اشتملت عليه هذه الرسالة إنما هو نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيثما ورد، وإن هذه الرسالة ككل أو أي جزء منها لم يقدم من قبل لنيل درجة أو لقب علمي أو بحثي لدى أي مؤسسة تعليمية أو بحثية أخرى.

### DECLARATION

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification

Student's Name:

Noureddin Talab M. Al-Madhoun

اسم الطالب:

نور الدين طلب محمد المدهون

Signature:

Date: 6 / 7 / 2015

التوقيع:

التاريخ: 2015/ 7/6 م

**The Islamic University in Gaza**  
Deanship of Higher Education  
College of Commerce  
Department of Business Administration

الجامعة الإسلامية – غزة  
عمادة الدراسات العليا  
كلية التجارة  
قسم إدارة الأعمال



**The Extent of Applicability of  
Municipal Cooperative Service Provider  
Solid Waste Management Councils  
in Gaza Governorates**

*Partial fulfillment of the requirement for the degree of Master in Business Administration*

Prepared by  
**Noureddin Talab Al-Madhoun**

Supervised by  
**Dr. Wasim Al-Habil**

Thesis is submitted in partial fulfillment of the requirement for

Degree of Master of Art in Business Administration

The Islamic University of Gaza

July, 2015



هاتف داخلي 1150

مكتب نائب الرئيس للبحث العلمي والدراسات العليا

الرقم.....ج س ع/35/Ref

التاريخ 2015/06/13م.....Date

## نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة شئون البحث العلمي والدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحثة/ نور الدين طلب محمد المدهون لنيل درجة الماجستير في كلية التجارة/ قسم إدارة الأعمال وموضوعها:

### The Extent of Applicability of Municipal Cooperative Service Provider

### Solid Waste Management Councils in Gaza Governorates

وبعد المناقشة التي تمت اليوم السبت 26 شعبان 1436هـ، الموافق 2015/06/13م الساعة الحادية عشرة صباحاً، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

.....	مشرفاً ورئيساً	د. وسيم إسماعيل الهاويل
.....	مناقشاً داخلياً	أ.د. يوسف حسين عاشور
.....	مناقشاً خارجياً	د. خالد أحمد قحمان

وبعد المداولة أوصت اللجنة بمنح الباحثة درجة الماجستير في كلية التجارة/قسم إدارة الأعمال.

واللجنة إذ تمنحها هذه الدرجة فإنها توصيها بتقوى الله ولزوم طاعته وأن تسخر علمها في خدمة دينها ووطنها.

والله ولي التوفيق ،،،

مساعد نائب الرئيس للبحث العلمي والدراسات العليا

أ.د. فؤاد علي العاجز



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَتَعَاوَنُوا عَلَى الْبِرِّ وَالتَّقْوَىٰ <sup>ط</sup>  
وَلَا تَعَاوَنُوا عَلَى الْإِثْمِ وَالْعُدْوَانِ <sup>ج</sup>

سورة المائدة الآية ٢

صدق الله العظيم

## **Dedication**

*This thesis is dedicated to the unknown soldiers...  
, to Garbage Collectors, Truck Drivers, and Street Sweepers....  
, who put themselves in danger for us;  
, who survive on the lowest pay in society's payroll hierarchy;  
, who keep up our lives by keeping our environment clean;*

*I also dedicate this work to my father whom had always encouraged me and to my brothers  
and sisters whom I can never imagine my life without...asking the almighty to bless the sole of  
my mother  
..... and to my beloved wife and daughters... the light of my life:  
Amani , Nada, Lina, Dalia, and Dina*

Noureddin T. Al-Madhoun

## Acknowledgment

I am grateful to my supervisor and mentor, Dr. Wasim Al-Habil for his efforts and support throughout the course of preparation of this research. I'm grateful to Dr. Yousif Ashour and Dr. Khaled Qahaman for accepting to discuss this research and to provide such helpful and insightful remarks.

I can never be thankful enough to my childhood friend, Mr. Hani Abuamer for his great support, guidance and consultations.

Appreciation is extended to Eng. Wael Safi, Professor Samir Safi, Eng. Adel Qazaz, Dr. Nabil Al-loh, Dr. Wael Al-Daya, and Dr. Yasser Al-Shorafa for evaluating, correcting and enhancing the questionnaire.

This works could have never been prepared without the support and cooperation of the Palestinian Ministry of Local Government; Mr. Sufian Abu Samra and the Chairmen of the Joint Service Councils in North Gaza: Mr. Ezzedin Al-Dahnoun, and the Joint Service Council in Middle and Southern Gaza: Eng. Yahya Al-Astal, and the cooperation and support of the wonderful Mayors of Gaza's municipalities: from the resilient City of Bait Hanoun to the Great City of Rafah.

It has been an honour to work with and learn from both present and past executives of the JSC's for Solid Waste Management in Gaza: Dr. Ali Barhoum, Eng. Mohammad Shalabi, Eng. Mohammad Al-Helou, Eng. Khalil Abu Jamous, Eng. Mohammad Al-Majdalawai, and Eng. Majed Jouda, Mr. Khalil Al-Kurd, and Mr. Mohamad Yousif.

Last, but not least I'm grateful to Arch. Abdel-Moghni Nofal; the Director General of the Municipal Development and Lending Fund (MDLF) and the wonderful colleagues in both MDLF Main Office in Ramallah and Gaza Branch Office for their support and encouragement, and I specially acknowledge the support of my friend and colleague Eng. Mutaz Mohaisen.

Noureddin T. Al-Madhoun

# Table of Contents

Dedication .....	III
Acknowledgment .....	IV
Table of Contents .....	V
List of Tables .....	VII
List of Figures .....	VIII
Abbreviations .....	IX
Abstract .....	X
<b>Chapter 1: Research Framework .....</b>	<b>2</b>
1.1 Introduction .....	2
1.2 Problem Statement .....	3
1.3 Importance .....	3
1.4 Research Objectives .....	5
1.5 Research Structure .....	5
1.6 Research Variables .....	5
1.7 Research Hypotheses .....	7
<b>Chapter 2: Literature Review .....</b>	<b>9</b>
2.1 Solid Waste Management .....	9
2.1.1 Overview .....	9
2.1.2 Historical Background of Managing Solid Waste .....	10
2.1.3 Elements and Process of Municipal Solid Waste Management .....	11
2.1.4 Political, Legal and Public Policy Aspects .....	15
2.1.5 Institutional Aspects .....	17
2.1.6 Financial Aspects .....	18
2.1.7 Inter-municipal Cooperation .....	19
2.2 Solid Waste Management in Palestine .....	22
2.2.1 Overview of the Palestinian Context .....	22
2.2.2 Political, Legal and Public Policy Aspects .....	24
2.2.3 Financial Aspects .....	25
2.2.4 Institutional Arrangement .....	27
2.2.5 The Palestinian Local Government Units .....	28
2.2.6 The Joint Service Councils (JSC) .....	28
2.2.7 The Joint Service Councils for Solid Waste Management .....	30
2.2.8 The Palestinian National Strategy for Solid Waste Management .....	30
2.2.9 Obstacles and Challenges .....	31
2.3 Solid Waste Management Council in North Gaza Governorate .....	32
2.3.1 Historical Background .....	32
2.3.2 Organizational Structure and Statutes .....	32
2.3.3 Services and Technical Aspects .....	34
2.3.4 Institutional and Financial Aspects .....	35
2.4 Previous Studies .....	36
2.4.1 This Research and Previous Studies .....	44
<b>Chapter 3: Research Methodology .....</b>	<b>47</b>
3.1 Introduction .....	47
3.2 Research Design .....	48
3.3 Research Sample .....	50
3.3.1 Sample Size, Questionnaire Distribution and Data Collection .....	51

3.4	Research Location .....	54
3.5	Developing the Questionnaire .....	54
3.6	Pilot study.....	54
3.7	Instrument validity .....	55
3.7.1	Test of Normality .....	56
3.7.2	Validity test .....	56
3.8	Instrument (Questionnaire) Reliability.....	61
<b>Chapter 4: Data Analysis, Interpretations and Discussion.....</b>		<b>65</b>
4.1	Demographic Data.....	65
4.1.1	Gender .....	65
4.1.2	Employer .....	65
4.1.3	Experience .....	65
4.1.4	Position.....	66
4.1.5	Education.....	66
4.1.6	Residence.....	66
4.2	Analysis for Each Field .....	67
4.2.1	Ministry of Local Government Policies .....	67
4.2.2	Sources of Funding.....	70
4.2.3	Organizational Environment .....	73
4.2.4	Member Municipalities Perspective .....	76
4.3	In General "All Paragraphs" .....	79
4.3.1	Hypothesis No. 5 .....	80
<b>Chapter 5: Conclusions and Recommendations .....</b>		<b>86</b>
5.1	Conclusions: .....	87
5.2	Recommendations: .....	88
References.....		89
Annex IA: Questionnaire Form (Arabic).....		94
Annex IB: Questionnaire Form (English).....		98
Annex II: List of Jurors.....		102



## List of Tables

Table 2.1 OECD Member Countries.....	12
Table 2.2 Policy versus Administration.....	16
Table 2.3 Estimated Solid Waste Management Costs 2010 and 2025.....	19
Table 2.4 Type of Joint Councils Service for Planning and Development (April 2008).....	29
Table 3.5 Percentages of Received Questionnaires .....	52
Table 3.6 Frequency of Job Title of the Respondents.....	52
Table 3.7 Kolmogorov-Smirnov Test of Normality .....	56
Table 3.8 Correlation coefficient of each paragraph of “Ministry of Local Government Policies” .....	57
Table 3.9 Correlation coefficient of each paragraph of "Sources of Funding" .....	58
Table 3.10 Correlation coefficient of each paragraph of "Organizational Environment" .....	59
Table 3.11 Correlation coefficient of each paragraph of "Member Municipalities Perspective” .....	59
Table 3.12 Eliminated Paragraphs according to P-value .....	60
Table 3.13 Correlation Coefficient of each Field and the whole Questionnaire.....	61
Table 3.14 Cronbach's Alpha for each field of the questionnaire .....	63
Table 4.15 Distribution of Gender .....	65
Table 4.16 Distribution of Employer .....	65
Table 4.17 Distribution of Experience.....	65
Table 4.18 Distribution of Position.....	66
Table 4.19 Distribution of Education.....	66
Table 4.20 Distribution of Residence .....	66
Table 4.21 Means and Test values for “Ministry of Local Government Policies” .....	69
Table 4.22 Means and Test values for “Sources of Funding” .....	72
Table 4.23 Means and Test Values for “Organizational Environment” .....	75
Table 4.24 Means and Test values for “Member Municipalities Perspective” .....	78
Table 4.25 Means and Test values for “All Paragraphs” .....	79
Table 4.26 Independent Samples T-Test Test of the Fields and their P-Values for Member Municipalities' JSC .....	79
Table 4.27 ANOVA test of the fields and their p-values for Employer.....	80
Table 4.28 ANOVA test of the fields and their p-values for Experience .....	81
Table 4.29 ANOVA test of the fields and their p-values for Position .....	82
Table 4.30 ANOVA test of the fields and their p-values for Education .....	83
Table 4.31 ANOVA test of the fields and their p-values for Residence.....	84

## **List of Figures**

Figure 1.1 Conceptual Map of Variables .....	6
Figure 1.2 Conceptual Map of Variables' Stages .....	6
Figure 2.3 Annual Waste Generation by Regions around the World.....	11
Figure 2.4 Integrated Sustainable Waste Management Framework .....	14
Figure 2.5 Governmental Expenditure on Environment in Palestine 2012.....	26
Figure 2.6 JSC-North Gaza Organizational Structure.....	33
Figure 3.7 Research methodology flowchart .....	48
Figure 3.8 Gaza Strip Local Authorities .....	53

## Abbreviations

CMWU	Coastal Municipalities Water Utility
EEA	European Environment Agency
EQA	Environment Quality Authority
EU	European Union
EUR	European Currency
GIZ	German International Agency
ISWM	Integrated Solid Waste Management
IMC	Inter-Municipal Cooperation
JSC	Joint Service Council
JSC-H&B	Joint Service Council - Hebron and Bethlehem Governorates
JSC-KRM	Joint Service Council - Khan Younis, Rafah and Middle Area Governorates
JSC-NG	Joint Service Council - North Gaza Governorate
JSCSWM	Joint Service Council for Solid Waste Management
KFW	German Development Bank
LGU	Local Government Unit
MDLF	Municipal Development and Lending Fund
MoLG	Ministry of Local Government
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
NDP	National Development Plan
NGO	Non-governmental Organization
NSSWM	National Strategy for Solid Waste Management
OECD	Organization of Economic Cooperation and Development
PA	The Palestinian Authority
PCBS	The Palestinian Central Bureau of Statistics
PNA	The Palestinian National Authority
SW	Solid Waste
SWM	Solid Waste Management
SWMC	Solid Waste Management Council
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNRWA	United Nations Relief and Works Agency
US	United States
US\$	United States Dollar

## **Abstract**

This research aimed to explore the influencing factors on the applicability of a municipal joint service provider; that is the Joint Service Council for Solid Waste Management. The subject of inter-municipal cooperation started in Palestine upon the establishment of the Palestinian National Authority and Gaza Strip presented the first model in the sector of solid waste management both in Gaza and the West Bank.

This research employed descriptive analytical approach, and in order to achieve the research objectives the research used the questionnaire tool targeting the top management of all stakeholders and in this case they are the Ministry of Local Government, local authorities (Municipalities) and the entities under research; the two Joint Service Councils in Southern and Northern Gaza, totalling 55 questionnaires which represented the entire study population. This study concluded that member municipalities consider alignment with donors' agenda as a stronger motive to join the JSC than the long term economic motives leading to the member municipalities' substantially differ in their commitment towards financing the operations of the JSC's by paying its due invoices, something that would have a serious impact on the sustainability of the Joint Service Council.

Furthermore, the research found that the member municipalities are not well informed of the policies of relation to the solid waste management sector, i.e, the National Plan for Solid Waste Management.

This research recommends enhancing the capacity of MoLG and local authorities in terms of proper communication, awareness and follow up of the understanding and implementation of the national agenda and the strategic plans pertaining to the solid waste management sector. Moreover, it is recommended that the central government financially intervene to assist the Joint Service Council to recover and restart its focus on its intended mission and long term objectives.

## الملخص

هدفت هذه الدراسة إلى التعرف على العوامل المؤثرة على مدى تطبيق نموذج مجالس الخدمات المشتركة في قطاع غزة وخاصة مجلس إدارة النفايات الصلبة. لقد بدأ مجال التعاون المشترك بين البلديات منذ تأسيس السلطة الوطنية الفلسطينية أواسط تسعينيات القرن الماضي، حيث كان لإنشاء مجلس إدارة النفايات الصلبة في محافظات وسط وجنوب قطاع غزة السبق في مجال إدارة النفايات الصلبة والذي أصبح نموذجاً لمجالس مشتركة أخرى في غزة والضفة الغربية.

لقد تم استخدام المنهج الوصفي التحليلي من أجل تحقيق أهداف الدراسة حيث تم استخدام أداة الإستبانة باستهداف كامل مجتمع الدراسة البالغ عدده 55 مستجيب، من الإدارة العليا في كل من وزارة الحكم المحلي الفلسطينية ومجلسي إدارة النفايات الصلبة في وسط/ جنوب وفي شمال غزة إضافة إلى الهيئات المحلية الأعضاء في المجالس المشتركة.

توصلت الدراسة إلى أن الدافع العام لانضمام الهيئات المحلية لمجالس الخدمات المشتركة مرتبط بأجندة الجهات المانحة وما تقدمه من دعم ، وهو دور تاريخي منذ انشاء السلطة الوطنية الفلسطينية، هذا الدافع الذي من شأنه أن يتأتى على حساب الدافع الإقتصادي بعيد المدى بالنسبة للهيئات المحلية.

كما وخلصت الدراسة إلى أن هناك ضعف في التواصل وتبادل المعلومات مع الهيئات المحلية من قبل الحكومة المركزية فيما يتعلق بالإستراتيجيات والخطط التنموية الوطنية خاصة فيما يتعلق بقطاع إدارة النفايات الصلبة.

أوصت الدراسة بوجوب تعزيز قدرات كل من وزارة الحكم المحلي والهيئات المحلية في مجال التواصل والوعي ومتابعة استيعاب الخطط الوطنية ذات العلاقة بإدارة النفايات الصلبة وتنفيذها. هذا وقد أوصت الدراسة بتدخل الحكومة الفلسطينية لمساعدة مجلس الخدمات المشترك في شمال غزة مالياً من أجل مساعدته في التعافي من الأزمات التي مر بها؛ من أجل تحقيق الهدف الذي أنشئ من أجله.

# Chapter 1

## Research Framework

- 1.1 Introduction
- 1.2 Problem Statement
- 1.3 Importance
- 1.4 Research Objectives
- 1.5 Research Structure
- 1.6 Research Variables
- 1.7 Research Hypotheses

## **Chapter 1: Research Framework**

### **1.1 Introduction**

As part of the Palestinian quest to improve the performance of municipal services, and in more specific; to develop the solid waste sector (PNA, National Strategy for Solid Waste Management 2010-2014, 2010) as part of the National Strategy for Solid Waste Management; new bodies were established to combine the efforts of individual municipalities into what is known as the Joint Service Councils (JSC) (Jabr, 2004). The first JSC concerned with solid waste management in the Palestinian Territory was established in Gaza Strip in 1995 covering the service area of the Middle and Khan Younis Governorates (13 municipalities), followed in 2004 by the formation of second JSC to cover the North Governorate in Gaza Strip – the Solid Waste Management Council in North Gaza Governorate) (Safi & Luecke, 2007). Ever since, several JSCs were established in the West Bank benefiting from the experience in Gaza yet with greater geographic coverage constituting greater number of local government units (municipalities and village councils).

The political and economic factors play crucial role on service provision especially in the aftermath of the Israeli blockade on Gaza and the high unemployment and the subsequent low municipal revenues that contribute to financing the operations of both JSCs where most researchers and reports has focused on. “The blockade on Gaza over the last two years has meant that municipal infrastructure was nearing collapse” (MDLF, Gaza Municipal Sector Damage Assessment, 2009). Nevertheless, “effective and sustainable waste management goes hand-in-hand with good local governance and sound municipal management”, (Whitman, Smith, & Wilson, 2015).

This study aims at finding the strength and weakness of the organizational structures, operational mandates, and the overall sustainability of services for the Joint Service Council in Northern Gaza (the Solid Waste Management Council in North Gaza Governorate) from the perspective of the decision makers and senior employees. This study attempts to highlight the causes for the drawback of the Solid Waste Management Council in North Gaza Governorate and to provide feedback for future establishment or expansion of similar or existing Joint Service Councils (JSCs) from a public administration point view. It is imperative to realize the lessons learnt and to provide a scientific analysis of the past and existing conditions, and to project the findings on future plans avoiding potential areas of conflict and supporting areas of stability and sustainability.

## **1.2 Problem Statement**

The precedent withdrawal of a major municipality that constituted 50% of the total service area from a Joint Service Council – the Solid Waste Management Council in North Gaza – raised several concerns among specialists in the field of solid waste management with connection to the sustainability of that public entity.

To date, no official publications has addressed the issues leading to the status of the Solid Waste Management Council in North Gaza although some opinions went to consider the situation normal as many – if not all – of the public sector agencies in Gaza Strip suffered years of crippling and aggressive blockade.

On the other hand, a combination factors has significantly contributed to the drawback of the Solid Waste Management Council in North Gaza (Joint Service Council in North Gaza) at different degrees. These factors range from central government policy in relation to the Joint Service Councils, through the emergence of temporary external funding at the first phases of operation, to the organizational structure itself with its human resources and mandates, to the culture, attitude, and perspective of Joint Service Council’s member municipalities, and last / not least the sense of ownership of member municipalities that it is believed that all together is molded through the public administration fabric that allowed many public sector entities to survive years of blockade and political/economic turmoil; that includes a similar organization in the Middle of Gaza Strip; the Solid Waste Management Council in Middle and Khan Younis Governorates. Therefore, the overall question of this research answer was: “what are the major influential factors for the failure of the Solid Waste Management Councils in Gaza Governorates?”

## **1.3 Importance**

This study will provide an insightful overview of the strength and weakness of the existing Joint Service Council (The Solid Waste Management Council in North Gaza Governorate) including clearer analysis of the factors leading to either success or failure of such entity through examining the extent of applicability through a mix of influencing factors that are interrelated through the fabric of public administration for institutions that provides



vital services touching the daily lives of Palestinians. The importance of this study serves the following levels:

- The National Level: through the lessons learnt for future establishment of similar joint service councils and expansions of existing ones since the concept of cooperative service providers is a preferred option;
- The Solid Waste Management Council Level: the findings can assist in a more accurate identification of weakness areas that can be addressed to improve the status of the Council in terms of organizational structure and the cooperation among member municipalities towards the common goal;
- Municipality Level: this study can provide a feedback and recommendations for individual municipalities in general, and for the member municipalities in the Solid Waste Management Council in North Gaza with regard to their ownership and organizational culture in a broad public administration sense;
- General Public Level: any findings that can assist the local government sector in general, or the Solid Waste Management Council in particular, that is in terms of improving overall efficiency and effectiveness on service provision will have a direct impact on the general public whom are the beneficiary of such services and on a daily basis;
- Academic Level: this study will be among the first to address the issue of solid waste management in Gaza from a business management/public administration perspective since most previous published studies, for Gaza at least, tackled the issue from an engineering, environmental, and public policy perspectives only and separately. In addition, the research experience and findings can enrich the researcher's knowledge in the sector and add new areas of exploration that can contribute to the researcher's career development.

## **1.4 Research Objectives**

- To highlight the critical factors behind failure of the Joint Service Councils for Solid Waste Management (JSCSWM) in Gaza Strip;
- To clarify the extent of influence of the critical factors on the Joint Service Councils for Solid Waste Management (JSCSWM) in Gaza Strip;

## **1.5 Research Structure**

This research consists of five chapters as follows:

- Chapter One: Research Framework: this chapter shows research problem, the main objectives and importance of the research statement, in addition to the research hypothesis and variables.
- Chapter Two: Literature Review and Previous Studies: this chapter provides a historical background on the research subject and review from previous studied to consolidate the main factors influencing the success of the Joint Service Councils (JSC's) in general, and the specific JSC of North Gaza;
- Chapter Three: Research Methodology: this chapter presents the methodologies used in this research in order to achieve the required objectives
- Chapter Four: Data Analysis, Interpretations and Discussion: this chapter provides the analysis of the main tool used in this research, the questionnaire, and discusses and elaborates the research results.
- Chapter Five: Conclusion and Recommendations:
- References and Appendixes.

## **1.6 Research Variables**

### **A. Dependent Variable:**

1. Success of the Solid Waste Management Council in North Gaza Governorate

### **B. Independent Variables:**

1. Palestinian Ministry of Local Government Policies
2. Sources - Amount of Funding
3. Organizational Structure
4. Member Municipality Culture

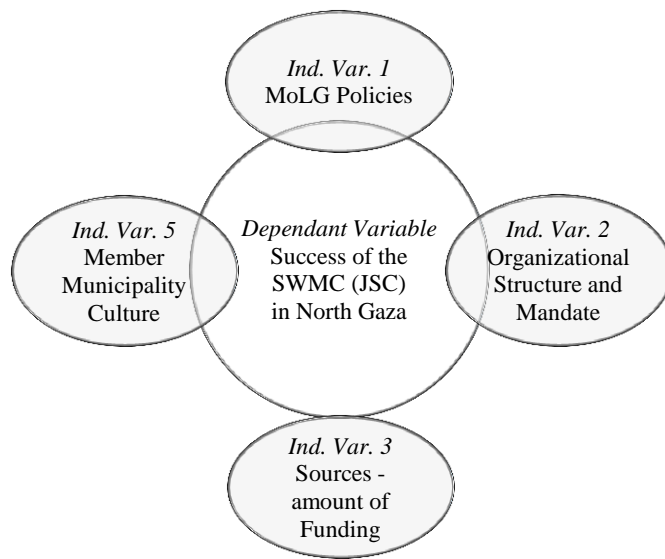


Figure 1.1 Conceptual Map of Variables

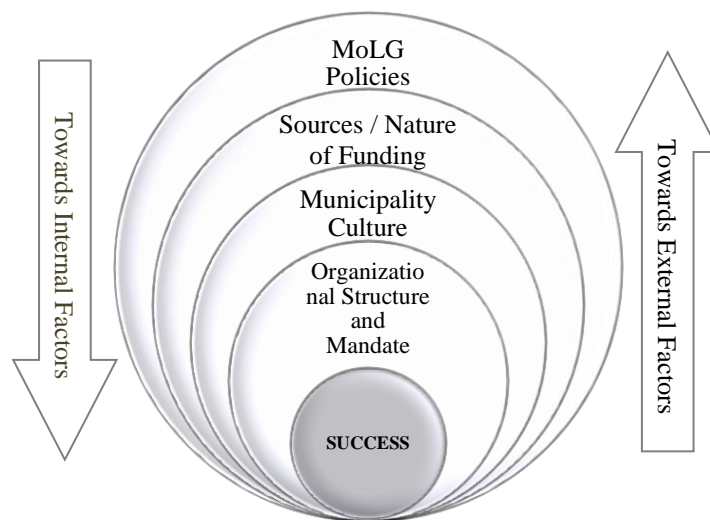


Figure 1.2 Conceptual Map of Variables' Stages

## 1.7 Research Hypotheses

1. There is a statistically significant relationship at  $\alpha \leq 0.05$  between the policies of the Palestinian Ministry of Local Government and the success of the Solid Waste Management Council in North Gaza Governorate.
2. There is a statistically significant relationship at  $\alpha \leq 0.05$  between the sources and amounts of funding and the success of the Solid Waste Management Council in North Gaza Governorate.
3. There is a statistically significant relationship at  $\alpha \leq 0.05$  between the organizational structure/mandate and the success of the Solid Waste Management Council in North Gaza Governorate.
4. There is a statistically significant relationship at  $\alpha \leq 0.05$  between member municipality culture and the success of the Solid Waste Management Council in North Gaza Governorate.
5. There is a significant difference among the respondents toward the “The Extent of Applicability of Municipal Cooperative Service Provider “due to Employer, Experience, Position, Education and Residence.

## Chapter 2

# Literature Review

- 2.1 Solid Waste Management
  - 2.1.1 Overview
  - 2.1.2 Historical Background of Managing Solid Waste
  - 2.1.3 Elements and Process of Municipal Solid Waste Management
  - 2.1.4 Political, Legal and Public Policy Aspects
  - 2.1.5 Institutional Aspects
  - 2.1.6 Financial Aspects
  - 2.1.7 Inter-municipal Cooperation
- 2.2 Solid Waste Management in Palestine
  - 2.2.1 Overview of the Palestinian Context
  - 2.2.2 Political, Legal and Public Policy Aspects
  - 2.2.3 Financial Aspects
  - 2.2.4 Institutional Arrangement
  - 2.2.5 The Palestinian Local Government Units
  - 2.2.6 The Joint Service Councils (JSC)
  - 2.2.7 The Joint Service Councils for Solid Waste Management
  - 2.2.8 The Palestinian National Strategy for Solid Waste Management
  - 2.2.9 Obstacles and Challenges
- 2.3 Solid Waste Management Council in North Gaza Governorate
  - 2.3.1 Historical Background
  - 2.3.2 Organizational Structure and Statutes
  - 2.3.3 Services and Technical Aspects
  - 2.3.4 Institutional and Financial Aspects
- 2.4 Previous Studies
  - 2.3.3 This Research and Previous Studies

## **Chapter 2: Literature Review**

### **2.1 Solid Waste Management**

#### **2.1.1 Overview**

Human activities produce volumes of unwanted materials known as solid wastes or refuse or in the common term “garbage” or "trash". Such unwanted material poses public health threat and unpleasant smells in addition to the damage to the aesthetics setting of a city, village, or the landscape of a country. Solid Waste also has other impacts on the entire environment with its air, ground water, and soil. In most countries, the local government or municipality or local government unit is responsible for managing solid waste, (Diaz, Savage, & Eggerth, 2005), that is in terms of collecting trash left in front of residential houses or from common refuse containers or from commercial districts. There are different types of wastes, but for the purpose of this research, the focus is made on municipal solid waste being the largest in volume in developing countries and Palestine being considered a developing country. For simplicity, municipal solid waste (MSW) is produced primarily by ordinary activities in connection to households and similar activities like commercial activities and other public activities, (EEA, 2013). The collection of solid waste is typically labor intensive where municipalities rely on labor to collect trash bags or empty waste bins into collection vehicles that range in type and size. The Solid Waste Management (SWM) process does not end at the collection of “trash”, rather it continues into transferring such unwanted material to its final destination; the landfill, where it is buried and covered with earth material or as approved depending on the regulator’s requirements. Between collection and landfilling, the solid waste may undergo resource recovery process where recyclable materials, such as plastics, metals, paper, and glass are filtered out to go back to factories that use them as input into new products. Such process of handling and utilizing municipal solid waste varies among countries depending on its economy and policies.

### **2.1.2 Historical Background of Managing Solid Waste**

“When humans abandoned nomadic life at around 10,000 BC, they began to live in communities, resulting in the mass production of solid waste”, (Worrell & Vesilind, 2010, p. 1). In modern times, the first organized solid waste management in its current shape can be traced back to England in the late 18<sup>th</sup> century as the industrial age was peaking and human activities took more of a modern turn in terms of consumption, thus the production of refuse material “trash” increased. A man by the name Corbyn Morris (English economist) can be considered the first to propose in, 1751 in London, the idea of organizing the management of solid waste under one public authority, opening the door to the modern set up and mandate of local authorities for managing the solid waste sector. ([www.wikipedia.org](http://www.wikipedia.org)).

Solid waste is directly connected to public health, where “a major adverse impact is its attraction of rodents and vector insects for which it provides food and shelter. Impact on environmental quality takes the form of foul odors and unsightliness. These impacts are not confined merely to the disposal site. On the contrary, they pervade the area surrounding the site and wherever the wastes are generated, spread, or accumulated”. (Diaz, Savage, & Eggerth, 2005, p. 3). Historically, “through the nineteenth century there were a continuing series of public health epidemics, made worse by bad sanitation. Over 250,000 people died from cholera between 1848 and 1854, and smallpox, typhoid, enteric fever and typhus were also major killers”, (Herbert, 2007, p. 10).

The relationship between solid waste and public health has been identified even in ancient history, where the Greek for instance used to transfer their waste “trash” at least a mile (1.6 kilometer) away from their homes. (Worrell & Vesilind, 2010).

A closer look at today’s disposal sites, known as landfills, large amounts of plastics and papers are observed, and as the human consumption behavior coupled with the economic growth the world had witnessed after the industrial revolution and the subsequent booming of inventions, the average per capita generation of solid waste has increased tremendously. The twentieth century witnessed the invention of many consumer products that contributed to the increase of municipal solid waste (MSW) volumes. For instance, paper cups were invented in 1908, corrugated cardboard in 1913, and the world famous Kleenex facial tissue was first marketed in 1924. The chemical giant Dow invented Styrofoam in 1944, and the aluminum cans which everyone uses today were developed in 1963. Finally, the plastic bottles, the PETE (short for polyethylene terephthalate) were invented and began replacing glass in 1977. (Worrell & Vesilind, 2010)/ ([www.wikipedia.org](http://www.wikipedia.org)).

### 2.1.3 Elements and Process of Municipal Solid Waste Management

In the early times, the provision of solid waste management services can be defined as simple as “to keep the streets clean and to send proper servants and carriages for so doing two days in every week on Friday and Saturday”. (Herbert, 2007, p. 9). However in modern days, and as waste streams increase with the increase of population, the process of managing solid waste does not stop at collecting solid waste “trash”, rather it extends to an entire system of collecting, handling, transporting, transferring, recycling, reusing, and disposing of solid waste into landfills; the latter being a space where solid waste ends for eternity or by a simple definition, a landfill is defined as, “a site for the disposal of waste materials by burial and is the oldest form of waste treatment. Historically, landfills have been the most common method of organized waste disposal and remain so in many places around the world”, (www.wikipedia.org, 2015, p. 10).

The world produced in 2012 almost 2.6 trillion pounds, (www.theatlantic.com, 2012) – which is equal to 1,179,339,200 metric tons of trash. “The world's cities currently generate around 1.3 billion tons of MSW a year, or 1.2kg per city-dweller per day, nearly half of which comes from OECD countries.” (www.economist.com, 2012). In general, “high-income countries produce the most waste per capita, while low income countries produce the least solid waste per capita”, (Hoornweg & Bhada-Tata, 2012).

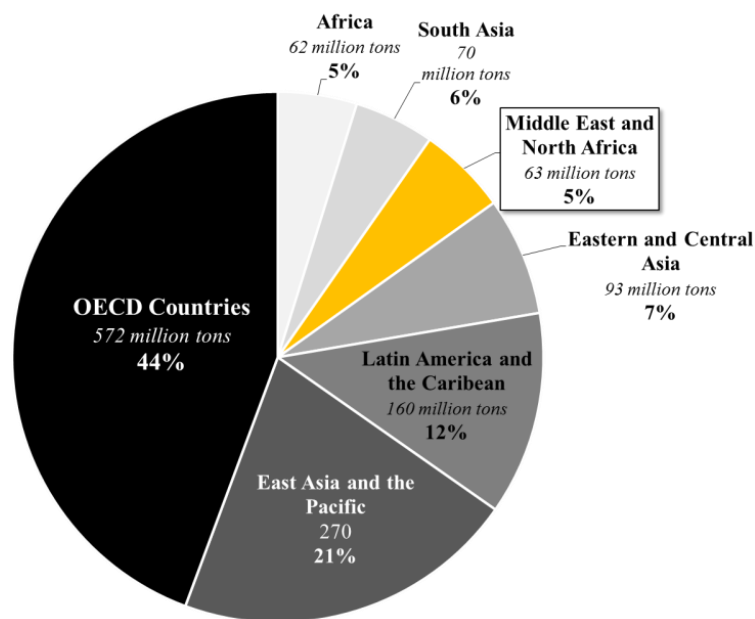


Figure 2.3 Annual Waste Generation by Regions around the World  
*Data recovered from (Hoornweg & Bhada-Tata, 2012, pp. 8-9)*



OECD Countries are members of the Organization for Economic Co-operation and Development, as listed in Table (2.1).

1. AUSTRIA	13. HUNGARY	24. NORWAY
2. AUSTRIA	14. ICELAND	25. POLAND
3. BELGIUM	15. IRELAND	26. PORTUGAL
4. CANADA	16. ISRAEL	27. SLOVAK REPUBLIC
5. CHILE	17. ITALY	28. SLOVENIA
6. CZECH REPUBLIC	18. JAPAN	29. SPAIN
7. DENMARK	19. KOREA	30. SWEDEN
8. ESTONIA	20. LUXEMBOURG	31. SWITZERLAND
9. FINLAND	21. MEXICO	32. TURKEY
10. FRANCE	22. NETHERLANDS	33. UNITED KINGDOM
11. GERMANY	23. NEW ZEALAND	34. UNITED STATES
12. GREECE		

Table 2.1 OECD Member Countries

Source: OECD (Organisation for Economic Co-operation and Development, 2015)

Handling the elements and process of solid waste management (SWM) follows general guidelines in connection to preserving public health and ensure safety of the worker in this sector; however as more specific the type of waste becomes, more specific instructions are anticipated. Since this research is concerned with the entity responsible for municipal solid waste management, i.e., the service provider or the Joint Service Council, it is vital to describe what is meant by SWM.

Solid waste management (SWM) “encompasses the functions of collection, transfer, treatment, recycling, resource recovery and disposal of municipal solid waste. Its first goal is to protect the health of the population, particularly that of low- income groups. Other goals include promotion of environmental quality and sustainability, support of economic productivity and employment generation. Achievement of SWM goals requires sustainable SWM systems, which are adapted to and carried by the municipality and its local communities.” (Bushra, 2000, p. 8)

MSW can have the following components, according to (Worrell & Vesilind, 2010, p. 30):

- “Mixed household waste
  - Recyclables, such as:
    - Newspapers
    - Aluminum cans
    - Milk cartons
    - Plastic soft drink bottles
    - Steel cans
    - Corrugated cardboard
    - Other material collected by the community
- Household hazardous waste
- Commercial waste
- Yard (or green) waste
- Litter and waste from community trash cans
- Bulky items (refrigerators, rugs, etc.)
- Construction and demolition waste”.

Often these wastes are defined by the way they are collected. Commonly, the mixed household wastes are collected by trucks specially built for that purpose, and the recyclables are collected either with the mixed waste in a separate compartment or by other vehicles built for that purpose. Yard waste may be collected with the household waste or placed separately in a dedicated vehicle. Commercial wastes use large containers that are emptied into specially built trucks”.

“Waste collection is the collection of solid waste from point of production (residential, industrial commercial, institutional) to the point of treatment or disposal. Municipal solid waste is collected in several ways:

- House-to-House: Waste collectors visit each individual house to collect garbage. The user generally pays a fee for this service.
- Community Bins: Users bring their garbage to community bins that are placed at fixed points in a neighborhood or locality. MSW is picked up by the municipality, or its designate, according to a set schedule.

- Curbside Pick-Up: Users leave their garbage directly outside their homes according to a garbage pick-up schedule set with the local authorities (secondary house-to-house collectors not typical).
- Self-Delivered: Generators deliver the waste directly to disposal sites or transfer stations, or hire third-party operators (or the municipality).
- Contracted or Delegated Service: Businesses hire firms (or municipality with municipal facilities) who arrange collection schedules and charges with customers. Municipalities often license private operators and may designate collection areas to encourage collection efficiencies.” (Hoornweg & Bhada-Tata, 2012, p. 13)

A good prelude to the following sections can be illustrated in figure (2.4), which concludes the picture for managing solid waste in a sustainable and integrated manner. An integrated solid waste management (ISWM) which “reflects the need to approach solid waste in a comprehensive manner with careful selection and sustained application of appropriate technology, working conditions, and establishment of a ‘social license’ between the community and designated waste management authorities”. (Hoornweg & Bhada-Tata, 2012, p. 25)

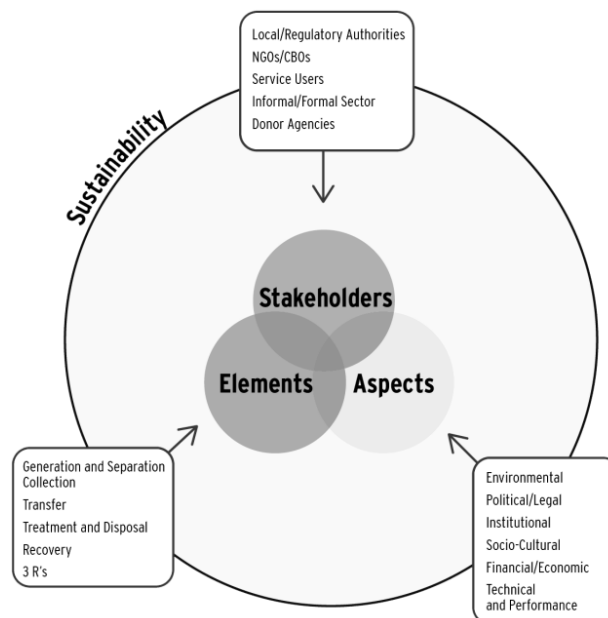


Figure 2.4 Integrated Sustainable Waste Management Framework  
 Source: (Hoornweg & Bhada-Tata, 2012, p. 26)

Overall, “in world practice, treatment of waste observed five obligatory aspects of the process: social, economic, political, institutional and financial.” (ECO Invest, 2011)

### 2.1.4 Political, Legal and Public Policy Aspects

"Governments will generally have final jurisdiction and responsibility for overall policy and for management of the MSWM system; whether or not the government itself is performing the waste management functions." (Diaz, Savage, & Eggerth, 2005).

SWM is "influenced in numerous ways by the political context, the existing relationship between local and central governments (the effective degree of decentralization, for example), the form and extent of citizens participation in the public processes of policy making and the role of party politics in local government administration all affect the character of management, governance and the type of municipal solid waste management (MSWM) system which is possible and appropriate." (Schübeler, Christen, & Wehrle, 1996, p. 25)

"Public policy is a combination of basic decisions, commitments, and actions made by those who hold authority or affect government decisions." (Municipal Research & Services Center of Washington, 1999, p. 2). In general, it is useful to understand the difference between policy and administration for both executive staff and policy makers. Table 2.2 details these differences.

Policy	Administration
<ul style="list-style-type: none"> <li>• Enact a budget</li> </ul>	<ul style="list-style-type: none"> <li>• Propose a budget. Spend within budgetary limits.</li> </ul>
<ul style="list-style-type: none"> <li>• Define the powers, functions and duties of officers and employees</li> </ul>	<ul style="list-style-type: none"> <li>• Fill positions consistent with local ordinances.</li> </ul>
<ul style="list-style-type: none"> <li>• Fix the compensation of officers and employees.</li> </ul>	<ul style="list-style-type: none"> <li>• Administer payroll consistent with budget and compensation plan adopted by council.</li> </ul>
<ul style="list-style-type: none"> <li>• Establish the working conditions of officers and employees.</li> </ul>	<ul style="list-style-type: none"> <li>• Insure that proper working conditions are provided.</li> </ul>
<ul style="list-style-type: none"> <li>• Establish retirement and pension systems</li> </ul>	<ul style="list-style-type: none"> <li>• Administer pension and retirement plan.</li> </ul>
<ul style="list-style-type: none"> <li>• Adopt ordinances regulating local affairs.</li> </ul>	<ul style="list-style-type: none"> <li>• Implement and enforce ordinances.</li> </ul>
<ul style="list-style-type: none"> <li>• Set fines and penalties for violation of ordinances.</li> </ul>	<ul style="list-style-type: none"> <li>• Collect fines and enforce penalties.</li> </ul>
<ul style="list-style-type: none"> <li>• Enter into contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• Propose contracts. Manage approved contracts. Enforce contracts.</li> </ul>
<ul style="list-style-type: none"> <li>• Regulate the acquisition, sale, ownership, and other disposition of real property.</li> </ul>	<ul style="list-style-type: none"> <li>• Negotiate terms of acquisition and sale of real property; carry out acquisition and sale.</li> </ul>
<ul style="list-style-type: none"> <li>• Decide which government services will be provided. Adopt budgets for their provision.</li> </ul>	<ul style="list-style-type: none"> <li>• Oversee the day to day operation of programs and services provided by the local government.</li> </ul>
<ul style="list-style-type: none"> <li>• Establish Public Utilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Manage provision of utility services.</li> </ul>
<ul style="list-style-type: none"> <li>• Grant franchise for the use of public ways.</li> </ul>	<ul style="list-style-type: none"> <li>• Enforce terms of franchise agreement.</li> </ul>
<ul style="list-style-type: none"> <li>• License, for the purpose of revenue and regulation, most any type of business.</li> </ul>	<ul style="list-style-type: none"> <li>• Administer business licenses as provided by council.</li> </ul>
<ul style="list-style-type: none"> <li>• Set tax rates and user fees consistent with state laws.</li> </ul>	<ul style="list-style-type: none"> <li>• Collect taxes and user fees.</li> </ul>
<ul style="list-style-type: none"> <li>• Approve claims against the city of county.</li> </ul>	<ul style="list-style-type: none"> <li>• Bring lawsuits, with legislative approval. Propose settlement of claims. Pay approved</li> </ul>

Policy	Administration
<ul style="list-style-type: none"> <li>• Enter into agreements to accept grants and gifts.</li> </ul>	<ul style="list-style-type: none"> <li>claims.</li> <li>• Propose agreements. Carry out terms of agreement.</li> </ul>

Table 2.2 Policy versus Administration

Source: (Municipal Research & Services Center of Washington, 1999, p. 18)

In the SWM context, “waste management strategies cannot be implemented without the support and guidance of legislative framework. Legislation should contain a series of ordinances and regulations aimed at managing solid waste, including procedures and methodologies for monitoring and enforcing the regulations. Consistent national policies on MSW legislation are needed. The policies should encourage cross-jurisdictions and inter-agency coordination, and facilitate implementation of economic instruments for improving waste management”, (Li, 2007, p. 11).

Taking the European Union (EU) as an example of industrial economy with an advance governance system, “Over the last 20 years, the EU has introduced a large body of waste legislation, including minimum requirements for managing certain waste types. Three targets in particular should have led to a convergence of municipal waste recycling levels across Europe: the Landfill Directive's landfill diversion target for biodegradable municipal waste; the Packaging and Packaging Waste Directive's recycling targets; and the Waste Framework Directive's recycling target for household and similar wastes”, (EEA, 2013). The case is different for developing countries, where the issue of solid waste may not gain a priority status on national agendas, thus the entire process of solid waste management would seem far underdeveloped when compared to industrialized nations in Europe and North America. "In an attempt to accelerate the pace of its industrial development, an economically developing nation may fail to pay adequate attention to solid waste management. Such a failure incurs a severe penalty at a later time in the form of resources needlessly lost and a staggering adverse impact on the environment and on public health and safety", (Diaz, Savage, & Eggerth, 2005).

“A comprehensive municipal solid waste management (MSWM) system includes some or all of the following activities:

- Setting policies;
- Developing and enforcing regulations;
- Planning and evaluating municipal MSWM activities by system designers, users, and other stakeholders;
- Using waste characterization studies to adjust systems to the types of waste generated;
- Physically handling waste and recoverable materials, including separation, collection, composting, incineration, and landfilling;
- Marketing recovered materials to brokers or to end-users for industrial, commercial, or small-scale manufacturing purposes;
- Establishing training programs for MSWM workers;
- Carrying out public information and education programs;
- Identifying financial mechanisms and cost recovery systems;
- establishing prices for services, and creating incentives;
- Managing public sector administrative and operations units; and
- Incorporating private sector businesses, including informal sector collectors, processors, and entrepreneurs.”, (Diaz, Savage, & Eggerth, 2005, p. 7)

### **2.1.5 Institutional Aspects**

Managing solid waste concerns the entire population; hence all government branches can be involved at some point in facilitating the process of SWM each from its perspective; depending on the powers or mandates given to each agency or institution. It can be clear that, “SWM is a major responsibility of local governments. It is a complex task, which depends as much upon the organization and co-operation between numerous public and private sector actors, as much as, upon appropriate technical solutions. SWM is also considered an important entry point for integrated urban management support.” (Bushra, 2000, p. 9)

“Understanding roles is a necessary step in resolving many conflicts. When roles are not clearly defined, compromise may be in order. Statutes and case law may not provide a ready

answer. All sides need flexibility to meet the challenges of effective local government that is responsive to public needs. Local government works best when local officials work well together and build relationships based on honesty and trust.” (Municipal Research & Services Center of Washington, 1999, p. 20)

### **2.1.6 Financial Aspects**

This study presumes that, municipal solid waste (MSW) management entails number of investments and operational expenses that is ongoing as humans produce waste. As illustrated in the previous sections, the public policy and the institutional arrangements are key factors in determining the sustainability and advancement of the system. That’s why it can be said that the advancement of the management of solid waste correlates directly with the economic prosperity of the country of the community it serves. The service provider, whether a local authority, municipality, or a private contractor needs to furnish the following expenses:

- Capital Costs: that includes the investment in machinery such as garbage collection fleet, in addition to buildings and facilities depending on the complexity of the system. For example, if sorting of solid waste is anticipated then a sorting facility is needed. If the collection area is large, then regional offices or garage (warehouses) are needed to host the collection fleet and the management personnel. If the service provider is responsible for disposal of solid waste, then landfilling costs are anticipated, that consists of capital investment pertaining to the purchase of the land and the preparation of the site depending on the environmental requirements. Nowadays, in most countries, a landfill has to be engineered in a manner that prevents the pollution of the ground water aquifer. To prevent pollution, the owner of the landfill has to construct a lining system, which is an impermeable layer such as plastic or asphalt or concrete or any approved layer system that can ensure no leaks of the garbage liquids, known as leachate, into the ground.
- Operational Expenses: for the labors and drivers of garbage trucks, in addition to the cost of maintenance for the machinery involved such as the collection trucks and other auxiliary equipment, e.g., loaders if needed.

Overall, waste management “is one of the most visible of urban services. These services are a major employer and consume a large proportion of the operational revenue of a city or

municipality. As such, effective and sustainable waste management goes hand-in-hand with good local governance and sound municipal management.” (Whiteman, Smith, & Wilson, 2009)

<b>Country Income Group</b>	<b>2010 Cost</b>	<b>2025 Cost</b>
Low Income Countries	\$1.5 Billion	\$7.7 Billion
Lower Middle Income Countries	\$20.1 Billion	\$84.1 Billion
Upper Middle Income Countries	\$24.5 Billion	\$63.5 Billion
High Income Countries	\$159.3 Billion	\$220.2 Billion
<b>Total Global Cost (US\$)</b>	<b>\$205.4 Billion</b>	<b>\$375 Billion</b>

Table 2.3 Estimated Solid Waste Management Costs 2010 and 2025  
Source: (Hoornweg & Bhada-Tata, 2012, p. 46)

Table (2.3) clearly shows the relatively low expenditure on SWM services. Although low income countries generate less solid waste than high income countries, refer to figure (2.3) in section 2.1.3, low income countries are still spending less on SWM which indicates the lower priority of this sector in low income countries. In a more specific conclusion, “in some developing countries, municipalities spend a disproportionate amount of financial resources on certain solid waste services, in particular waste collection and sweeping”, (Diaz, Savage, & Eggerth, 2005, p. 3). In the same context, financial analysis is not necessarily being utilized to weigh in the gain and losses, in other words “this situation is quite typical for cities of the developing world where waste services are seldom analyzed using cost-revenue accounting because the service is seen as “public financed” independent of the cost.” (Lohri, Camenzind, & Zurbrügg, 2014, p. 550)

### **2.1.7 Inter-municipal Cooperation**

There are several reasons for municipalities to cooperate in the first place, that is to avoid financial distress, also as decentralization is increasing among governments across the world and more responsibilities are shifted towards local governments. Generally, the size of municipalities seeking inter-cooperation plays an important factor, that is besides the need for effective services and (better quality), and the necessity nature imposes as sharing borders among municipalities dictates the need for cooperation. Finally, inter-municipal cooperation



helps reduce the risk of failures, or risks can be rather shared. (Schep, Gerrit Jan; Schep, Stijn W., 2011).

“In many instances, particularly in developing countries, the greatest impediments to efficient and environmentally sound handling of MSWM issues are managerial, rather than technical”. (Diaz, Savage, & Eggerth, 2005).

“In particular, agencies will respond more substantively to actors who are seen to have more direct hierarchical control over their budget, organizational structure, and decision making”, (Pandey & Wright, 2006, p. 516).

“No matter how clear the advantages of cooperation might seem, creating a cooperative venture does never seem to be easy. On their way towards cooperation municipalities can encounter all sorts of hazards that may become so important and unexpected that they become insurmountable. Many initiatives are therefore malfunctioning or even given up. It is therefore inevitable that municipalities create a sound base for cooperation in an early stage. In order to do so, it is necessary to obtain a perspective on the potential pitfalls. If they are identified in time, they can be solved or avoided. If this does not happen, they can become pitfalls that can finally harm the cooperation.” (Schep, Gerrit Jan; Schep, Stijn W., 2011, p. 12).

#### **2.1.7.1 Drawbacks on Inter-municipal Cooperation**

When independent entities share common goals, similar to the case of forming a JSC for instance, some factors may play a critical role on the sustainability of such cooperation; Gerrit Jan Schep explained such drawbacks in his manual (Schep, Gerrit Jan; Schep, Stijn W., 2011, pp. 12-13), as follows:

- **Cooperation as Solution for Immediate Problems:**  
It happens quite often that the initiative for cooperation comes from a municipality with immediate problems in that specific area. There are two main reasons for the fact that such initiatives are destined to fail eventually. Cooperation does, first of all, not provide a solution for these short term necessities. Creating a solid cooperative relation costs time, while municipalities that find themselves in immediate problems

do not have the luxury to invest this time. Also, a malfunctioning municipal department is not an attractive partner to departments of other municipalities.

- Differences in Policy Content:

While there might be differences between municipalities with respect to the content of their policies, they do not seem to be a large threat to the cooperation. The differences are often not a result of different perspectives and principles, but much more of coincidences and practicalities. If the differences are observed and considered, they normally do not form any problems in the cooperation process.

- Behavior of a Large Municipality:

The behavior of the largest municipality in the formation process of the cooperative agreement is usually crucial. It is also a difficult role to play. The largest municipality is the initiator of the cooperation in most of the cases. This central municipality (not necessarily in the physical sense) supplies, due to its size, most of the expertise and provides the largest financial support. This means that only when the central municipality joins the cooperation, it also becomes interesting to the remainder of the municipalities. In contrast to this, it could be stated that the others have the habit to watch the largest of the potential partners with great suspicion. The largest local government, its directors and its public servants are almost per definition suspected of the intention to increase their power and influence. This means that the largest local government has to play her role of initiator with great discretion and simultaneously protect the egos of the smaller municipalities. It has to take the initiatives, but must not be a dominant partner. Equality is, therefore, a key principle.

- (Non) Core activity:

A core activity is an activity which the municipality regards as important. Core activities are usually extensively checked by the counsels in order to secure their wellbeing. A municipality can, for example, have more interest in the reintegration of unemployed people than the exact logistical process of garbage collection. It is therefore not very surprising that a local government might be reluctant to start a cooperative agreement on a core activity. Cooperation usually means that a municipality has to give up a certain amount of power on the decision making of that

particular activity. A decrease in control over such activities can be a pitfall to good cooperation.

## **2.2 Solid Waste Management in Palestine**

### **2.2.1 Overview of the Palestinian Context**

In introducing this section, it is important to review the political context of Palestine since it touches all aspects of life and more importantly the political environment where, “External politics impacts local government administration in several ways”, (Al-Habil, 2008, p. 195) on one hand, and generally politicians play an important role in setting the agenda by adopting an issue, (Shafritz & E., 1999) on the other hand. The Municipal Solid Waste Management sector in Palestine is of a unique nature given that Palestine is still under occupation, and the semi-state status of the Palestinian Government places limitations on its freedom. For example, the main disposal sites, landfills, in the occupied West Bank are located in area C, areas with full Israeli administrative and security control, which constitute over 60% of the West Bank, (PNA, 2010, p. 39). According to the Oslo Accord, the Palestinian Authority must coordinate and get approval from Israeli Authorities concerning any activity in areas of joint sovereignty. The status of areas C can be manifested in the Israeli imposed restrictive planning and zoning policies, the demolitions and displacements of the Palestinians and the restrictions to accessing these areas even for the public and individuals who own properties in those areas, (OCHA, 2010). An example of that is the newly designed landfill in the West Bank where, “In 2004 the German Development Bank (KfW) committed EUR 10 million for the Regional Solid Waste Management program for Ramallah/Al-Bireh governorate. Identification of a suitable site that meets Palestinian needs, whilst complying with Israeli restrictions, was a major challenge. The proposed sites were mostly located in ‘Area C’, and therefore subject to a complex process of site selection overseen by the Israeli military and civil administration. Four years later, in August 2008, Israel gave in-principle approval of a site in Rammun. The SWM Joint Service Council for the governorate initiated the process of obtaining a construction permit for the landfill, and produced a feasibility study and an environmental impact assessment. However, Israel is now stipulating access road arrangements that would lead to a 1 to 2 hour detour of more than 75% of solid waste trucks through secondary and tertiary roads. This will give rise to prohibitive increase in construction and operational costs” (PNA, 2010).

While in Gaza, although the Palestinian Authority has relative sovereignty on Gaza Strip territory, such sovereignty stops at 500 meters within Gaza Boundaries, and worse no sovereignty is exercised on the entry points to and out of Gaza Strip, (PNA, 2010, p. 39), particularly after the internal Palestinian conflict in 2007 and the subsequent closure of Gaza by Israel, leading to unprecedented embargo resulting in deterioration across all sectors of public and private businesses in Gaza accompanied with a complete halt of the legislative branch of the government, the Palestinian Legislative Council, whose chairman and many of its members were unjustly arrested by Israel. This context affected all aspects of Palestinians' lives including the management of solid waste sector. Nevertheless, basic services in Gaza Strip continued as the international community maintained its support, on the technical level, to ensure publics' access to basic services including Solid Waste Management services, through the provision of fuel and maintenance to trucks and machinery and through job creation projects. Funding for municipalities came in different forms, but the sustainability of such projects was not necessarily ensured due to the emergency nature of donors' intervention. The funding of municipal services, which SWM and sanitation costs constitute the biggest budget item in Gaza local authorities, comes primarily from fees collected from the beneficiaries, however municipal revenues in Gaza severely dropped as a result of continued blockade and wars on Gaza. (MDLF, Rapid Assessment of Gaza Municipal Sector Damage, 2014)

Overall, "the Palestinian Local Government Sector is currently operating under limited sovereignty due to the prolonged Israeli Occupation. This situation makes formulating plans for a future Palestinian State difficult, particularly considering that there is no "time table" for a reaching a political solution. Resultantly, this impedes any PNA attempts to set and implement a vision, plans, and strategies for development." (PNA, The Palestinian General National Plan, Summary of the Cross-Sectoral Strategy for Palestinian Local Government and Administration Sectors 2011-2013, 2010, p. 3)

On the operational level, the World Bank estimated in 2012 the collection rate of the solid waste in the West Bank and Gaza is 85% in urban areas. (The World Bank, 2012, p. 85). The collection rate of solid waste puts Palestine in the ranks of middle and high income countries.

Generally, “The political, institutional, social, economic and environmental contexts must be considered carefully and comprehensively”, (Abu El Qomboz & Busch, 2007, pp. E-1)

### **2.2.2 Political, Legal and Public Policy Aspects**

“The legal and legislative system regulating the work in this field is marred by some inconsistencies, contradictions and duplication, as well as a lack of inclusiveness and harmony. Roles and responsibilities vary from one law to another; interpretation of law provisions also varies between the different stakeholders, causing a gap between their legal provisions and their actual implementation on the ground. The lack of a specific law or an endorsed legislation for solid waste management leaves room for discretion in the interpretation of these laws and, consequently, creates duplication and conflict of roles and responsibilities.” (EQA, 2010, p. 8)

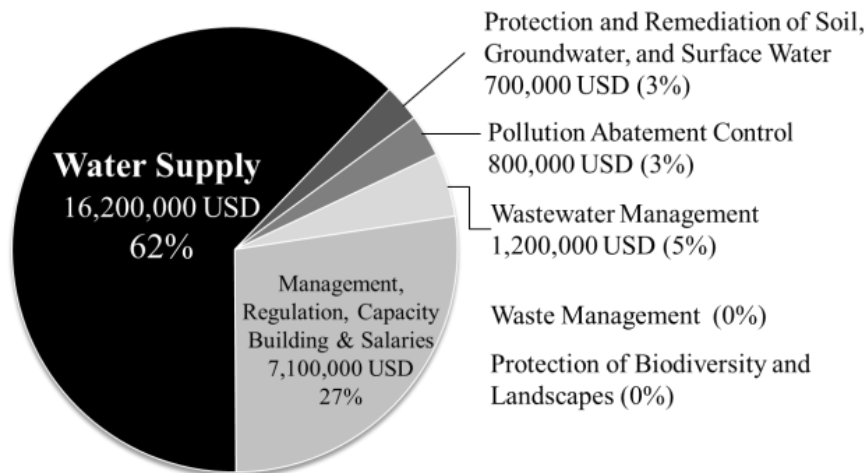
“Palestinian Local Government Law of 1997 created the legal basis for establishing an institutional framework, such as a solid waste management council, that can manage a regional landfill facility and municipal waste collection on a district and regional scale. Article No. 15, Paragraph 8, concerned with cleaning, states: All local authorities are responsible for collecting SW from public places, transporting and disposing these wastes in designated areas. The same article stipulates that all local authorities shall take all precautions and procedures necessary to maintain public health and prevent outbreaks of epidemics among the people.” (Soufan, 2012, p. 70)

The question of decentralization in Palestine had been ongoing ever since the establishment of the PNA, as (Al-Habil, 2008) concluded, “the majority of survey respondents agreed on the need of reorganizing the relations between the central government and local ones emphasizing on giving more specific authorities and autonomy to local governments and adopting more decentralized policies in order to achieve more efficient services”, (Al-Habil, 2008, p. 180).

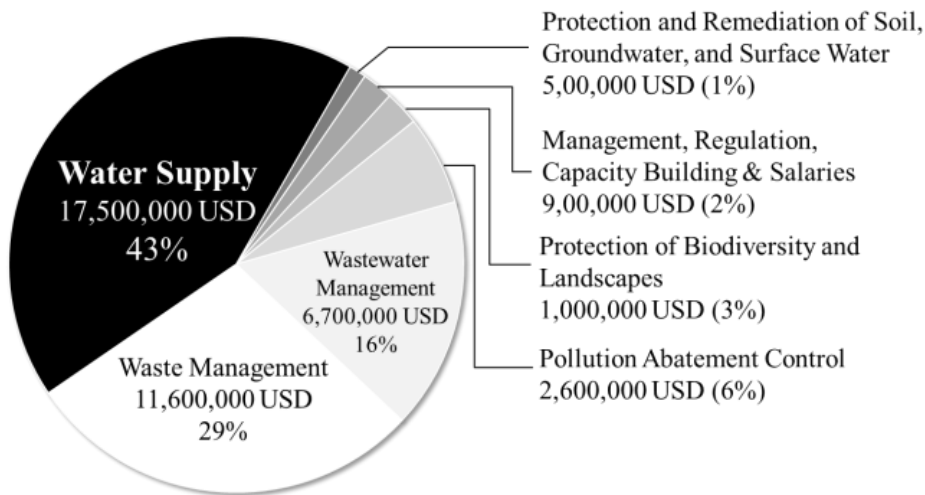
### **2.2.3 Financial Aspects**

In 2012, 40.8% of the total Palestinian expenditure on the environment sector in the West Bank and Gaza was financed by external donors, while 26% was financed by the central government. As for solid waste management, being one of the major themes within the environment sector, the central government showed no spending at all while external donors provided 5.4 million US dollars and 11.6 million US dollars in 2011 and 2012 respectively. (PCBS, Palestinian Central Bureau of Statistics, 2012)

The Palestinian Central Bureau of Statistics (PCBS) indicated in 2012 that the Palestinian government did not finance any infrastructure investment in the SWM sector in the West and Gaza, while donor countries reserved almost 29% of their financing in the environment sector for SWM. The below figures illustrates that, and it can be concluded that investment in the solid waste management sector is entirely left for external donations. However, the same data showed the Palestinian government spending 27% of its finance in the environment sector in 2012, or 7,100,000 US dollars, for management, regulation, capacity building, and salaries which indicate the Palestinian government's commitment to support operational aspects of SWM, i.e., salaries and running costs. It should be noted the local authorities collect fees for SWM services, but the collected fees are not enough to cover operational costs due to the economic conditions in Gaza and citizen's inability to pay. (MDLF, Rapid Assessment of Gaza Municipal Sector Damage, 2014)



Government Expenditure on Environment 2012



Donors Expenditure on Environment 2012

Figure 2.5 Governmental Expenditure on Environment in Palestine 2012  
*Top:* Palestinian government's expenditure, *Bottom:* donors' expenditure  
 Compiled by the researcher, data source: (PCBS, Palestinian Central Bureau of Statistics, 2012)

The Palestinian public administration is donor supported, “the technical assistance provided by the US, Japan, and the UN has had the largest effect on efforts to help advance the establishment of a modern local governance system”. (Al-Habil, 2008, p. 194). However, “the role of the legal system must regulate, monitor and supervise the performance and the functions of the local governments and without any interference of the central government.” (Al-Habil, 2008, p. 195)

“International organizations are also involved with solid waste management. These include both governmental and nongovernmental donors that are funding solid waste projects in the area. International donors have a strong decision-making power for solid waste policy options

in Palestine because resources are limited in the current conditions and the PA institutions are dependent on foreign aid.” (Musleh, 2002, p. 17)

“The European Union has supported solid waste management in Gaza Municipality and nearby Rafah Municipality, which have similar systems. On the other hand, the Germans funded a project in the central area of the Gaza Strip that is a very different system from these two. The World Bank is currently in the process of studying the possibility of funding two sanitary landfills, one in the northern and the other in the southern area of the West Bank.” (Musleh, 2002, p. 18).

#### **2.2.4 Institutional Arrangement**

Two government bodies are primarily responsible for SWM in Palestine; the Ministry of Local Government (MoLG), and the Environment Quality Authority (EQA). Other governmental agencies have roles but at different degrees concerning specific theme within the SWM sector. For instance, the Ministry of Health is concerned with the health care waste – medical waste – that consists of hazardous waste. Since this research is concerned with the Joint Service Councils responsible for Municipal Solid Waste (MSW), focus is made on the key institutions. “The Ministry of Local Government is the main coordinating agency for solid waste management within the Occupied Palestinian Territories, having overall responsibility for the relevant functions of local authorities. The Regional Solid Waste Councils is responsible for the construction of solid waste plants, under the supervision of the ministry of Local Government. The Ministry of Planning and International Cooperation is responsible for the overall planning and fund raising, while the Environmental Quality Authority is responsible for licensing of sites, environmental monitoring, provision of expertise and ensuring environmental protection. However, as a result of the current crisis and related Israeli security measures such as closures and curfews, these central responsibilities are largely inactive.

Most of the day-to-day processing of solid waste (collection, transportation and disposal of waste, and operation and maintenance of facilities) is the responsibility of the local authorities. In larger towns and cities, this is usually the local municipality, while in smaller localities the village councils play a key role, often with coordination provided by the district authorities.” (UNEP, 2003, p. 56)



### **2.2.5 The Palestinian Local Government Units**

According to the Local Government Law No.1, 1997, Article 2, MoLG is responsible for developing public policies guiding the work of Local Government Units (LGUs) and overseeing the functions of these LGUs and the organization of public projects and budget as well as monitoring the relevant financial, administrative and legal aspects. Under Article 15, one of the Local Government Units (LGUs') responsibilities is to organize collection, transfer and disposal of SW within its jurisdiction.

“The definition of the local government and administration system is yet confined on LGUs, Joint Services Councils, and Ministry of Local Government, including its directorates, despite the fact that there are many other stakeholders that to some extent play significant role in local development, this includes Governors, Association of Palestinian Local Authorities (APLA), Municipalities Development Fund, line service oriented Ministries such as Health, Education, Security, civil society organizations, NGOs, and the Private Sector.” (PNA, The Palestinian General National Plan, Summary of the Cross-Sectoral Strategy for Palestinian Local Government and Administration Sectors 2011-2013, 2010, p. 2)

### **2.2.6 The Joint Service Councils (JSC)**

In 2004, The Palestinian Ministry of Local Government (MoLG) established the General Directorate of Joint Services Councils for Planning and Development (GDJSC) within the ministry with a main purpose of setting forth the policies with regard to forming and supervising the Joint Service Councils for Planning and Development in the West Bank and Gaza. (MoLG, MoLG, 2009). The objectives of the GDJSC, (MoLG, MoLG, 2009), is to:

- Enhance the joint councils and prepare them for amalgamation, thus contributing to sustainable cooperation between local units.
- Reinforce cooperation and integration among the joint councils within the framework of the Palestinian local government system.
- Reinforce the capacities of the General Directorate of Joint Councils and enhance their role as a technical arm for the Ministry in the sector.
- Support the joint councils to ensure their sustainability and enhance their capacities to help them perform their duties.

One of the duties of the GDJSC is the implementation of the SWM National Strategy Program.

Researchers had recommended the joint service approach, for example Wasim Al-Habil recommended in 2008 that “Joint service delivery between governments and macro regional planning should be reinforced and supported”, (Al-Habil, 2008, p. 201).

In 2006, the MoLG adopted the Statute of Joint Service Councils. The Statute defines rules of establishing JSCs, and elaborates their jurisdiction, membership, administrative structure, reporting, election and voting mechanisms. It also defines the “General Assembly” and “Board of Directors” of the JSC and sets out the roles and responsibilities of each. The key staffs that must be retained by the JSC are also established in the Statute. The legal and financial status of a JSC established under the Statute derives from the legal status of its Local Government Unit (LGU) members. The MoLG has oversight responsibility for JSC’s. (Daifi, 2012, p. 67).

Table 2.4 provide the number and type of JSCs in the West Bank and Gaza. The multilateral JSC provides various services for a group of LGU’s, while the single JSC is concerned with one type of service for LGU’s, e.g., solid waste management or water. (MoLG, MoLG, 2009).

Governorate	Municipality	Village	Local Community	Total	JSC	
					Single	Multilateral
1. Jenin	12	30	34	76	11	4
2. Tubas	3	5	7	15	1	2
3. Nablus	9	49	1	59	1	5
4. Tulkerm	11	17	5	33	2	4
5. Qalkilia	5	12	17	34	1	3
6. Salfeet	9	10	-	19	1	3
7. Ramallah	18	48	2	68	13	2
8. Jerusalem	10	17	1	28	1	5
9. Jericho	3	5	-	8	1	3
10. Bethlehem	10	20	8	38	5	3
11. Hebron	17	22	40	79	2	4
12. Gaza	25	-	-	25	6	3
Total	132	235	115	482	45	41

Table 2.4 Type of Joint Councils Service for Planning and Development (April 2008)  
*Source: Ministry of Local Government (MoLG, MoLG, 2009)*

### **2.2.7 The Joint Service Councils for Solid Waste Management**

The JSC approach proved its viability in Palestine, especially concerning SWM with the establishment of the first JSC for SWM in Middle Gaza in 1995. The model of JSC-Middle Gaza was followed by establishing several Joint Service Councils for Solid Waste Management (JSCSWM). Through Gaza and the West Bank, there are several functioning JSCSWM in the West Bank and Gaza. (Safi & Luecke, 2007). The MoLG succeeded drawing lessons to a degree from each JSC experience applying learnt lessons for new JSCSWM. Nowadays, there are two JSCSWM in Gaza Strip; the JSC for Khan Younis, Rafah and Middle Area (JSC-KRM), the JSC for North Gaza (JSC-NG). In the West Bank, there are 5 JSCSWM; the JSC for Jenin, the JSC for Ramallah and Al-Bireh, the JSC's for Hebron and Bethlehem (JSC-H&B), and the JSC for Jericho. (Researcher's own account). These JSC's operate on the governorate level, and they are single service JSC – see previous section, table 2.1. The other single service JSC's operating at a smaller scale in small towns and villages in the West Bank, and its presence is directly related to the continuity of service it provides. (MoLG, MoLG, 2009)

### **2.2.8 The Palestinian National Strategy for Solid Waste Management**

Adopted by the Palestinian Cabinet in 2010, the National Strategy for Solid Waste Management (NSSWM) covers eight strategic objectives, namely: an effective legal and organizational framework for SWM; strong and capable institutions; effective and environmentally-safe management of SW services; financially viable and efficient SWM services and activities; principles and mechanisms suitable for managing medical, hazardous, and special wastes; increasing the participation of the private sector; a more participating and aware community; and effective information and monitoring systems. (MoLG, Ministry of Local Government, 2014)

### **2.2.9 Obstacles and Challenges**

According to (UNDP, 2015, p. 7) as part of the agency's assessment of municipal capacity in Gaza, which can apply in part to most municipalities in the West Bank, "the Gaza Municipalities are in the midst of a crisis, largely because of wider legislative, institutional and political factors. These issues cannot be resolved over night, but their resolution is of utmost importance if they are to continue to function in the longer-term. A holistic perspective is therefore required that seeks to build consensus around the following core issues:

- Revisit decentralization dialogue with a focus on state-building;
- Completion of processes of alignment of Gaza Municipalities under CMWU and Solid Waste Councils for North and South Gaza;
- Revisit discussion on inter-governmental fiscal relations;
- Reduce regulatory controls over Municipalities;
- Revisit discussion on amalgamation;
- Strengthen the framework for Regional and Local Economic Development;
- Massive investment into LGU Capacity Development."

## **2.3 Solid Waste Management Council in North Gaza Governorate**

### **2.3.1 Historical Background**

The North Gaza Governorate comprises four municipalities: Jabalia, Beit Lahia, Beit Hanoun and Umm El-Nasser. The total population of North Gaza Governorate is 348,808 inhabitants, including Jabalia Refugee Camp (54,123 inhabitants); which is served by United Nations Relief and Works Agency (UNRWA). (PCBS, Palestinian Central Bureau of Statistics, 2014)

The JSC-North Gaza was established in August 2002 and assumed its full responsibility of the solid waste management in North Gaza Governorate in 2004, where the responsibilities and assets pertaining to SWM was gradually transferred from the municipalities to the JSC - North Gaza.

The JSC-North Gaza is responsible for primary collection (from house-to house), secondary collection (from refuse containers on streets), and transport of MSW to the landfill that is operated by Gaza Municipality. The JSC-North Gaza operates a fleet of collection trucks, tractors, and a maintenance warehouse; in addition to a temporary SW transfer point (station).

### **2.3.2 Organizational Structure and Statutes**

Upon the establishment phase of the JSC-North Gaza, an institutional setup study was conducted that includes detailed job analysis. A master plan was conducted in 2005 detailing technical aspects of SWM across the North Gaza Governorate. The organizational structure of JSC-North Gaza was based on its successful sister JSC in Southern Gaza, JSC-Middle Gaza which was renamed later (in 2012) as JSC-KRM. Figure (2.6) illustrates the organizational structure of JSC-North Gaza upon its establishment in 2012-2014. The overall objective of the JSC-North Gaza, under article 6 of the statute, is to provide reliable, cost effective and environmentally sound solid waste collection and disposal services to its member communities. (MoLG, 2002, p. 2)

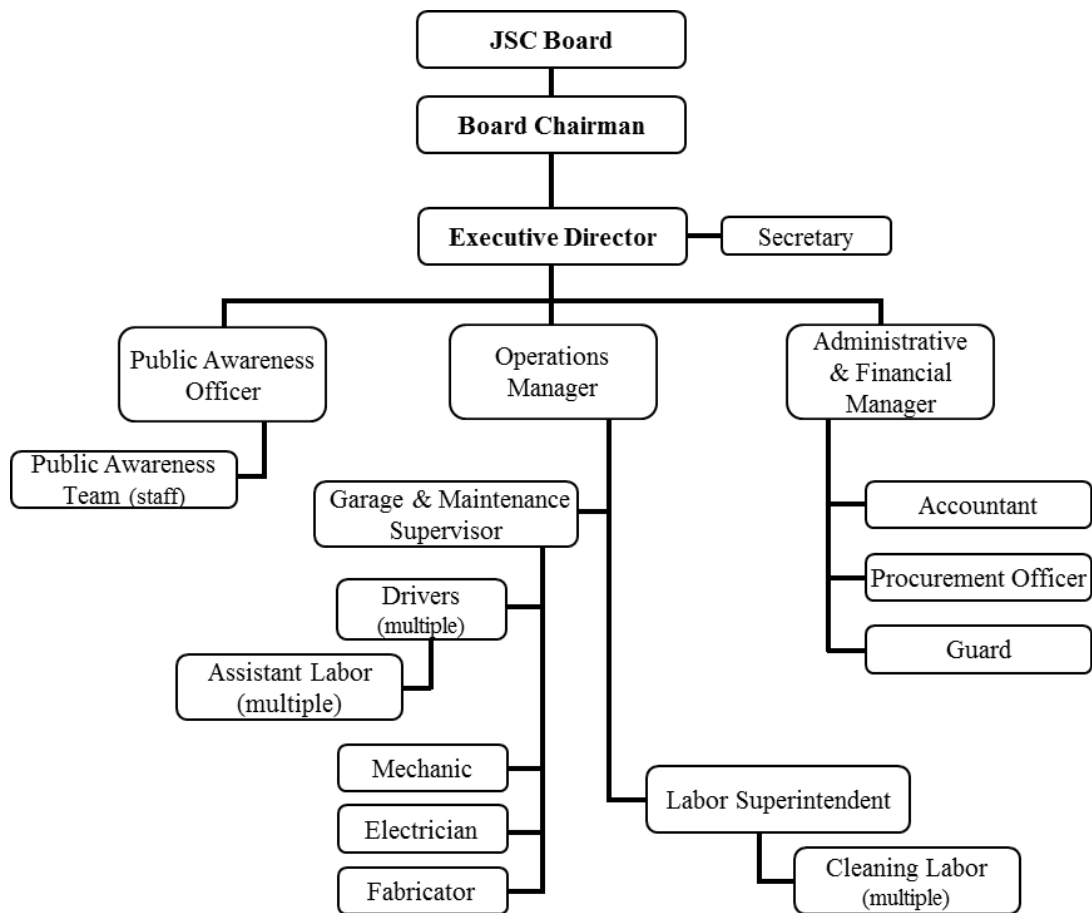


Figure 2.6 JSC-North Gaza Organizational Structure

Source: (Researcher’s account, from German International Cooperation (GIZ) project documents and JSC unpublished documents).

The Statute of JSC-North Gaza was ratified in 2012 by the Minister of Local Government, where it – the statutes, clarified roles and responsibilities among the board, chairman, and the executives. The statute was developed in consultations with all member municipalities whose feedback and comments were incorporated into the final document. (Researcher’s account, German International Cooperation (GIZ) project documents).

### 2.3.3 Services and Technical Aspects

According to the statutes of JSC-North Gaza, the duties of the Council are limited to the following:

- Collection and transfer of solid waste from member communities;
- Operate one garage to accommodate all vehicles involved in solid waste collection and transport in the Service Area of the JSC;
- Operate, maintain and replace vehicles for municipal solid waste collection in the member communities;
- Provide and maintain sufficient communal containers for municipal solid waste collection in member communities. Empty containers in urban areas at least every second day and in rural areas at least two times per week;
- Plan and supervise the solid waste collection, transport and disposal system;
- Closing and upgrading the old existing disposal sit in Beit-Hanoun;
- Train the staff involved in refuse collection, transport and disposal.
- Cooperate with and support Members of the JSC in respect of cleaning of areas outside municipal boundaries;
- Advice and support Members of the JSC and other municipal personnel involved in this sector regarding all aspects of solid waste management, including legal, technical, public health, and social and environmental issues;
- Represent the Member Communities regarding all aspects involved in solid waste management towards other parties and institutions;
- Plan and implement measures to reduce environmental pollution related to solid waste and support principles of avoidance, resource recovery and recycling;
- Solid waste disposal should take place in Gaza Landfill.

It is important to note that the JSC-North Gaza had inherited the already depreciated SW collection trucks from its member municipalities, and according to the statutes, the ownership of transferred equipment remains the property of member municipalities, but any new equipment shall be registered under the Council's property.

### **2.3.4 Institutional and Financial Aspects**

At the institutional level, the JSC-North Gaza will have to use the existing staff of member municipalities, and they would remain employed by their respective municipality, (MoLG, 2002, pp. 2, article 8). This aspect made the JSC-North Gaza differ from its sister JSC in southern Gaza, JSC-KRM. By examining the first point in the previous section, the JSC-North Gaza is responsible for the collection and transfer of solid waste from member communities, meaning the entire process of SW collection whether from house to house or otherwise remained the responsibility of the Council, thus the JSC-North Gaza manages municipal staff to carry out the SW collection process. The case is different in JSC-KRM, where all activities related to street sweeping and cleaning of public areas, including locations of communal storage facilities, and personnel, facilities and equipment involved in these activities, shall remain with the Municipalities and Village Councils in the service area of the JSC-KRM. (MoLG, 1995, pp. 2, article 5, point 13).

According to clause 21 of the JSC-North Gaza statute, funds of the JSC include:

- The contributions of the member municipalities;
- Grants given to the Council;
- Any assistants or contributions from the Palestinian Authority;
- Loans approved by the Minister (Minister of Local Government).

The overall Palestinian context with the current political conditions and the subsequent economic deterioration caused clear gap among the roles of the Palestinian central government and local authorities (LGU's) on one hand, and LGU's themselves and the joint bodies such as the Coastal Municipalities Water Utility (CMWU) and JSCs, to a degree that donors' interventions would seem not achieving the desired effectiveness of service provision, something that had led one of the prominent international agencies to report the following; "a concerted effort must be made to ensure the complete transition of Gaza Municipalities into CMWU and Solid Waste Councils for North and South Gaza. This should be supported by the realization of planned donor support infrastructure investments and associated training ... and a revision of the currently deficient system of inter-governmental transfers to Palestinian LGUs." (UNDP, 2015, p. 81)



## 2.4 Previous Studies

Municipal service administration is a broad subject that has been extensively studied from different perspectives providing results that are not necessarily similar due to the context of each study and the special nature of the study area. The following previous studies were selected to represent different angles of the subject of research; technical and economy, public administration and government policy, and political science. The previous studies provide wide range of experiences that will enrich this research with focus on the special case study; relating the case study presented in this research to the international experience provided with strong foundation for conclusions and recommendations that would benefit the decision makers and municipal officials in the study region given that the Palestinian experience is still being observed and evaluated given its relative age and political-economic complexity.

1. **(Bel & Warner, 2014) Inter-municipal Cooperation and Costs: Expectations and Evidence, 2014**

This research aimed at analyzing the costs saving opportunities through inter-municipal cooperation, particularly the solid waste management is the most common form of shared services among municipalities. The researcher focused in the European experience. The researcher concluded that “several factors are crucial to obtaining costs savings from cooperation. Among them, the type of service, the size of output/population, and the transaction costs imposed by the institutional design of the cooperative governance arrangement. All these factors are at play in explaining the different results in the existing literature: solid waste is more prone to scale economies; small municipalities are more likely to benefit from exploiting scale economies. The researcher indicated that “economies of scale exist for small municipalities, but not for larger ones. Because of this, small municipalities will benefit more than larger ones from cooperation, as the former ones will more likely achieve a reduction of the average cost of service delivery”.

2. **(Masoud, 2013) The Effect of Cluster of Local Governments on the Political Development (Arabic)**

This study focused on the concept of municipal amalgamation or clustering into one new single entity where the research presented the hypothesis which suggested that the current “*amalgamation “clustering” policy of local government units does not contribute to*

*sustainable development*” (Masoud, 2013, p. 5) , including the establishments of Joint Service Councils which the research concluded that *“the Ministry of Local Government tried hard to present solutions to the challenge raised by the weakness of local government units, these solutions included: Joint Service Councils, Regional Planning Committees, and clustering of smaller units. Some of these policies were not extensively discussed and studied, rather it came due to external encouragements by western funders and their own (western donors) preference towards clustering, or as a result of local initiatives that were adopted by the Ministry”* (Masoud, 2013, p. 115). The importance of this study that it addresses – at one point – the foundation of local governance in Palestine and clearly referred to the lack of adequate discussions and studies preceding the formation of new Joint Service Councils or cluster of towns. This study can provide substantial feedback to this research relating the central policy with policy implementation across the different levels of local governance which can lead to either success or failure of the intended purpose of the players.

3. (Gomez, Diaz, & Hern´andez, 2013) **Reducing Costs in Times of Crisis: Delivery Forms in Small and Medium Sized Local Governments' Waste Management Services**

This paper addressed the costs savings approach governments around the world are taking especially after the financial crisis. This paper is similar to that of (Bel, Germà; Warner, Mildred E., 2014) mentioned hereafter. The researchers used empirical data to analyze the cost savings in selected Spanish cities of small to medium size and concluded that “public management exercised via the local authority, reduce the cost of the service”.

4. (Bel & Warner, 2013) **Factors Explaining Inter-municipal Cooperation in Service Delivery: A Meta-Regression Analysis**

This analytical paper looked into the motivations for inter-municipal cooperation, where the research used fiscal constraints, economies of scale, community wealth, organizational factors (manager), and special factors as dependent variables and concluded that the theoretical expectations that fiscal constraints are significant factors for cooperation for small municipalities, but the case vary when larger samples were studied to find that *“Technological improvements in service quality and the need to coordinate services across the metropolitan region are increasingly being referenced in the qualitative literature on cooperation as important drivers.”* (Bel & Warner, 2013, p. 13).

Thus the researcher suggested that other factors could be important in explaining cooperation. The importance of this paper that it pointed to the direction of other factors other than economic savings benefits of joint service provision; something that can benefit our research in Gaza in modifying the conventional understanding of regional approaches (Joint Service Councils) for sustainable service provision.

5. **(UNDP-PAPP, 2012) Feasibility Study and Detailed Design for Solid Waste Management in Gaza Strip**

This study addressed the entire Solid Waste Management Sector in Gaza Strip in attempt by international donors and stakeholders (ministries, municipalities and Joint Service Councils) to provide a comprehensive plan until the year 2040 to overcome the increasing quantities of solid waste. The study reviewed the institutional, financial, technical, and legal aspects of managing solid waste in Gaza Strip, where the Joint Service Councils (JSC's) were viewed as a favorable option for managing the sector. This study provided several recommendations, most important and related to the study at hand is the 6<sup>th</sup> and 7<sup>th</sup> recommendation (pp. 140-141) which stated that, "two Joint Service Councils will be established in the Gaza Strip: (1) one for Northern Gaza (including Gaza City and the existing JSC for Northern Gaza), responsible for waste collection, transportation and operation of the Johr al Deek Sanitary Landfill; (2) the second one for Southern Gaza (including Beir al Balah JSC and Rafah City), responsible for waste collection, transportation and operation of the Rafah Landfill", and "The two Joint Service Councils will co-operate closely with each other, and with all municipalities and related public authorities, to set up an effective and integrated solid waste management system for Gaza, as elaborated in this Feasibility Study".

6. **(Soufan, 2012) Solid Waste Management in the West Bank: Institutional, Legal, Financial Assessment and Framework Development**

This research aimed "to assess the institutional, legal and financial aspects of SWM in the West Bank in order to suggest necessary measures to achieve higher levels of sustainable development". The researcher used questionnaires and interviews with decision makers in the West Bank, in addition to primary data collection from existing laws, bylaws and guidelines within Palestine. The researcher concluded that "was still weakness in the implementation of the tasks of SWM operations among the current institutional, financial and legal situations of waste management".

7. (Al Masri, 2012) **Functional Role Ambiguity and Its Impact on Delegation, Applied Study on the Ministry of Local Government (Arabic)**

This research aimed at identifying the impact of role ambiguity on delegation of tasks and authority at the Ministry of Local Government (MoLG). He concluded that although staff members of MoLG are aware of the Ministry's mission but less awareness was expressed by the respondents on more strategic issues and even on the detailed job description and specific roles of staff members. Furthermore, Al-Masri concluded that work loads are not distributed equally among staff where few staff members perform majority of the work. The researcher also concluded that the job description of staff members is not clear.

8. (Bolgherini, 2011) **Local Government and Inter-Municipal Cooperation in Italy and Germany**

This paper explores the relationships pertaining to government and governance at local level presenting two case studies from Italy and Germany. The researcher explained the purpose of this paper as an attempt *“to show that the success of local territorial policies and reforms, such as the IMC (Inter-Municipal Cooperation) experiences, greatly depend on an efficacious balance between deliberative bodies, participatory modalities and “free choices” of the local actors, on the one side, and representative institutions, hierarchical decisions and centralistic guidelines, on the other side.”* (Bolgherini, 2011, p. 5). The researcher had also concluded that *“The importance of this study that it provided direct comparison of two adjacent and pioneer countries in the area of municipal services and local governance. This study can add to the value of this research in Gaza in terms of better exploration of the interrelations among municipalities and the central government (variable 1 in the proposed research).*

9. (Abu Al-Ajeen, 2010) **The Impact of Organizational Obstacles on the Performance of Local Authorities in Gaza Strip**

This research aimed at identifying the impact of organizational obstacles on the performance of local authorities in Gaza Strip where he distributed a questionnaire to the local authorities (municipalities) in Gaza Strip. The researcher came with several recommendations, one of which is related to the human resource development (training and development) and the incentive system in Gaza municipalities, which the respondents indicated that both areas needed development and support by the local authorities.

10. (Saleh & Saad, 2010) **Absence of Some Administrative Practices and Its Impact on Level of Services (Arabic)**

This research on four major Iraqi Governorates examined the level of services and correlated its ineffectiveness to the lack of administrative practices. The researchers recommended the establishment of Joint Service Councils citing number of its benefits and considering that approach as of “a modern local governance approach” (Saleh & Saad, 2010, p. 183). The importance of this study that presents an example that is well behind the experience in Palestine – *in comparison to a more advanced experiences in the following paragraphs*. Yet it would remind the researcher of the basic principles behind pursuing shared resource councils, and it can provide a good context to compare with throughout the course of this research.

11. (Dollery, Akimov, & Byrnes, 2009) **Shared Services in Australian Local Government: Rationale, Alternative Models and Empirical Evidence**

This paper focused on the approach of shared services against full amalgamation experience in Australian local governance, where the researched concluded, among others, that solid waste management was among the common areas of success when using the shared service approach. The research also concluded that “*common barriers to shared services include: (i) loss of “municipal identity”; (ii) complexity of the process; (iii) conflicting objectives; and (iv) uncertain benefits*” (Dollery, Akimov, & Byrnes, 2009, p. 216). In their concluding remarks the researchers provided that “*In common with much other policy analysis of real-world arrangements, we are obliged to draw the modest conclusion that while the thoughtful selection and application of shared service arrangements would almost certainly induce cost savings, it could not by itself solve the acute problems of financial sustainability confronting a majority of Australian local councils.*” (Dollery, Akimov, & Byrnes, 2009, p. 218). The importance of this study that it can relate to the case study this research intends to explore; the Solid Waste Management Council in North Gaza, in terms of the barriers and service sustainability. It would be a good opportunity to relate the findings in this research to the international experience even though the political and economic background vary; something that can benefit the decision makers in Palestine in terms of better understanding of public administration within the complexities of central vis-à-vis decentralized local governance.

12. (Safi & Luecke, 2007) **Higher Efficiency and Effectiveness in Public Services through Regional Approaches – Joint Solid Waste Management Councils**

This international conference preceding paper addressed and promoted the regional approach in terms of joint service provision of municipal solid waste management, it is (the paper) considered the most related and probably the only published paper on the case subject of this research – the Solid Waste Management Council in North Gaza, in terms of technical performance. The paper focused on performance indicators of pure operational aspects and it correlated it to the reduced unit cost when compared to individual municipality's performance, where the paper had found the achievement of 25% cost reduction in the first 3 years of operation. This paper concluded that regional (joint service) approach enables efficient use of resources, and that an improved capacity can be attained by professionally trained staff and professional management systems that can all be keys to success that can be sustained if and only an appropriate tariff system is in place enabling full cost recovery.

13. (Abu El Qomboz & Busch, 2007) **Solid Waste Management in Gaza Strip Problems and Solutions**

This research focused on practical aspects of solid waste management in the Palestinian territories in an attempt to summarize the current situation with regard to solid waste management in Palestine, in the hope that it may provide an introduction to the situation for those local experts and decision makers and those foreign experts coming to the region to work in the field of waste management. The researcher concluded that “the proper management of MSW in Gaza Strip is generally obstructed by many technical, administrative and financial shortcomings”.

14. (Eid, 2007) **Evaluation of Solid Waste Management in Qalqilia District**

This research aimed at describing the problems, issues and challenges of MSWM faced by local authorities in Qalqilia district in the West Bank and to discuss approaches of possible solutions that can be undertaken to improve the Municipal Solid Waste services. The researched found that no consideration of environmental impacts was paid in the selection of landfills. He also concluded that the local authorities often are faced with financial difficulties in meeting the large payment of wages, fuel and maintenance of vehicles, etc. Most local authorities have become economically constrained in offering

efficient management of MSW, and he recommended to improve the different stages of the solid waste management and to increase public participation in addition to training of municipal workers on hygiene and occupational health.

15. (Al-Khatib, et al., 2007) **Trends and problems of solid waste management in developing countries: A case study in seven Palestinian districts**

This research surveyed 132 municipalities in the West Bank in an aim to identify the collection rate of solid waste targeting the top management in these municipalities, e.g. heads of departments. This study concluded that the quality of MSW management has been gradually deteriorating in the Palestinian districts since the start of the Palestinian uprising in 2000, due to several reasons including the current unstable political situation.

16. (Lawson, 2007) **Review of South Australian Local Government Joint Service Delivery Opportunities: Analysis of Council Responses to a Survey and Options for Implementation of Various Resource Sharing Measures**

This research reviewed the entire southern Australian joint service activities relying on a questionnaire as the primary tool of data collection from concerned Councils in answering three main questions on current joint service provision, and future services of high preference, and on other future resource sharing opportunities. It was found out that solid waste management represented the most common area for resource sharing. The researcher observed (among other observations) that although financial savings were key motives for entering into resource sharing model, none of the Councils provided estimate of the money savings resulted from such approach. The researcher also found that rural and regional Councils, for reasons mattered to size, have more resource sharing initiatives. The researcher presented 5-step procedure based on Australian Local Government Manual to aid Councils in pursuing further resource sharing initiatives. The importance of this paper that it drew conclusions directly from those operating in the joint service models; something that is similar to what this research intends to explore, yet within Gaza context.

17. (Jabr, 2004) **A Municipal Management and Decentralization Policy (Arabic)**

This research presented an overview assessment of municipal performance in light of decentralization, and it did rank the Joint Service Councils/Regional Service Councils at the lower levels of decision making. One of the findings of this study in relation to the JSCs confirms what is presented in a later study as to the benefits rendered through sharing resources (Safi & Luecke, 2007, p. 9). This study recommended, as part of recommendation no. 7 to: *“Improving the institutional capacity of the local governments according to priorities”, and “enhancing the cooperation between the municipalities and the executive institutions.”* (Jabr, 2004, p. 682). The importance of this study is that it presented clear example of different perceptions of public service pertaining to municipal service provision including the Joint Service Councils which occupied the bottom level of the decision making hierarchy; something that can perhaps contribute to better formulation of data collection and analysis in the case of the Solid Waste Management Council in North Gaza; the case study of this research.

18. (El-Hawi, 2004) **Towards and Environmentally Sound Sustainable Solid Waste Disposal Strategy: The Gaza Strip Case**

This research aimed to “investigate the existing practice of municipal solid waste (MSW) handling in the Gaza Strip in terms of collection, storage, transportation, recycling and critically focus on disposal options and alternatives. Also evaluating existing conditions and progress made in reduction at source, reuse and recycle (3R's) as waste minimization scheme beside other options and suggest an environmentally sound sustainable and integrated disposal strategy of the MSW in the study area of the Gaza Strip”. The Researcher concluded that “the lack of coordination and cooperation among relevant institutions often results in different parties becoming the national counterpart to different external support institutions for different SWM collaborative projects without being aware of what other institutions are doing. This leads to duplication of efforts, wasting of resources, and un-sustainability of overall SWM programmes”.



19. (Musleh, 2002) **Solid Waste Policy Making in a System in Transition; The Case of Biological Treatment in the West Bank**

This research aimed to highlight “the major factors determining solid waste policy making in a socio-political system in transition”, through investigating the technical, economic, and socio-economic factors in international setting that determine biological treatment. The researcher provided overview on the local dynamics in the West Bank that feeds in the policy making process. One of the major conclusions of this study was to transfer and apply the experience from Gaza concerning the institutional arrangement and what it led to in terms of biological treatment to the West Bank.

#### **2.4.1 This Research and Previous Studies**

This research “The Extent of Applicability of The Extent of Applicability of Municipal Cooperative Service Provider: Solid Waste Management Council in North Gaza Governorate” has common areas with the previous studies elaborated in the main section 2.4. Such similarities and differences can be grouped in the following categories:

– Subject and Variables:

This research intersects with all the previous studies in terms of the overall the business sector under study that is the Solid Waste Management Sector. It also agrees with (Masoud, 2013) on the overall approach of collective service among number of municipalities. This research agrees with (Safi & Luecke, 2007), (Lawson, 2007), (Dollery, Akimov, & Byrnes, 2009), and (Bel & Warner, 2013) on the shared services concept manifested in the Joint Service Councils. This research meets with (Bolgherini, 2011) on the importance of policy making and the role of the central government, where (Bolgherini, 2011) brought an impressive comparison between the Italian and German experience. This research intersects with (Soufan, 2012) on the institutional and policy aspect of the solid waste management sector. The research intersect with both (Al Masri, 2012), and (Abu Al-Ajeen, 2010) in the area of public administration in Gaza Strip, and the specific role, and organizational characteristics of a key factor in the research; the Ministry of Local Government.

– Geographic Area

This research shares an overall common area, that is Palestine with (Masoud, 2013), (Soufan, 2012), (Al-Khatib, et al., 2007), (Jabr, 2004), and (Musleh, 2002) within the solid waste

management sector. The more specific area of Gaza Strip is shared with both (Al Masri, 2012), and (Abu Al-Ajeen, 2010); both of which address a key player in this research as presented in the previous paragraph. This research comes within a bigger study presented by (El-Hawi, 2004), yet it is more specific. The same can be said about (Abu El Qomboz & Busch, 2007) but at much lesser degree. (Safi & Luecke, 2007) is the only study that focuses on both the geography and theme with our research, where (Safi & Luecke, 2007) discussed the very same entity under this research.

However, this study differ than that of (Masoud, 2013), as it focuses the attention on the Joint Service Councils where (Masoud, 2013) was discussion the bigger frame of municipal amalgamation.

This study also differ than that of (Safi & Luecke, 2007) in terms of the variables, where (Safi & Luecke, 2007) focused on technical matters pertaining to efficiency and effectiveness of the Joint Service Councils approach, while the study at hand look at another angle concerning the regulating Ministry's influence (policy) and the sources and amounts of funding in addition to the organizational dynamics and member municipalities' perspective

– Research Tool and Study Population:

The research tool employed in this research is similar to that of (Al Masri, 2012), and (Abu Al-Ajeen, 2010) (Soufan, 2012), but it differ in terms of study population in terms of location and entity with common category of study population with (Soufan, 2012), that are solid waste management administrators and decision makers.

Overall, this research present key differences with previous studies in terms of the specific case and the themes it measure that are more focused than some and more holistic than the other for a sector that is commonly studied in schools of engineering, science, and economy. This research presents an opportunity to view the Joint Service Councils in Gaza from a public administration point of view for the first time and after enough time lapses after the establishment of such councils in Gaza Strip.

## Chapter 3

# Research Methodology

- 3.1 Introduction
- 3.2 Research Design & Sample
- 3.3 Research Sample
- 3.4 Research Location
- 3.5 Developing the Questionnaire
- 3.6 Pilot Study
- 3.7 Instrument validity
  - 3.7.1 Test of Normality
  - 3.7.2 Validity Test
- 3.8 Instrument (Questionnaire) Reliability

## **Chapter 3: Research Methodology**

### **3.1 Introduction**

This chapter discusses the research strategy and research design. In addition, it discusses the techniques of the adopted methodology. The information included in this chapter clarifying population, sample size, data collection tools, questionnaire design, instrument validity, pilot study and methods for data analysis. The approach undertaken for this research comprised three components, a literature review discussed in the previous chapter, a questionnaire survey and semi-structured interviews.

Moreover, this research presents the extent of applicability of municipal cooperative service provider as a case study of the Solid Waste Management Council in North Gaza Governorate through provide an insightful overview of the strength and weakness of the organizational structures including clearer analysis of the factors leading to either success or failure of the existing Joint Service Council in North Gaza Governorate. From literature review and past studies, it was obtained that there were different directions used in order to achieve the required target, goals and objectives. Previous studies highlight the critical factors behind success and failure of the Solid Waste Joint Service Councils in different countries around the world.

The differentiation of directions and goals of topic as shown previously in chapter 2, required different methodologies. The main methodologies obtained from literature review were: questionnaire survey and interviewing. The methodology adopted for this research can be summarized in the following points

- Identifying the major influential factors for the success of the Solid Waste Management Council in North Gaza,
- Developing a research model,
- Method of collecting data,
- Design a questionnaire,
- Instrument validity (validity of the questionnaire),
- Research sample and size,
- Instrument (questionnaire) reliability,
- Conduct a semi-structured interviews,
- Method of data analysis,

The research methodology flowchart is shown in Figure 3.7

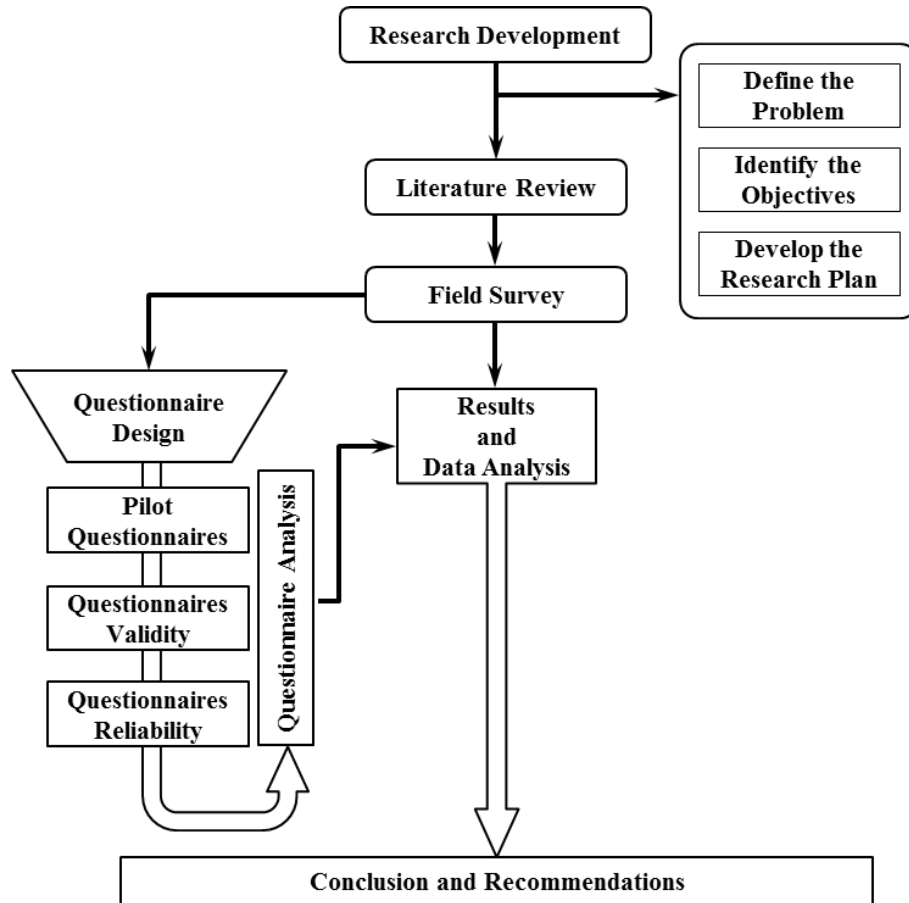


Figure 3.7 Research methodology flowchart  
(developed by this research)

### 3.2 Research Design

The purpose of this research is to highlight the critical factors behind success and failure of the Joint Service Councils model in Gaza Governorates. To achieve this purpose, a structured questionnaire is used in this research. The strategy of this research built on quantitative research method, where a questionnaire survey was used. The structured questionnaire is probably the most widely used data collection technique for conducting surveys and it has been widely used for descriptive and analytical surveys in order to find out facts, opinions and views. It enhances confidentiality, supports internal and external validity, facilitates analysis, and saves resources.

The path of this research flowed through **six stages**, the **First Stage** was defining the research problem, identification of the objectives and development of research plan, **the Second One** included literature review, **Third Stage** included a pilot study which was judged by eight referees and all of them holds postgraduate degrees and have related experience. The questionnaire design has been also amended to meet the feedback provided by the referees who judged the questions.

**Fourth Stage** is the main survey, in this stage of the survey qualitative approach utilized in the thesis. Therefore, a self-administered questionnaire targeted to respective municipal, governmental, and local/international agencies' personnel working in the field. An extensive sampling strategy was used to secure the mandatory number of respondents for meaningful statistical analysis which included distributing 69 questionnaires to the target groups of population of both Solid Waste Management Councils in North and Middle/Khan Younis Governorates, in addition to Ministry of Local Government and sector-related international agencies. In order to obtain reliable and representative data, the questionnaires were distributed to populations of different educational levels, but from top management level who are assumed aware of policies, finance, organizational environment and mayor's perspective (member municipality perspective).

**Fifth Stage:** Statistical Analysis and Results: The Data analysis was performed by using (SPSS 22) application. The following statistical methods were utilized:

1. Kolmogorov-Smirnov test of normality
2. Cronbach's Alpha for Reliability Statistics
3. Pearson correlation for Validity
4. Frequency and Descriptive analysis
5. Parametric Tests (T tests, One-Way Analysis of Variance ANOVA)

Pearson correlation coefficient was used to examine whether there is a significant statistical relationship between the various research's variables. Independent t test was used to examine if there is a significant statistical difference between two means among the respondents due to gender.

T-test is used to determine if the mean of a paragraph is significantly different from a hypothesized value 6 (Middle value of Likert scale). If the P-value (Sig.) is smaller than or equal to the level of significance,  $\alpha = 0.05$ , then the mean of a paragraph is significantly different from a hypothesized value 6. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 6. On the other hand, if the P-value (Sig.) is greater than the level of significance,  $\alpha = 0.05$ , then the mean a paragraph is insignificantly different from a hypothesized value 6.

The One-Way Analysis of Variance (ANOVA) is used to examine if there is a statistical significant difference between several means among the respondents toward the (The Extent of Applicability of Municipal Cooperative Service Provider) due to (Employer, experience, position, education and residence). Note that Gender is ignored for comparison purposes because there are only four females.

It is important to highlight here that all of the aforementioned statistical analysis test are considered as parametric tests; where the research population was tested for normality (being in line with the normal distribution) by applying the Kolomogrove-Smirnov [K-S] test which used to identify if the data follow normal distribution or not, this test is considered necessary in case testing hypotheses as most parametric.

Finally, the **stage six** is the conclusion and recommendations: The final phase of the research included the conclusions and recommendations.

### **3.3 Research Sample**

The population of this research was identified in order to collect reliable data. Since the variables are related to policies, funding, and organizational structure and perspective of member municipalities, top management level in local authorities (municipalities) and the Ministry of Local Government (MoLG) are the research population, where the municipalities comprise the board of directors of both Joint Service Councils in Gaza. With the classifications of municipalities by the MoLG into A, B, C, and D according to size and locality population, it was determined that the entire research population should be surveyed, where in large municipalities (Jabalia, Dair El-Balah, Khan Younis, and Rafah) 4 questionnaire forms were distributed to target the Mayor and administrative and finance managers and one questionnaire for the head of sanitation department (a total of 20

questionnaires). For middle sized municipalities, 3 questionnaires were distributed to each (9 municipalities) for a total of 27. And for municipalities of classification C and D (small localities), two questionnaires were distributed to class C (5 municipalities) and one questionnaire was distributed to each of the remaining D class municipalities for a total of 13 questionnaires. Questionnaires were also distributed to international agencies which has extensive experience in the solid waste management sector; United Nations Relief and Works Agency (UNRWA), German International Cooperation (GIZ) and United Nations Development Program (UNDP). 5 questionnaires were provided to the Ministry of Local Government, for Ministry's top level. Figure 3.8 illustrates Gaza Strip map with local authority location and classification. Gaza Governorate was not included in the survey since it is not part of the JSC system.

### 3.3.1 Sample Size, Questionnaire Distribution and Data Collection

To choose the sample size from the population which are the solid waste experts and decision makers in Gaza Strip (80 professionals), the formula of Kish equation (1965) can be used. The sample size can be calculated as shown below for 94% confidence level (Assaf et al., 2001; Israel, 2003; Moore et al., 2003)

- $n = n' / [1 + (n'/N)]$  (Kish equation)

Where:

- N = total number of population
- n = sample size from finite population
- n' = sample size from infinite population =  $S^2/V^2$ ; where  $S^2$  is the variance of the population elements and V is a standard error of sampling population. (Usually  $S = 0.5$  and  $V = 0.06$ )

So, for 80 solid waste professionals and experts:

- $n = n' / [1 + (n'/N)]$
- $n' = S^2/V^2 = (0.5)^2/(0.06)^2 = 69.44$
- $N = 80$
- $n = 69.44 / [1 + (69.44 / 80)] = 37.17$

This means that the questionnaire should be distributed to 37 solid waste experts in order to achieve 94% confidence level.



According to previous results of sample sizes, 67 questionnaires were distributed and 55 questionnaires were received (82.10%). These percentages are shown in Table 3.13. It is important to note that the member municipalities of each JSC were included under the respective JSC in table 3.5

Type	Concerned sample size	No. of respondents	Percentage
Solid Waste Sector Senior Personnel	67	55	82.10 %
Distributed as follows:			
1. Ministry of Local Government	5		
2. JSC – North Governorate	12		
3. JSC – Middle and Southern Governorates	46		
4. International Organizations	4		
Total	67		

Table 3.5 Percentages of Received Questionnaires

These respondents are solid waste experts as general managers, mayors, and head of departments and so on as they have a practical experience in solid waste management field. Their sufficient experiences are a suitable indication to find out the perceptiveness of the relative importance of the factors leading to either success or failure of the existing Joint Service Council in North Gaza Governorate. Table 3.6 shows summary for frequency of job title of the respondents.

Position	N	%
General Manager and above	4	7.3
Mayor	10	18.2
Head of Department	21	38.2
Administrative Staff	10	18.2
Other	10	18.2
Total	55	100.0

Table 3.6 Frequency of Job Title of the Respondents

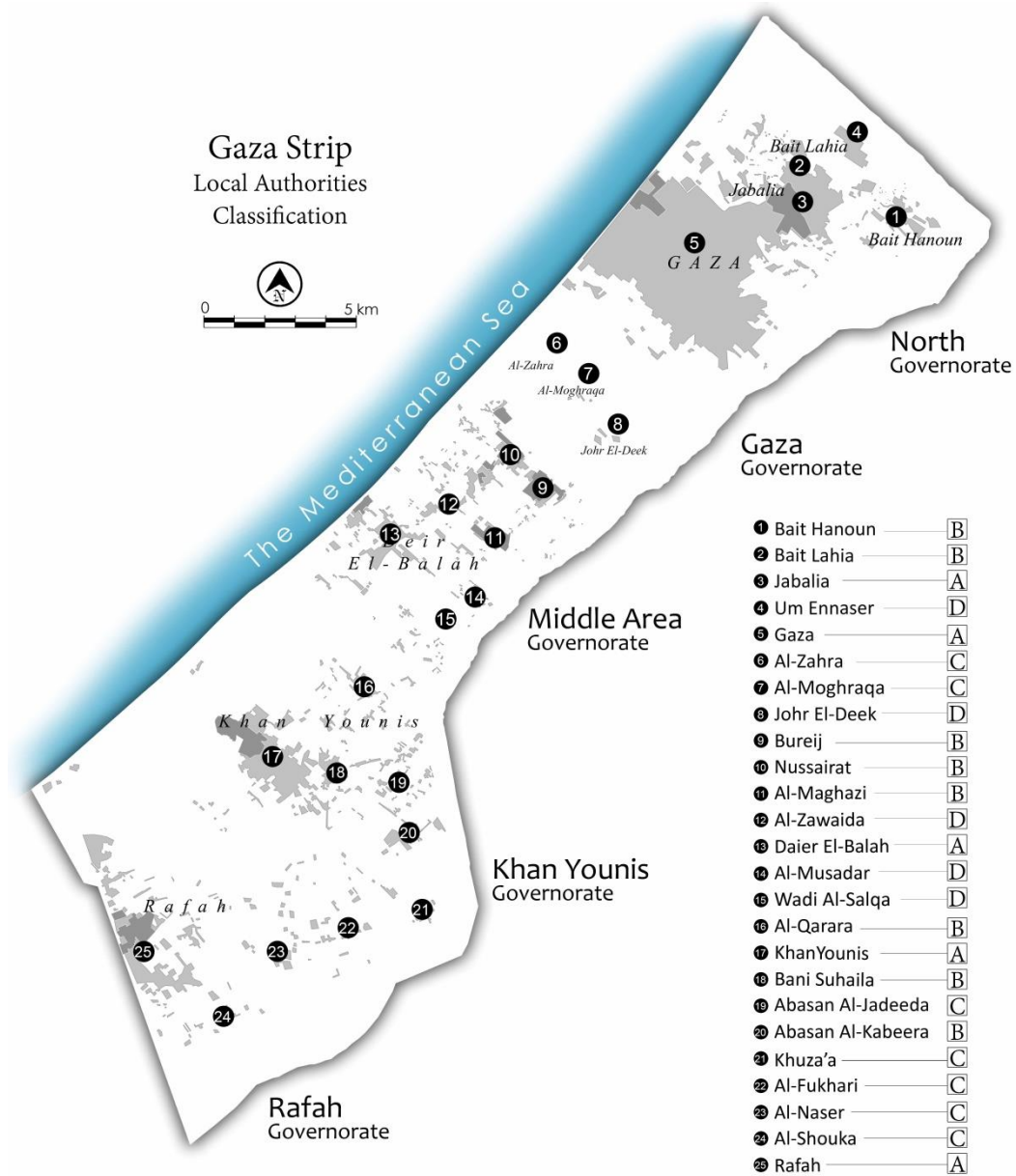


Figure 3.8 Gaza Strip Local Authorities  
*Developed by the researcher, data from MoLG*

### **3.4 Research Location**

The research is carried out at a direction that serves the collection of data relevant to the research objectives, targeting Gaza governorates which have a joint service council as a service provider, i.e., four governorates out of Gaza's five governorates: The Northern Governorate, the Middle Governorate, Khan Younis Governorate, and Rafah Governorate

### **3.5 Developing the Questionnaire**

A questionnaire survey is designed to obtain further information in order to support the research study objectives and it is also designed based on identified the strength and weakness of the Solid Waste Management Council in North Gaza Governorate and highlight the critical factors behind success and failure of it. In this study, the questions of the research questionnaire are constructed based on

- Literature review stated in previous chapter (Chapter 2)
- Several interviews with local experts in the solid waste sector to obtain different thoughts, which can be useful for creating questions.
- The experience of the researcher and some engineers in solid waste field management.

A five page questionnaire was developed as a research tool for this study and it was built mainly using closed questions. Moreover, the questionnaire was developed in Arabic version with English Translation available, (Annex 1).

### **3.6 Pilot study**

A pilot study provides a trial run for the questionnaire, which involves testing the wording of questions, identifying ambiguous questions, testing the technique that used to collect the data. After the preliminary testing, a pilot study was conducted to evaluate the questionnaire; the researcher distributed the questionnaire to a sample of eight different academic professionals and local solid waste management experts to fill them. They have a strong experience both academically and in solid waste management fields. Their sufficient experiences are a suitable indication for pilot study. The purpose of this step is to discover if the questions are well understood or not, also to find out any problem that may raise in filling the questionnaire. Generally, it appeared that respondents had no

difficulty in understanding the items or the instructions to complete the questionnaire. The following items are summary of the main results obtained from pilot study:

- Questionnaire should be started with a cover page explained the aim and objectives of the questionnaire;
- The scale ought to be changed to 10 point Likert Scale;
- The first part of questionnaire should be general information about the participants and their organizations,
- Some critical factors and sentences should be modified in order to give more clear meaning and understanding;
- Some critical factors and sentences should be represented with more specific details;
- Some critical factors were repeated more than one time with the same meaning. So, it should be to eliminate these repeated factors;
- Some critical factors should be added as recommended by local experts;
- Some critical factors should be rearranged in order to give more suitable and consistent meaning.

### **3.7 Instrument validity**

The questionnaire was reviewed by a group of experts in the field of the study. They were requested to identify the internal validity and to what extent it was suitable to be used as an instrument to realize the goals and aims of this research.

The group of experts have agreed that the questionnaire is suitable to achieve the studying objectives with some amendments. The researcher has made these amendments in the structure and language of the questionnaire to be consistent with the local environment.

The validity content of the questionnaire was tested by many experts. Each of them has full information about the research objectives and was requested to evaluate validity content for each item based on rating the index of content validity.

The participants were then requested to rate each item based on relevance on the four point ratings scale. The point scale developed by Yaghmaie (2003) as "1 = not relevant; 2 = item need some revision; 3 = relevant but need minor revision; 4 = very relevant". Based on comments of the experts some minor changes, modifications, and addition were introduced to the questions.

### 3.7.1 Test of Normality

The One-Sample Kolmogorov-Smirnov Test procedure compares the observed cumulative distribution function for a variable with a specified theoretical distribution, which may be normal, uniform, Poisson, or exponential. The Kolmogorov-Smirnov Z is computed from the largest difference (in absolute value) between the observed and theoretical cumulative distribution functions. This goodness-of-fit test tests whether the observations could reasonably have come from the specified distribution. Many parametric tests require normally distributed variables. The one-sample Kolmogorov-Smirnov test can be used to test that a variable of interest is normally distributed, (Henry, C. and Thode, Jr., 2002).

Table 3.7 shows the results for Kolmogorov-Smirnov test of normality. From Table 3.6, the p-value for each variable is greater than 0.05 level of significance; and then the distributions for these variables are normally distributed. Consequently, parametric tests will be used to perform the statistical data analysis.

No.	Variables	Kolmogorov-Smirnov	
		Test Value	P-value
1.	Ministry of Local Government Policies	0.681	0.743
2.	Sources of Funding	0.974	0.299
3.	Organizational Environment	0.699	0.713
4.	Member Municipalities Perspective	0.974	0.299
5.	<b>ALL independent variables together</b>	0.692	0.724

Table 3.7 Kolmogorov-Smirnov Test of Normality

### 3.7.2 Validity test

This section presents test of validity of questionnaire according to the pilot study. Validity refers to the degree to which an instrument measures what it is supposed to measure (Pilot and Hungler, 1985). Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include criterion-related validity and construct validity.

To insure the validity of the questionnaire, two statistical tests should be applied. The first test is Criterion-related validity test (Spearman test) which measures the correlation

coefficient between each paragraph in one field and the whole field. The second test is structure validity test (Spearman test) that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of similar scale.

### 3.7.2.1 Criterion-related validity test

Internal consistency of the questionnaire is measured by a scouting sample, which consisted of 31 questionnaires through measuring the correlation coefficients between each paragraph in one factor and the whole factor.

To test criterion-related validity test, the correlation coefficient for each item of the group factors and the total of the field is achieved. The results of criterion-related validity test can be obtained with more details and tables as mentioned below.

Tables 3.8 through table 3.12 present the correlation coefficient for each paragraph of a field and the total of the corresponding field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all paragraphs are significant at  $\alpha = 0.05$ , so it can be said that all paragraphs of each field are consistent and valid to be measure what it was set for.

Table 3.8 Correlation coefficient of each paragraph  
*“Ministry of Local Government Policies” and the total of this field*

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management in Gaza Strip concerning budgetary matters.	0.533	0.000*
2.	There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management (JSC) in Gaza Strip concerning JSC’s technical performance (collection and disposal of solid waste).	0.637	0.000*
3.	The Ministry of Local Government regularly follows up the latest developments concerning the JSC.	0.723	0.000*
4.	The role of Ministry of Local Government is considered sufficient with regard to JSC.	0.756	0.000*
5.	The Ministry of Local Government intervenes in cases of conflicts and disputes among	0.448	0.000*

	members of JSC.		
6.	The Ministry of Local Government intervenes in regulating the financial relations among members of JSC.	0.504	0.000*
7.	Ministry of Local Government representative always attend the monthly meetings of the board of JSC	0.348	0.005*
8.	I have been informed about the National Development Plan (NDP) for years 2011 – 2013	0.730	0.000*
9.	I have been informed about the National Strategy of Solid Waste Management for years 2010 – 2014	0.751	0.000*
10.	I have been informed about the laws and bylaws concerning the sector of solid waste management.	0.758	0.000*
11.	I have been informed about the bylaw of the JSC of 2006	0.763	0.000*

\* Correlation is significant at the 0.05 level

Table 3.9 Correlation coefficient of each paragraph of "Sources of Funding" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Member municipalities' financial contribution satisfies the operational budget of the JSC.	0.481	0.000*
2.	The solid waste management tariff is defined well to satisfy both the operational and development budgets of the JSC.	0.604	0.000*
3.	The JSC plan its annual budget properly.	0.616	0.000*
4.	Member municipalities' differ in their commitment to paying off JSC dues.	0.264	0.026*
5.	The JSC provide their invoices to member municipalities regularly every month.	0.466	0.000*
6.	JSC financial reports are endorsed by the financial managers in each member municipality.	0.618	0.000*
7.	All solid waste management assets are registered under the JSC.	0.616	0.000*
8.	The JSC always specify their needs and communicate them with donor agencies	0.352	0.004*
9.	The central government covers the deficit in the JSC budget.	0.420	0.001*
10.	The external donor agencies cover the deficit in the JSC budget.	0.432	0.000*
11.	The solid waste management sector is strongly present on the agenda of the Palestinian Government.	0.692	0.000*
12.	The solid waste management sector is strongly present on the agenda of the external donor agencies.	0.668	0.000*

\* Correlation is significant at the 0.05 level

Table 3.10 Correlation coefficient of each paragraph of "Organizational Environment" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There is a clear organizational structure in the JSC.	0.643	0.000*
2.	There is accurate documentation of daily work orders in the JSC.	0.737	0.000*
3.	The JSC Management encourages career development for JSC staff.	0.722	0.000*
4.	JSC board members effectively intervene in JSC's daily work.	0.698	0.000*
5.	The JSC has an emergency plan concerning daily operations.	0.714	0.000*
6.	The JSC statute clearly defines the relationships among the members, the chairman, and the executive management of the JSC.	0.621	0.000*
7.	The JSC regularly prepare annual report.	0.701	0.000*
8.	The JSC board members discuss the JSC annual report.	0.690	0.000*
9.	The JSC has a clear job description for its key staff.	0.553	0.000*
10.	The board members are immediately briefed on actions and events concerning the JSC.	0.718	0.000*
11.	The JSC executive management takes immediate actions in response to service related complaints.	0.699	0.000*
12.	The JSC has a fair compensation system for its employees.	0.372	0.003*

\* Correlation is significant at the 0.05 level

Table 3.11 Correlation coefficient of each paragraph of "Member Municipalities Perspective" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There is a consensus among member municipalities on JSC mission and objectives.	0.601	0.000*
2.	JSC member municipalities understand each other needs within the work of JSC.	0.683	0.000*
3.	Member municipalities acknowledge the independent identity of the JSC.	0.596	0.000*
4.	JSC board decisions are reached unanimously.	0.581	0.000*
5.	The JSC provides equal level of services to its member municipalities.	0.527	0.000*
6.	The JSC executive management is selected on professional grounds that meet the needs of member municipalities.	0.679	0.000*
7.	The JSC board always discusses the problems	0.651	0.000*



No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
	and challenges in the areas of respective member municipalities.		
8.	The JSC board meets regularly every month.	0.551	0.000*
9.	Member municipalities' staff of relevance are always informed of JSC activities.	0.440	0.000*
10.	Member municipalities act as owners of JSC assets	0.625	0.000*
11.	The JSC is solely responsible for financing its operations.	0.449	0.000*
12.	A member municipality is entitled to withdraw from the JSC if the level of service dropped.	0.384	0.002*
13.	Solid Waste Management services had improved after the establishment of JSC.	0.646	0.000*
14.	The unit cost for each ton of Solid Waste Management had decreased after the establishment of JSC.	0.403	0.001*
15.	The main motive for municipalities to join the JSC is economic.	0.257	0.029*
16.	The main motive for municipalities to join the JSC is concerned with the level of service.	0.657	0.000*
17.	The main motive for municipalities to join the JSC is concerned with the alignment with donor's agenda.	0.292	0.015*
18.	The JSC is considered a successful model for solid waste management in Gaza Strip.	0.754	0.000*

\* Correlation is significant at the 0.05 level

According to the pilot study, the following paragraphs were eliminated because the P-value (sig.) is greater than the level of significance  $\alpha = 0.05$  for each paragraph.

Table 3.12 Eliminated Paragraphs according to P-value

Field	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
Ministry of Local Government Policies	The Palestinian internal conflict has weakened Ministry of Local Government role in supporting the JSC	0.110	0.215
Member Municipalities Perspective	Different political backgrounds (if exists) have negative effect on the work of the JSC	0.041	0.383

### 3.7.2.2 Structure Validity Test

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of liker scale. In another meaning, it is assessed the fields structure validity by calculating the correlation coefficients of each field of the questionnaire and the whole of questionnaire.

Table 3.13 clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at  $\alpha = 0.05$ , so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

Table 3.13 Correlation Coefficient of each Field and the whole Questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Ministry of Local Government Policies	0.704	0.000*
2.	Sources of Funding	0.812	0.000*
3.	Organizational Environment	0.876	0.000*
4.	Member Municipalities Perspective	0.894	0.000*

\* Correlation is significant at the 0.05 level

### 3.8 Instrument (Questionnaire) Reliability

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (Polit and Hunger, 1985). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (Polit and Hunger, 1985).

The value of the reliability coefficient theoretically can range between -1.00 and +1.00. For most purposes, reliability coefficients above 0.7 are considered satisfactory

(Polit and Hungler, 1999). The reliability coefficient was calculated which indicated a high level of reliability. For more accuracy, reliability coefficient was calculated for important parts.

This section presents test of reliability of questionnaire according to the pilot study. Reliability of internal consistency was used to test the reliability of the research questionnaire.

The reliability coefficient of the scale was established by Chronbach's alpha using SPSS package. Chronbach's alpha method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire (George D. & Mallery P, 2006). The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

The formula that determines alpha is fairly simple and makes use of the items (variables), k, in the scale and the average of the inter-item correlations, r

$$\alpha = \frac{kr}{1 + (k - 1)r}$$

As the number of items (variables) in the scale (k) increases the value  $\alpha$  becomes large. Also, if the inter-correlation between items is large, the corresponding  $\alpha$  will also be large.

Since the alpha value is inflated by a large number of variables then there is no set interpretation as to what is an acceptable alpha value. A rule of thumb that applies to most situations is:

$0.9 \leq \alpha \leq 1.0$	Excellent
$0.8 \leq \alpha \leq 0.9$	Good
$0.7 \leq \alpha \leq 0.8$	Acceptable
$0.6 \leq \alpha \leq 0.7$	Questionable
$0.5 \leq \alpha \leq 0.6$	Poor
$0.0 \leq \alpha \leq 0.5$	Unacceptable

The Chronbach's coefficient alpha was calculated for each field of the questionnaire. The most identical values of alpha indicate that the mean and variances in the original scales do not differ much, and thus standardization does not make a great difference in alpha.

Table 3.14 shows the values of Chronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Chronbach's Alpha were in the range from 0.757 and 0.857. This range is considered high; the result ensures the reliability of each field of the questionnaire. Chronbach's Alpha equals 0.922 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table 3.14 Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
1.	Ministry of Local Government Policies	0.857
2.	Sources of Funding	0.757
3.	Organizational Environment	0.848
4.	Member Municipalities Perspective	0.854
5.	<b>ALL independent variables together</b>	<b>0.922</b>

Thereby, it can be said that it is proved that the questionnaire is valid, reliable, and ready for distribution for the population sample.

## Chapter 4

# Data Analysis, Interpretations and Discussion

### 4.1 Demographic Data

- 4.1.1 Gender
- 4.1.2 Employer
- 4.1.3 Experience
- 4.1.4 Position
- 4.1.5 Education
- 4.1.6 Residence

### 4.2 Analysis for Each Field

- 4.2.1 Ministry of Local Government Policies
- 4.2.2 Sources of Funding
- 4.2.3 Organizational Environment
- 4.2.4 Member Municipalities Perspective

### 4.3 In General "All Paragraphs"

- 4.3.1 Hypothesis No. 5

## Chapter 4: Data Analysis, Interpretations and Discussion

### 4.1 Demographic Data

#### 4.1.1 Gender

Table 4.15 Distribution of Gender

Gender	N	%
Male	51	92.7
Female	4	7.3
Total	55	100.0

#### 4.1.2 Employer

Table 4.16 Distribution of Employer

Employer	N	%
Ministry of Local Government	9	16.4
Municipality	35	63.6
Solid Waste Management Council – North Gaza	4	7.3
Solid Waste Management Council – Governorates of Khan Younis and Middle Area	5	9.1
International Agency	2	3.6
Total	55	100.0

The above table showed that the number of respondents from the JSC in North and south are 4 and 5 respectively, and that that is due to the fact that member municipalities are the direct owners of the JSC (board and general assembly), therefore the top level in respective municipalities hold both position as municipal staff and JSC top management.

#### 4.1.3 Experience

Table 4.17 Distribution of Experience

Experience	N	%
Less than 5 years	5	9.1
From 5 to 10 years	9	16.4
From 10 to 20 years	29	52.7
20 years and more	12	21.8
Total	55	100.0

#### 4.1.4 Position

Table 4.18 Distribution of Position

<b>Position</b>	<b>N</b>	<b>%</b>
General Manager and above	4	7.3
Mayor	10	18.2
Head of Department	21	38.2
Administrative Staff	10	18.2
Other	10	18.2
Total	55	100.0

#### 4.1.5 Education

Table 4.19 Distribution of Education

<b>Education</b>	<b>N</b>	<b>%</b>
2 year diploma	5	9.1
Bachelor's Degree	27	49.1
Master's Degree and more	22	40.0
Eng. Science	1	1.8
Total	55	100.0

#### 4.1.6 Residence

Table 4.20 Distribution of Residence

<b>Residence</b>	<b>N</b>	<b>%</b>
North Gaza	16	29.6
Gaza	7	13.0
Middle Area	10	18.5
Khan Younis	13	24.1
Rafah	8	14.8
Total	54	100.0

The above table shows a total of 54 respondents versus total of 55, and that is due to one respondent not filling the space related to the place of residence.

## 4.2 Analysis for Each Field

### 4.2.1 Ministry of Local Government Policies

Table (4.21) shows the results of the analysis; the following description is limited to the statements that received the highest degree of agreement and in contrary those which received the lowest degree of agreement, or disagreement (if any) and neutral means for respective statements as follows:

- The mean of paragraph #1 “There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management in Gaza Strip concerning budgetary matters” equals 7.76 (77.64%), Test-value =6.83, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. It can be conclude that the respondents agree to this paragraph.
  
- The mean of paragraph #9 “I have been informed about the National Strategy of Solid Waste Management for years 2010 – 2014” equals 5.87 (58.73%), Test-value =-0.32, and P-value = 0.374 which is greater than the level of significance  $\alpha = 0.05$ . Then the mean of this paragraph is insignificantly different from the hypothesized value 6. It can be concluded that the respondents are "neutral" to this paragraph.
  
- The mean of paragraph #8 “I have been informed about the National Development Plan (NDP) for years 2011 – 2013” equals 5.11 (51.11%), Test-value =-2.28, and P-value = 0.013 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is negative, so the mean of this paragraph is significantly smaller than the hypothesized value 6. It can be concluded that the respondents disagree to this paragraph.

Overall, the mean of the field “Ministry of Local Government Policies” equals 6.41 (64.12%), Test-value =1.98, and P-value =0.027 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly



greater than the hypothesized value 6. It can be concluded that the respondents agree to field of “Ministry of Local Government Policies”.

Based on the analysis, the research concluded the validity of the following conclusion with respect to Hypothesis (1):

**H1:** There is a statistically significant relationship at  $\alpha \leq 0.05$  for Ministry of Local Government Policies on the success of the Solid Waste Management Council in Gaza Governorates.

Discussion of Table (4.21):

The most agreeable statements by the respondents relates to MoLG intervention to resolve financial and budgetary matters only (paragraphs 1, 5, and 6), because the respondents disagreed on the paragraph relates to the sufficiency of MoLG intervention, meaning that the MoLG intervention is limited to conflict resolution among municipalities rather than policy implementation with regard to technical matters, as the respondents were almost neutral to paragraph (2), “There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management (JSC) in Gaza Strip concerning JSC’s technical performance (collection and disposal of solid waste)”. This is contrary to the legal role of the MoLG which gives it complete oversight on municipalities. (Al Masri, 2012) Concluded in his research that there is a degree of role ambiguity for the Ministry’s staff as he substantiated that the “the employee does not receive clear explanations for his role, thus it limits his accountability”. (Al Masri, 2012, p. 117). The respondents were neutral on the disagreement side with regard to paragraph #9, #10, and #11 which supports the findings of (Al Masri, 2012, p. 117) but at wider scale; that is the lack of information on strategies and bylaws extend beyond the employees of the MoLG to the local authorities (the municipalities) themselves; and alarming conclusion that requires utmost attention from the Palestinian central government, a recommendation that is aligned with recommendation no. 7 of (Jabr, 2004, p. 682), “*Improving the institutional capacity of the local governments according to priorities*”, and “*enhancing the cooperation between the municipalities and the executive institutions*”.

Table 4.21 Means and Test values for “Ministry of Local Government Policies”

No.	Paragraph	Mean	Standard Deviation	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management in Gaza Strip concerning budgetary matters.	7.76	1.91	77.64	6.83	0.000*	1
2.	There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management (JSC) in Gaza Strip concerning JSC's technical performance (collection and disposal of solid waste).	6.22	2.13	62.18	0.76	0.226	8
3.	The Ministry of Local Government regularly follows up the latest developments concerning the JSC.	6.62	2.09	66.18	2.20	0.016*	4
4.	The role of Ministry of Local Government is considered sufficient with regard to JSC.	5.64	2.30	56.36	-1.17	0.124	10
5.	The Ministry of Local Government intervenes in cases of conflicts and disputes among members of JSC.	7.40	1.87	74.00	5.55	0.000*	2
6.	The Ministry of Local Government intervenes in regulating the financial relations among members of JSC.	6.95	2.18	69.45	3.22	0.001*	3
7.	Ministry of Local Government representative always attend the monthly meetings of the board of JSC	6.24	2.52	62.41	0.70	0.243	7
8.	I have been informed about the National Development Plan (NDP) for years 2011 – 2013	5.11	2.87	51.11	-2.28	0.013*	11
9.	I have been informed about the National Strategy of Solid Waste Management for years 2010 – 2014	5.87	2.92	58.73	-0.32	0.374	9
10.	I have been informed about the laws and bylaws concerning the sector of solid waste management.	6.29	2.90	62.91	0.74	0.230	6
11.	I have been informed about the bylaw of the JSC of 2006	6.42	2.72	64.18	1.14	0.130	5
	<b>Ministry of Local Government Policies</b>	<b>6.41</b>	<b>1.54</b>	<b>64.12</b>	<b>1.98</b>	<b>0.027*</b>	

\* The mean is significantly different from 6

#### 4.2.2 Sources of Funding

Table (4.22) shows the results of the analysis; the following description is limited to the statements that received the highest degree of agreement and in contrary those which received the lowest degree of agreement, or disagreement (if any) and neutral means for respective statements as follows:

- The mean of paragraph #4 “Member municipalities’ differ in their commitment to paying off JSC dues” equals 8.16 (81.64%), Test-value =8.31, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agree to this paragraph.
- The mean of paragraph #2 “The solid waste management tariff is defined well to satisfy both the operational and development budgets of the JSC” equals 5.75 (57.45%), Test-value =-0.71, and P-value = 0.241 which is greater than the level of significance  $\alpha = 0.05$ . Then the mean of this paragraph is insignificantly different from the hypothesized value 6. We conclude that the respondents "neutral" to this paragraph.
- The mean of paragraph #9 “The central government covers the deficit in the JSC budget” equals 2.42 (24.18 %), Test-value =-13.96, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is negative, so the mean of this paragraph is significantly smaller than the hypothesized value 6 . We conclude that the respondents disagree to this paragraph.

The mean of the field “Sources of Funding” equals 6.26 (62.56%), Test-value =1.53, and P-value =0.067 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Sources of Funding ”.

Based on the analysis, the researcher concludes the validity of following result with respect to Hypothesis (2):

**H2:** There is a statistically significant relationship at  $\alpha \leq 0.05$  for the sources and amounts of funding on the success of the Solid Waste Management Council in Gaza Governorates.

Discussion of Table (4.22):

The respondents had almost unanimously strongly agreed that “*Member municipalities’ differ in their commitment to paying off JSC dues*”, and this is evident by all international and local observations on the deteriorating financial status of Gaza Municipalities, where their revenues had sharply dropped during the blockade and particularly after each aggressive war against Gaza. UNDP, MDLF, The World Bank, the European Union, and the Palestinian National Authority reported the devastated status of Gaza Strip, and more recently the poverty increase among Palestinian people in Gaza. For the case of JSC-North Gaza, Jabalia Municipality had a higher mean than the average respondents on this item (9.33 versus 8.16 on average) indicating an alarming situation presented by Jabalia Municipality. The Respondents from Jabalia Municipality however had a lower mean than the average respondents (7.00 versus 7.98 on average) on paragraph #5 concerning that “the JSC provide their invoices to member municipalities regularly every month”, indicating relatively lower satisfaction on the side of biggest municipality in JSC-North Gaza with JSC’s financial follow up; a conclusion that coincide with recommendation no. 1 of (Jabr, 2004, p. 681), where he recommended that, “*a good financial system and a cost accounting system need to be established and new local sources of financing needs to be developed. Besides, there is a need for the participation of the central government in financing*”. The respondents from Jabalia Municipality was more pessimistic than the average respondents concerning paragraphs #11 and #12 concerning the presence of the SWM sector on both the national agenda and donors’ agenda, indicating the biggest municipality in JSC-North Gaza thinks that the JSC-North Gaza did not receive adequate attention and support due to the lack of coordination and capacity on the JSC-North Gaza side as paragraph #8 shows. On Paragraph #8, respondents from Jabalia Municipality had strongly disagreed on the statement “*The JSC always specify their needs and communicate them with donor agencies*” (mean of 9.33 versus 7.65 for the entire respondents’ population), something that can led to the conclusion that the size of Jablalia Municipality (population of 212,900 according to the PCBS), may not realize the benefits of the JSC versus the smaller municipalities (Bait Lahia, Bait Hanoun, and Um Ennaser with populations less than 100,000). This coincides with international researches

which concluded that “economies of scale exist for small municipalities, but not for larger ones”, (Bel, Germà; Warner, Mildred E., 2014). Sources and amounts of funding are one of the pitfalls the undermines the achievements of the JSC in terms of efficiency and effectiveness as elaborated by (Safi & Luecke, 2007); where donor agency at the time was still in cooperation agreement with JSC and the matter of funding was not as acute as it became later after the wars of 2008 and 2014 given that a substantial cooperation agreement ended with JSC-North Gaza on 31 December, 2009. (German – Palestinian project agreement, unpublished, 2002). This finding coincides with what (Masoud, 2013, p. 115) went to as he described of many policies or actions came about as a result of donors’ “encouragement”. Overall, the MoLG’s role is not limited to “coordination” with local authorities concerning budgetary matters, it shall act as a regulator and enforcer of the law- according to the Palestinian Local Government Law and in harmony with international experience, where, in this regard a lesson can be learned from the Italian experience on the necessity for the MoLG (the central government) to intervene where (Bolgherini, 2011) indicated that, “*Italian regions have progressively been empowered with legislative competences and powers in the matter of IMCs, as well as with the authority to intervene when municipalities do not comply with their guidelines*”. According to the statutes of all JSC’s in Palestine, the member municipalities are obliged within a certain period of time to pay off their dues after receipt of JSC invoice. (MoLG, 2002, pp. 23, article (23), subarticle (3)).

Table 4.22 Means and Test values for “Sources of Funding”

No.	Paragraph	Mean	Standard Deviation	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Member municipalities’ financial contribution satisfies the operational budget of the JSC.	5.20	2.65	52.00	-2.24	0.015*	10
2.	The solid waste management tariff is defined well to satisfy both the operational and development budgets of the JSC.	5.75	2.66	57.45	-0.71	0.241	9
3.	The JSC plan its annual budget properly.	6.73	2.16	67.27	2.49	0.008*	6
4.	Member municipalities’ differ in their commitment to paying off JSC dues.	8.16	1.93	81.64	8.31	0.000*	1
5.	The JSC provide their invoices to member municipalities regularly every month.	7.98	2.28	79.82	6.44	0.000*	2

No.	Paragraph	Mean	Standard Deviation	Proportional mean (%)	Test value	P-value (Sig.)	Rank
6.	JSC financial reports are endorsed by the financial managers in each member municipality.	6.62	2.43	66.18	1.89	0.032*	7
7.	All solid waste management assets are registered under the JSC.	7.27	2.86	72.73	3.30	0.001*	4
8.	The JSC always specify their needs and communicate them with donor agencies	7.65	2.02	76.55	6.07	0.000*	3
9.	The central government covers the deficit in the JSC budget.	2.42	1.90	24.18	-13.96	0.000*	12
10.	The external donor agencies cover the deficit in the JSC budget.	4.42	2.35	44.18	-5.00	0.000*	11
11.	The solid waste management sector is strongly present on the agenda of the Palestinian Government.	5.85	2.61	58.52	-0.42	0.339	8
12.	The solid waste management sector is strongly present on the agenda of the external donor agencies.	6.98	2.30	69.82	3.17	0.001*	5
	<b>Sources of Funding</b>	<b>6.26</b>	<b>1.24</b>	<b>62.56</b>	<b>1.53</b>	<b>0.067*</b>	

\* The mean is significantly different from 6

### 4.2.3 Organizational Environment

Table (4.23) shows the results of the analysis; the following description is limited to the statements that received the highest degree of agreement and in contrary those which received the lowest degree of agreement, or disagreement (if any) and neutral means for respective statements as follows:

- The mean of paragraph #6 “*The JSC statute clearly defines the relationships among the members, the chairman, and the executive management of the JSC*” equals 8.11 (81.09%), Test-value =8.31, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agree to this paragraph.

- The mean of paragraph #12 “*The JSC has a fair compensation system for its employees*” equals 5.58 (55.82%), Test-value = -1.21, and P-value = 0.115 which is greater than the level of significance  $\alpha = 0.05$ . Then the mean of this paragraph is insignificantly different from the hypothesized value 6. We conclude that the respondents "neutral" to this paragraph.

The mean of the field “Organizational Environment” equals 7.07 (70.72%), Test-value = 5.53, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Organizational Environment”.

Based on the analysis, the researcher concludes the validity of following result with respect to Hypothesis (3):

<p><b>H3:</b> There is a statistically significant relationship at <math>\alpha \leq 0.05</math> for the organizational structure/mandate on the success of the Solid Waste Management Council in Gaza Governorates.</p>
--

Discussion of Table (4.23):

Paragraph #6 agrees with (Musleh, 2002), as the Statutes of the Joint Service Councils and their modality became an example for a new JSC’s established in the West Bank, where they built on the experience in Gaza for their new JSC’s. Paragraph #12 confirms the conclusion of (Abu Al-Ajeen, 2010) on the lack of incentives and career development in the local authorities. However, emphasis may be placed on the JSC by its member municipality since it (the JSC) is viewed as a new approach for better service by some, or only a vehicle to gain donors’ funding, or solve temporary problem as provided by (Schep, Gerrit Jan; Schep, Stijn W., 2011, p. 12).

Table 4.23 Means and Test Values for “Organizational Environment”

No.	Paragraph	Mean	Standard Deviation	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There is a clear organizational structure in the JSC.	7.62	2.04	76.18	5.88	0.000*	4
2.	There is accurate documentation of daily work orders in the JSC.	7.18	2.06	71.82	4.26	0.000*	7
3.	The JSC Management encourages career development for JSC staff.	6.33	2.10	63.27	1.16	0.126	10
4.	JSC board members effectively intervene in JSC’s daily work.	6.75	2.01	67.45	2.75	0.004*	9
5.	The JSC has an emergency plan concerning daily operations.	6.24	2.48	62.36	0.71	0.241	11
6.	The JSC statute clearly defines the relationships among the members, the chairman, and the executive management of the JSC.	8.11	1.88	81.09	8.31	0.000*	1
7.	The JSC regularly prepare annual report.	7.75	2.23	77.45	5.81	0.000*	2
8.	The JSC board members discuss the JSC annual report.	7.73	2.26	77.27	5.66	0.000*	3
9.	The JSC has a clear job description for its key staff.	6.98	2.62	69.81	2.75	0.004*	8
10.	The board members are immediately briefed on actions and events concerning the JSC.	7.38	1.97	73.82	5.21	0.000*	5
11.	The JSC executive management takes immediate actions in response to service related complaints.	7.31	2.18	73.09	4.44	0.000*	6
12.	The JSC has a fair compensation system for its employees.	5.58	2.56	55.82	-1.21	0.115	12
	<b>Organizational Environment</b>	<b>7.07</b>	<b>1.44</b>	<b>70.72</b>	<b>5.53</b>	<b>0.000*</b>	

\* The mean is significantly different from 6



#### 4.2.4 Member Municipalities Perspective

Table (4.24) shows the results of the analysis; the following description is limited to the statements that received the highest degree of agreement and in contrary those which received the lowest degree of agreement, or disagreement (if any) and neutral means for respective statements as follows:

- The mean of paragraph #4 “JSC board decisions are reached unanimously” equals 7.78 (77.82%), Test-value =6.36, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agree to this paragraph.
- The mean of paragraph #12 “A member municipality is entitled to withdraw from the JSC if the level of service dropped” equals 5.69 (56.91%), Test-value =-0.89, and P-value = 0.189 which is greater than the level of significance  $\alpha = 0.05$ . Then the mean of this paragraph is insignificantly different from the hypothesized value 6. We conclude that the respondents "neutral" to this paragraph.

The mean of the field “Member Municipalities Perspective” equals 7.00 (70.03%), Test-value =6.25, and P-value =0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of “Member Municipalities Perspective”.

Based on the analysis, the researcher concludes the validity of following result with respect to Hypothesis (4):

<p><b>H4:</b> There is a statistically significant relationship at <math>\alpha \leq 0.05</math> for member municipality perspective on the success of the Solid Waste Management Council in Gaza Governorates.</p>
---

#### Discussion of Table (4.24):

The respondents positively answered to paragraph #17 that *“the main motive for municipalities to join the JSC is concerned with the alignment with donor’s agenda”*, while they have negatively answered; disagreed, to paragraph # 15 that *“the main motive for municipalities to join the JSC is economic”*. This is very important, as it agree with (Masoud, 2013) and with (Musleh, 2002) on the donor driven motivations rather than the economy behind joining efforts. The case of JSC-North Gaza proved that when financial resources soured as a result of donor withdrawal, member municipalities may question the viability of the JSC, a conclusion that agrees at some dimension with (Dollery, Akimov, & Byrnes, 2009) on the Australian experience, that *“while the thoughtful selection and application of shared service arrangements would almost certainly induce cost savings, it could not by itself solve the acute problems of financial sustainability confronting a majority of Australian local councils”*. The issue of sustainability in Palestine in general, and in Gaza in Particular is subjected to a relatively different influences that those in Australia or the West, as this research concluded under the second hypothesis where municipalities significantly differ in paying off their dues to a Joint Service Council due to the particular context of Gaza as elaborated under the discussion of table 4.20 related to the “Sources of Funding”. Furthermore, it appeared that the respondents disagreed on paragraph #14 *“The unit cost for each ton of Solid Waste Management had decreased after the establishment of JSC”*, which is in contrary to what (Safi & Luecke, 2007, p. 7), and that in turn opens the door for the necessity of unifying the concepts, where (Safi & Luecke, 2007) relied on empirical evidence before the blockage on Gaza, the respondents seemed to consider the overall costs as not “decreasing” neglecting the facts that the JSC had higher performance according to (Safi & Luecke, 2007), thus collecting and transporting more solid waste making the unit cost less, but not necessarily the overall costs. This concludes that there is a gap between the understanding of the technical performance of the JSC and the respective financial implications. Furthermore on the technical aspect, the respondents had slightly agreed on paragraphs #5 and #9, which are respectively, *“The JSC provides equal level of services to its member municipalities”* and *“Member municipalities’ staffs of relevance are always informed of JSC activities”*, which indicates a sign of dissatisfaction with the information flow between the JSC and member municipalities.

Table 4.24 Means and Test values for “Member Municipalities Perspective”

No.	Paragraph	Mean	Standard Deviation	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There is a consensus among member municipalities on JSC mission and objectives.	7.71	2.01	77.09	6.32	0.000*	2
2.	JSC member municipalities understand each other needs within the work of JSC.	7.25	1.95	72.55	4.78	0.000*	8
3.	Member municipalities acknowledge the independent identity of the JSC.	6.84	2.44	68.36	2.54	0.007*	13
4.	JSC board decisions are reached unanimously.	7.78	2.08	77.82	6.36	0.000*	1
5.	The JSC provides equal level of services to its member municipalities.	6.89	2.23	68.91	2.96	0.002*	12
6.	The JSC executive management is selected on professional grounds that meet the needs of member municipalities.	7.55	2.14	75.45	5.35	0.000*	4
7.	The JSC board always discusses the problems and challenges in the areas of respective member municipalities.	7.51	1.85	75.09	6.03	0.000*	5
8.	The JSC board meets regularly every month.	7.09	1.84	70.91	4.40	0.000*	10
9.	Member municipalities’ staffs of relevance are always informed of JSC activities.	6.36	2.26	63.64	1.19	0.119	15
10.	Member municipalities act as owners of JSC assets	6.91	2.02	69.09	3.34	0.001*	11
11.	The JSC is solely responsible for financing its operations.	6.78	2.32	67.82	2.50	0.008*	14
12.	A member municipality is entitled to withdraw from the JSC if the level of service dropped.	5.69	2.57	56.91	-0.89	0.189	18
13.	Solid Waste Management services had improved after the establishment of JSC.	7.24	2.41	72.41	3.78	0.000*	9
14.	The unit cost for each ton of Solid Waste Management had decreased after the establishment of JSC.	5.75	2.51	57.45	-0.75	0.228	17
15.	The main motive for municipalities to join the JSC is economic.	6.25	2.58	62.55	0.73	0.234	16
16.	The main motive for municipalities to join the JSC is concerned with the level of service.	7.40	2.30	74.00	4.52	0.000*	7
17.	The main motive for municipalities to join the JSC is concerned with the alignment with donor’s agenda.	7.62	2.17	76.18	5.52	0.000*	3
18.	The JSC is considered a successful model for solid waste management in Gaza Strip.	7.42	2.28	74.18	4.61	0.000*	6
	<b>Member Municipalities Perspective</b>	<b>7.00</b>	<b>1.19</b>	<b>70.03</b>	<b>6.25</b>	<b>0.000*</b>	

\* The mean is significantly different from 6

### 4.3 In General "All Paragraphs"

Table (4.25) shows the mean of all paragraphs equals 6.73 (67.27%), Test-value =4.90, and P-value =0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The mean of all paragraphs is significantly different from the hypothesized value 6. We conclude that the respondents agree to all paragraphs.

This indicates that the hypothesized factors influencing the success of the joint service councils are true on their entirety.

Table 4.25 Means and Test values for "All Paragraphs"

Item	All Paragraphs
Mean	6.73
Standard Deviation	1.10
Proportional Mean (%)	67.27
Test Value	4.90
P-Value (Sig.)	0.000*

\*The mean is significantly different from 6

Table 4.26 Independent Samples T-Test Test of the Fields and their P-Values for Member Municipalities' JSC

No.	Field	Means		Test Value	Sig.
		JSC NG	JSC KRM		
1.	Ministry of Local Government Policies	5.27	6.81	-3.161	0.004*
2.	Sources of Funding	5.49	6.59	-2.471	0.019*
3.	Organizational Environment	6.07	7.25	-1.902	0.067
4.	Member Municipalities Perspective	6.59	7.00	-0.728	0.472
	<b>All independent variables together</b>	5.95	6.92	-2.119	0.042*

\* The mean difference is significant a 0.05 level

### 4.3.1 Hypothesis No. 5

There is insignificant difference among the respondents toward the “The Extent of Applicability of Municipal Cooperative Service Provider “due to Employer, Experience, Position, Education and Residence””.

This hypothesis can be divided into the following sub-hypotheses:

**A.** There is a significant difference among the respondents toward the " The Extent of Applicability of Municipal Cooperative Service Provider " due to Employer

Table (4.27) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference among the respondents toward each field due to Employer. We conclude that the personal characteristics’ Employer has no effect on each field.

Although there is insignificant difference, when the data is viewed on individual basis within a category, e.g., municipality, differences can be observed on the degree of agreement such as the case of Jabalia Municipality in Hypothesis 2 “Sources of Funding”. This difference within the degree of agreement or disagreement only indicates the perspective of member municipalities towards the JSC in general; an indicator that feed within the overall Hypothesis 3 which constitutes the fabric that holds several entities towards a shared goal or objective.

Table 4.27 ANOVA test of the fields and their p-values for Employer

Field	Means			Test Value	Sig.
	Ministry of Local Government	Municipality	Others		
Ministry of Local Government Policies	7.15	6.22	6.42	1.318	0.277
Sources of Funding	6.18	6.21	6.46	0.187	0.830
Organizational Environment	7.41	6.83	7.55	1.354	0.267
Member Municipalities Perspective	7.20	6.91	7.12	0.273	0.762
<b>All Independent Variables Together</b>	7.01	6.59	6.92	0.719	0.492

**B.** There is a significant difference among the respondents toward the “The Extent of Applicability of Municipal Cooperative Service Provider “due to Experience

Table (4.28) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the field “Ministry of Local Government Policies”, then there is significant difference among the respondents toward this field due to Experience. We conclude that the personal characteristics’ Experience has an effect on this field.

For the field “Ministry of Local Government Policies”, the mean for the category “20 years and more” respondents have the highest among the other Experience categories, then we conclude that the category "20 years and more" respondents had agreed for the field “Ministry of Local Government Policies” much more than the other Experience categories.

For the other fields, the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$ , then there is insignificant difference among the respondents toward these fields due to Experience. We conclude that the personal characteristics’ Experience has no effect on the other fields.

It appears that the younger generation disagree with the hypothesis of relation to “Ministry of Local Government Policies”, H1, and that can be explained that those who has 10 years of experience and below had only witnessed the deterioration the of the conditions in Gaza ever since 2005 versus older or more experienced respondents whom witnessed all conditions thus may have a different and a more comprehensive judgment

Table 4.28 ANOVA test of the fields and their p-values for Experience

Field	Means			Test Value	Sig.
	Less than 10 years	10-20 years	20 years and more		
Ministry of Local Government Policies	5.73	6.35	7.35	4.008	0.024*
Sources of Funding	6.24	6.13	6.58	0.568	0.570
Organizational Environment	7.08	6.78	7.77	2.095	0.133
Member Municipalities Perspective	6.83	6.90	7.44	1.067	0.352
<b>All independent variables together</b>	6.53	6.58	7.30	2.225	0.118

\* The mean difference is significant at 0.05 level

C. There is a significant difference among the respondents toward the "The Extent of Applicability of Municipal Cooperative Service Provider" due to Position.

Table (4.29) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference among the respondents toward each field due to Position. We conclude that the personal characteristics' Position has no effect on each field.

This conclusion is logical given that the sample was selected from senior staff in their respective organizations, and that in turn confirm the consistency of the view of both decision makers and top administrative staff in the sector.

Table 4.29 ANOVA test of the fields and their p-values for Position

Field	Means					Test Value	Sig.
	General Manager and above	Mayor	Head of Department	Administrative Staff	Other		
1. Ministry of Local Government Policies	7.14	7.03	6.18	5.81	6.59	1.172	0.334
2. Sources of Funding	5.73	6.42	6.29	6.03	6.46	0.352	0.841
3. Organizational Environment	7.81	6.84	6.83	7.49	7.10	0.678	0.610
4. Member Municipalities Perspective	7.06	6.87	7.01	6.95	7.16	0.074	0.990
<b>All Independent Variables Together</b>	6.94	6.80	6.63	6.63	6.87	0.137	0.968

\* The mean difference is significant at 0.05 level

**D.** There is a significant difference among the respondents toward the “The Extent of Applicability of Municipal Cooperative Service Provider” due to Education.

Table (4.30) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference among the respondents toward each field due to Education. We conclude that the personal characteristics’ Education has no effect on each field.

This conclusion is logical given that the sample was selected from senior staff in their respective organizations, and that in turn confirm the consistency of the view of both decision makers and top administrative staff in the sector.

Table 4.30 ANOVA test of the fields and their p-values for Education

Field	Means			Test Value	Sig.
	2 year diploma	Bachelor’s Degree	Master’s Degree and more		
1. Ministry of Local Government Policies	6.80	5.97	6.89	2.467	0.095
2. Sources of Funding	5.90	6.31	6.27	0.227	0.798
3. Organizational Environment	7.93	6.78	7.25	1.691	0.194
4. Member Municipalities Perspective	7.43	6.75	7.23	1.393	0.258
<b>All Independent Variables Together</b>	7.07	6.49	6.94	1.313	0.278

**E.** There is a significant difference among the respondents toward the "The Extent of Applicability of Municipal Cooperative Service Provider” due to Residence.

Table (4.31) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference among the respondents toward each field due to Residence. We conclude that the personal characteristics’ Residence has no effect on each field.



Table 4.31 ANOVA test of the fields and their p-values for Residence

Field	Means					Test Value	Sig.
	North Gaza	Gaza	Middle Area	Khan Younis	Rafah		
1. Ministry of Local Government Policies	5.76	6.71	7.17	6.24	6.52	1.524	0.210
2. Sources of Funding	5.94	5.88	6.81	6.29	6.41	0.918	0.461
3. Organizational Environment	6.45	7.10	7.62	7.14	7.26	1.189	0.327
4. Member Municipalities Perspective	6.86	7.15	7.24	6.89	6.94	0.204	0.935
<b>All independent variables together</b>	6.33	6.76	7.21	6.67	6.80	1.036	0.398

## **Chapter 5**

# Conclusions and Recommendations

## Chapter 5: Conclusions and Recommendations

This research comes as the Palestinians are trying to resolve their internal political differences in Gaza and the West Bank. As the researcher was trying to prove the common interest among Palestinian municipalities to join efforts and consolidate resources into the regional joint approach for municipal services, he did not neglect the overall context of political differences within the Palestinian political system; something that seem completely on the other side of the scope and nature of this research that is purely concerned with the administrative nature of the Joint Service Councils for Solid Waste Management. Although pilot study eliminated the questions related to the influence of “*political backgrounds among members*” and the “*internal Palestinian Conflict*” on the success of the Joint Service Councils model in Gaza as “statistically insignificant”, the respondents had considered the policies of the Ministry of Local Government as the most influential factor; a factor (Policies) that is known in the human science of Public Administration as a reflection of the entire political and economic environment in any country with a democratic system. The second influential factor being the sources and amounts of funding clearly points out at the general conditions resulting from the unfair and unprecedented blockade exercised on Gaza by the Israeli occupation; something that had directly affected the entire socio-economic structure of public services making the Joint Service Councils – vulnerable to become closer to failure than success as it would be anticipated for any entity under similar conditions. With limited financial resource due to the low or underestimated tariff for solid waste management services, the respondents expressed that neither the central government nor external donors could fulfill the deficit in the JSC budget; expressing in parallel that “*the main motive for municipalities to join the JSC is concerned with the alignment with donor’s agenda*”. Therefore, it can be concluded that once donors’ funding stops, the motive for joining a JSC becomes less.

## **5.1 Conclusions:**

This research concludes the following for the Joint Service Council in North Gaza and can be applied to all JSC's under the same context:

- 1) Member municipalities are in consensus with regard to the mission and objectives of the Joint Service Councils (JSC's) in Gaza; however:
- 2) Member municipalities consider alignment with donors' agenda as a stronger motive to join the JSC than the long term economic motives.
- 3) The coordination among the JSC's and the Ministry of Local Government (MoLG) is limited to budgetary matters only, and coordination on technical matters is absent.
- 4) The overall role of the MoLG in Gaza is considered insufficient concerning the JSC from the viewpoint of the respondents
- 5) There is a lack of information channeling from the MoLG with regard to key strategic issues concerning the solid waste management sector and the national development agenda.
- 6) Member municipalities substantially differ in their commitment towards financing the operations of the JSC's by paying it due invoices.
- 7) The Palestinian Central Government represented by the MoLG does not support the JSC's in Gaza in terms of fulfilling budget deficits.
- 8) The external donors do not support the JSC's in Gaza in terms of fulfilling budget deficits.
- 9) The JSC incentive system and training and development for its staff is not substantial.

## **5.2 Recommendations:**

- 1) The central government shall invest in enhancing the capacity of MoLG and local authorities in terms of proper communication, awareness and follow up of the understanding and implementation of the national agenda and the strategic plans pertaining to the solid waste management sector.
- 2) The central government shall financially intervene to assist the Joint Service Council to recover and restart its focus on its intended mission and long term objectives.
- 3) The issue of sustainability shall be emphasized to JSC and member municipalities by endorsing and setting an action plan that would ultimately lead to self-sufficiency in terms of financing operations and services of the Joint Service Council, and to start reducing dependency on donors' fund.
- 4) Financial management training is highly recommended to JSC staff in order to better plan and communicate JSC operations and needs.
- 5) More efforts are needed to place the solid waste management sector in Gaza on priority position on national and donor agendas

## References

### Books:

- Hoorweg, D., & Bhada-Tata, P. (2012). *WHAT A WASTE A Global Review of Solid Waste Management*. The World Bank, Urban Development & Local Government Unit. Washington: The World Bank.
- Worrell, W. A., & Vesilind, P. A. (2010). *Solid Waste Engineering* (Second Edition ed.). Stamford: Cengage Learning.

### Journals:

- Al-Khatib, I. A., Arafat, H. A., Basheer, T., Shawahneh, H., Salahat, A., Eid, J., et al. (2007, January 16). Trends and problems of solid waste management in developing countries: A case study in seven Palestinian districts. *Waste Management*.
- Bel, Germà; Warner, Mildred E. (2014). *Inter-municipal cooperation and costs: Expectations and evidence*. Public Administration.
- Dollery, B., Akimov, A., & Byrnes, J. (2009, June). Shared Services in Australian Local Government: Rationale, Alternative Models and Empirical Evidence. *The Australian Journal of Public Administration*, 68(2), 208-219.
- Gomez, J. L., Diaz, A. P., & Hern´andez, A. M. (2013). Reducing Costs in Times of Crisis: Delivery Forms in Small and Medium Sized Local Governments' Waste Management Services. *Public Administration*, 91(1), 51-68.

### Thesis:

- Abu Al-Ajeen, T. Y. (2010). *The Impact of Organizational Obstacles on the Performance of Local Authorities in Gaza Strip*. Gaza: The Islamis Universsity in Gaza.
- Abu El Qomboz, Y. D., & Busch, H. G. (2007). *Solid Waste Management in Gaza Strip Problems and Solutions*. Retrieved from <http://research.iugaza.edu.ps/files/2265.PDF>
- Al-Habil, W. I. (2008). *Occupations, a Diaspora, and the Design for Local Governments for a Palestinian State*. Clevelan State University.
- Al Masri, R. M. (2012). *Functional Role Ambiguity and Its Impact on Delegation, Applied Study on the Ministry of Local Government*. Gaza: Islamic University in Gaza.
- Bushra, M. (2000). *Policies and Institutional Assessment of Solid Waste Management in Five Countries: Egypt*. United Nations Environment Program, CEDARE, PlanBlue.
- Daifi, D. Z. (2012). *Development of an Institutional Framework and Organizational Structures for Water and Sanitation Service Providers in the West Bank – Palestine*. Nablus: An-Najah National University.
- Eid, J. A. (2007). *Evaluation Of Solid Waste Management In Qalqilia District*. Nablus: An- Najah National University.

- El-Hawi, M. K. (2004). *Towards and Environmentally Sound Sustainable Solid Waste Disposal Strategy: The Gaza Strip Case*. Salford: Universtiy of Salford.
- Jabr, M. H. (2004). *A Municipal Management and Decentralization Policy*. Nablus: An-Najah National University.
- Li, K. (2007). *Study of Influence Factors in Municipal Solid Waste Management Decision-making*. Master of Science Thesis, Royal Institute of Technology, Industrial Ecology.
- Lohri, C. R., Camenzind, E. J., & Zurbrügg, C. (2014). Financial sustainability in municipal solid waste management – Costs and revenues in Bahir Dar, Ethiopia. *Waste Management*, 34(2).
- Masoud, H. A. (2013). *The Effect of Cluster of Local Governments on the Political Development*. Nablus: An-Najah National University.

### **Electronic Sources:**

- Bel, G., & Warner, M. E. (2013). Factors Explaining Inter-municipal Cooperation in Service Delivery: A Meta-Regression Analysis. *Public Management Research Association Conference*. Madison, WI: University of Wisconsin-Madison.
- Bolgherini, S. (2011). *Local Government and Inter-Municipal Cooperation in Italy and Germany*. Gießen: PIFO: Politische Italien-Forschung.
- David, S. (2002). *Decentralization and Intergovernmental Finance in the Palestinian Authority*. Retrieved from <http://www.passia.org/goodgov/resources/Decentralization.pdf>
- Diaz, L. F., Savage, G. M., & Eggerth, L. L. (2005). *Solid Waste Management*. United Nations Environment Programme, Division of Technology, Industry and Economics.
- ECO Invest. (2011). *ECO Invest*. Retrieved 05 20, 2015, from ECO Invest website: <http://eco-invest.org.ua/en/publications/waste%20management.htm#.VV-0zE-qqko>
- EEA. (2013). *Managing Municipal Solid Waste - a review of achievements in 32 European Country*. European Environment Agency. Copenhagen: Luxembourg: Publication Office of the European Union.
- EQA. (2010). *Environment Sector Strategy, Executive Summary*. Ramallah: Palestinian National Authority.
- Herbert, L. (2007). *Centenary History of Waste and Waste Managers in London and South East England*. Retrieved from [www.ciwm.co.uk](http://www.ciwm.co.uk)
- Lawson, T. (2007). *Review of South Australian Local Government Joint Service Delivery Opportunities: Analysis of Council Responses to a Survey and Options for Implementation of Various Resource Sharing Measures*. Tony Lawson Consulting.
- United Nations. (2010, 08). Retrieved from Office for the Coordination of Humanitarian Affairs: <http://unispal.un.org/UNISPAL.NSF/0/59AE27FDECB034BD85257793004D5541>

Web sites:

- www.economist.com*. (2012, 06 07). Retrieved 05 20, 2015, from <http://www.economist.com/blogs/graphicdetail/2012/06/daily-chart-3?zid=313&ah=fe2aac0b11adef572d67aed9273b6e55>
- www.theatlantic.com*. (2012, 06 07). Retrieved 05 20, 2015, from <http://www.theatlantic.com/business/archive/2012/06/26-trillion-pounds-of-garbage-where-does-the-worlds-trash-go/258234/>
- www.wikipedia.org*. (n.d.). Retrieved 05 20, 2015, from [http://en.wikipedia.org/wiki/History\\_of\\_waste\\_management#cite\\_note-4](http://en.wikipedia.org/wiki/History_of_waste_management#cite_note-4)
- www.wikipedia.org*. (n.d.). Retrieved 05 20, 2015, from [http://en.wikipedia.org/wiki/Polyethylene\\_terephthalate](http://en.wikipedia.org/wiki/Polyethylene_terephthalate)
- (2015, 05 20). Retrieved from *www.wikipedia.org*: <http://en.wikipedia.org/wiki/Landfill>
- MDLF. (2009). *Gaza Municipal Sector Damage Assessment*. Municipal Development and Lending Fund (MDLF).
- MDLF. (2014). *Rapid Assessment of Gaza Municipal Sector Damage*. Gaza: MDLF.
- MoLG. (1995). *Statutes of the Solid Waste Management Council of the communities: Khan Yunis and Deir El-Balah, Nuseirat, Buraij, Maghazi, Zawaydah, Bani Suhaila, Qarara, Abassan Kabira, Abassan Saghira and Khuza'a*. Gaza: Ministry of Local Government (unpublished).
- MoLG. (2002). *Statute of the Solid Waste Management Council of the Communities Jabalia/El-Nazalah, Beit-Lahia, Beit-Hanoun*. Gaza: Ministry of Local Government (unpublished).
- MoLG. (2009). *MoLG*. Retrieved January 20, 2014, from <http://www.molg.pna.ps>: [http://www.molg.pna.ps/Join\\_council\\_aboutus.aspx](http://www.molg.pna.ps/Join_council_aboutus.aspx)
- MoLG. (2014). *Ministry of Local Government*. Retrieved April 23, 2015, from Ministry of Local Government Web site: [http://www.molg.pna.ps/announcement\\_details.aspx?id=61&lang=2](http://www.molg.pna.ps/announcement_details.aspx?id=61&lang=2)
- Municipal Research & Services Center of Washington. (1999). *Local Government Policy-Making Process*. Seattle: Municipal Research & Services Center of Washington.
- Musleh, R. (2002). *Solid Waste Policy Making in a System in Transition*. Birzeit: Institute of Community & Public Health, Birzeit University.
- Organisation for Economic Co-operation and Development. (2015). *OECD*. Retrieved 05 20, 2015, from OECD Web site: <http://www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm>
- Pandey, S. K., & Wright, B. E. (2006, February 1). Connecting the Dots in Public Management: Political Environment, Organizational Goal Ambiguity, and the Public Manager's Role Ambiguity. *Journal of Public Administration Research and Theory*, 511-532.
- PCBS. (2012). *Palestinian Central Bureau of Statistics*. Retrieved May 20, 2015, from Palestinian Central Bureau of Statistics Web site: [http://www.pcbs.gov.ps/Portals/\\_Rainbow/Documents/GS%20E2A%202013.htm](http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/GS%20E2A%202013.htm)



- PCBS. (2014). *Palestinian Central Bureau of Statistics*. Retrieved 03 14, 2015, from [http://www.pcbs.gov.ps/Portals/\\_Rainbow/Documents/nrth%20gza.htm](http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/nrth%20gza.htm)
- PNA. (2010). *Building Palestine Achievements and Challenges*. New York.
- PNA. (2010). *National Strategy for Solid Waste Management 2010-2014*. Ramallah: Palestinian National Authority.
- PNA. (2010). *The Palestinian General National Plan, Summary of the Cross-Sectoral Strategy for Palestinian Local Government and Administration Sectors 2011-2013*. Ramallah: Palestinian National Authority.
- Safi, W. S., & Luecke, M. (2007). Higher Efficiency and Effectiveness in Public Services through Regional Approaches - Joint Service Councils . *Eleventh International Waste Management and Landfill Symposium*. Sardinia: CISA, Environmental Sanitary Engineering Centre, Italy.
- Safi, W., & Luecke, M. (2007). Higher Efficiency and Effectiveness in Public Services through Regional Approaches – Joint Solid Waste Management Councils. *Eleventh International Waste Management and Landfill Symposium*. Sardinia: CISA, Environmental Sanitary Engineering Centre, Italy.
- Saleh, A. A., & Saad, A. M. (2010). Absence of Some Administrative Practices and Its Impact on Level of Services. *Al-Gharee for Economics and Adminictrtion Sciences*, 234-251.
- Schep, Gerrit Jan; Schep, Stijn W. (2011). *Inter-municipal cooperation Introduction Guide to the VNG International Approach to a Successful IMC*. Retrieved from One of the principal ways by which greater efficiency can be achieved is by obtaining economies of scale. For smaller authorities, this can be done through inter-municipal cooperation, i.e., the joint management of services
- Schübeler, P., Christen, J., & Wehrle, K. (1996). *Conceptual Framework for Municipal Solid Waste Management in Low-Income Countries*. Gallen, Switzerland: SKAT (Swiss Centre for Development Cooperation in Technology and Management).
- Shafritz, J. M., & E., R. W. (1999). *Introducing Public Administration* (Second Edition ed.). Longman.
- Soufan, B. R. (2012). *Solid Waste Management in the West Bank: Institutional, Legal, Financial Assessment and Framework Development*. Nablus: An-Najah National University.
- The World Bank. (2012). *WHAT A WASTE A Global Review of Solid Waste Management*. The World Bank, Urban Development & Local Government Unit. Washington: The World Bank.
- UNDP. (2015). *Local Governance Capacity Assessment in the Gaza Strip*. UNDP/PAPP.
- UNEP. (2003). *Desk Study on the Environment in the Occupied Palestinian Territories*. Geneva: United Nations Environment Programme.
- Whiteman, A., Smith, P., & Wilson, C. D. (2009, June). *David C. Wilson*. Retrieved April 30, 2014, from David C. Wilson Web site: [http://www.davidcwilson.com/Waste\\_Management\\_An\\_Indicator\\_of\\_Urban\\_Governance.pdf](http://www.davidcwilson.com/Waste_Management_An_Indicator_of_Urban_Governance.pdf)

Whitman, A., Smith, P., & Wilson, D. C. (n.d.). *Waste Management: An indicator of urban governance*. Retrieved from [www.davidcwilson.com](http://www.davidcwilson.com):  
[http://www.davidcwilson.com/Waste\\_Management\\_An\\_Indicator\\_of\\_Urban\\_Governance.pdf](http://www.davidcwilson.com/Waste_Management_An_Indicator_of_Urban_Governance.pdf)

## Annex IA: Questionnaire Form (Arabic)

### الإستبانة

أولاً: بيانات ديموغرافية

الجنس	<input type="checkbox"/> ذكر	<input type="checkbox"/> أنثى
الجهة	<input type="checkbox"/> وزارة الحكم المحلي <input type="checkbox"/> هيئة محلية (بلدية) ، حدد/ _____ <input type="checkbox"/> مجلس الخدمات المشترك لإدارة النفايات الصلبة للهيئات المحلية في محافظة شمال غزة. (مجلس إدارة النفايات الصلبة في محافظة شمال غزة). <input type="checkbox"/> مجلس الخدمات المشترك لإدارة النفايات الصلبة للهيئات المحلية في محافظات خان يونس و رفح و الوسطى. (سابقاً ؛ مجلس إدارة النفايات الصلبة في محافظتي خان يونس و دير البلح). <input type="checkbox"/> مؤسسة دولية أو أهلية، حدد/ _____	
عدد سنوات الخبرة لدى الجهة	<input type="checkbox"/> أقل من 5 سنوات	<input type="checkbox"/> 6 – 10
طبيعة العمل	<input type="checkbox"/> مدير عام فأعلى	<input type="checkbox"/> رئيس بلدية
	<input type="checkbox"/> مدير دائرة/ مدير منطقة	<input type="checkbox"/> موظف إداري
	<input type="checkbox"/> مدير فني	<input type="checkbox"/> غيره ، _____
الخلفية العلمية	<input type="checkbox"/> ثانوية عامة	<input type="checkbox"/> دبلوم
	<input type="checkbox"/> علوم هندسية	<input type="checkbox"/> علوم إنسانية
	<input type="checkbox"/> غيره ، _____	<input type="checkbox"/> بكالوريوس
منطقة السكن	<input type="checkbox"/> محافظة شمال غزة	<input type="checkbox"/> محافظة غزة
	<input type="checkbox"/> محافظة خان يونس	<input type="checkbox"/> محافظة رفح
	<input type="checkbox"/> محافظة الوسطى	

### إرشادات تعبئة الإستبانة:

- يقوم المجيب بقراءة العبارة و وضع الرقم المعبر عن موافقته أو عدم موافقته مع مضمون العبارة في المربع المخصص في الخانة اليسرى.
- تستخدم هذه الإستبانة المقياس العشري بحيث يعبر الرقم **1** بـ (لا أوافق بشدة) و الرقم **10** بـ (أوافق بشدة) ، و تتفاوت بينهما درجة الموافقة أو عدمها مع تعبير الرقم **5** عن درجة (الحياد).
- يعبر المجيب من الهيئة المحلية عن المجلس المشترك التابع له.

ثانياً: محاور الإستبانة

حدد من 1 إلى 10	العبارة
<b>المحور الأول: سياسات وزارة الحكم المحلي</b>	
<input type="checkbox"/>	1. يُوجد تنسيق مستمر بين وزارة الحكم المحلي و المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة فيما يتعلق بشؤون الموازنة المالية.
<input type="checkbox"/>	2. يُوجد تنسيق مستمر بين وزارة الحكم المحلي و المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة فيما يتعلق بالأداء الفني للمجالس المشتركة لإدارة النفايات الصلبة (جمع و ترحيل و التخلص من النفايات)
<input type="checkbox"/>	3. تتابع وزارة الحكم المحلي آخر المستجدات بشكل منتظم فيما يخص مجالس الخدمات المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	4. يُعتبر دور وزارة الحكم المحلي كاف فيما يتعلق بالمجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	5. تتدخل وزارة الحكم المحلي عند الضرورة في حل الإشكالات و اختلاف وجهات النظر بين البلديات الأعضاء في المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	6. تتدخل وزارة الحكم المحلي عند الضرورة في تنظيم العلاقة المالية بين البلديات الأعضاء و المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	7. يحضر ممثل وزارة الحكم المحلي على الدوام الاجتماعات الشهرية لمجلس إدارة المجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	8. أضعف الإنقسام السياسي الفلسطيني دور وزارة الحكم المحلي فيما يتعلق بدعم المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	9. يتم إعلامي بالخطة الوطنية التنموية للأعوام 2011 – 2013
<input type="checkbox"/>	10. يتم إعلامي بالخطة الإستراتيجية الوطنية لإدارة النفايات الصلبة للأعوام 2010 – 2014
<input type="checkbox"/>	11. يتم إعلامي بالقوانين و اللوائح الخاصة بقطاع النفايات الصلبة.
<input type="checkbox"/>	12. يتم إعلامي بالنظام الأساسي لمجالس الخدمات المشتركة لسنة 2006
<b>المحور الثاني: مصادر التمويل</b>	
<input type="checkbox"/>	13. تلبى مساهمة البلديات الأعضاء الموازنة التشغيلية للمجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	14. تم تعريف رسوم "خدمة النظافة/النفايات الصلبة" بشكل يلبي الموازنة التشغيلية و التنموية للمجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	15. تقوم المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة بتحديد موازنتها السنوية على أكمل وجه.
<input type="checkbox"/>	16. تتفاوت البلديات الأعضاء من حيث الالتزام بتسديد مستحقات المجلس المشترك.
<input type="checkbox"/>	17. يقدم المجلس المشترك مطالبته المالية المستحقة على البلديات الأعضاء على رأس كل شهر.
<input type="checkbox"/>	18. تحظى التقارير المالية المقدمة من المجلس المشترك بموافقة المدراء الماليين في كل من البلديات الأعضاء.
<input type="checkbox"/>	19. تسجل جميع المعدات الخاصة بإدارة النفايات الصلبة ضمن أصول مجلس الخدمات المشترك.
<input type="checkbox"/>	20. تقوم المجالس المشتركة لإدارة النفايات الصلبة بتحديد احتياجاتها و إيصالها للجهات المانحة.
<input type="checkbox"/>	21. تقوم الحكومة بسد العجز السنوي في موازنة المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.

حد من 1 إلى 10	العبارة
<input type="checkbox"/>	22. تقوم الجهات الدولية المانحة بسد العجز السنوي في موازنة المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	23. يحتل قطاع النفايات الصلبة موقع الأهمية في أجندة الحكومة الفلسطينية.
<input type="checkbox"/>	24. يحتل قطاع النفايات الصلبة موقع الأهمية في أجندة المانحين.
<b>المحور الثالث: البيئة التنظيمية</b>	
<input type="checkbox"/>	25. يُوجد تسلسل إداري واضح في المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	26. يُوجد توثيق دقيق لأوامر العمل اليومية في المجالس المشتركة لإدارة النفايات الصلبة في قطاع غزة.
<input type="checkbox"/>	27. تقوم إدارة المجالس المشترك لإدارة النفايات الصلبة في قطاع غزة بتشجيع التطور المهني للعاملين فيها.
<input type="checkbox"/>	28. يتدخل أعضاء مجلس الإدارة بشكل فعال في أعمال المجالس المشتركة لإدارة النفايات الصلبة.
<input type="checkbox"/>	29. يوجد لدى المجلس المشترك لإدارة النفايات الصلبة خطة طوارئ فيما يتعلق بعملياته اليومية.
<input type="checkbox"/>	30. يحدد النظام الداخلي للمجلس المشترك العلاقة بشكل واضح بين أعضاء و رئيس مجلس الإدارة و بين الإدارة التنفيذية للمجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	31. يُقدم المجلس المشترك لإدارة النفايات الصلبة تقرير سنوي بشكل منتظم.
<input type="checkbox"/>	32. يُناقش أعضاء مجلس الإدارة التقرير السنوي للمجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	33. يُوجد لدى المجلس المشترك لإدارة النفايات الصلبة وصف وظيفي واضح للوظائف الرئيسية.
<input type="checkbox"/>	34. يُطلع أعضاء مجلس الإدارة على كافة المستجدات لدى المجلس المشترك لإدارة النفايات الصلبة فور حدوثها.
<input type="checkbox"/>	35. تتخذ إدارة المجلس المشترك إجراءات فورية عند ورود شكاوى متعلقة بالخدمة.
<input type="checkbox"/>	36. يُوجد لدى المجلس المشترك نظام مكافئة عادل للعاملين.

<b>المحور الرابع: منظور الهيئات المحلية الأعضاء</b>	
<input type="checkbox"/>	37. تُجمع البلديات الأعضاء حول مهمة و أهداف المجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	38. تتفهم البلديات الأعضاء احتياجات بعضها البعض ضمن سياق عمل المجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	39. تراعي البلديات الأعضاء الشخصية المستقلة للمجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	40. تُتخذ قرارات مجلس إدارة مجلس الخدمات المشترك باجماع جميع الأعضاء.
<input type="checkbox"/>	41. يؤثر اختلاف الخلفيات السياسية بين أعضاء مجلس الإدارة (إن وجد) سلباً على عمل المجلس المشترك لإدارة النفايات الصلبة.
<input type="checkbox"/>	42. يوفر المجلس المشترك لإدارة النفايات الصلبة مستوى خدمات متساوٍ بين البلديات الأعضاء.
<input type="checkbox"/>	43. يتم اختيار الإدارة التنفيذية للمجلس المشترك لإدارة النفايات الصلبة على أسس مهنية و مالية لاحتياجات البلديات الأعضاء.
<input type="checkbox"/>	44. يناقش مجلس إدارة المجلس المشترك لإدارة النفايات الصلبة دوماً الإشكالات المتعلقة بإدارة

المحور الرابع: منظور الهيئات المحلية الأعضاء	
	النفائات الصلبة في مناطق البلديات الأعضاء.
<input type="checkbox"/>	45. يحافظ مجلس الإدارة على اجتماعات دورية بشكل شهري.
<input type="checkbox"/>	46. يطلع موظفي البلديات الأعضاء ذوي العلاقة بشكل مستمر على أعمال المجلس المشترك لإدارة النفائات الصلبة.
<input type="checkbox"/>	47. تتصرف البلديات الأعضاء على الدوام كمالكي لأصول المجلس المشترك لإدارة النفائات الصلبة.
<input type="checkbox"/>	48. يُعتبر المجلس المشترك لإدارة النفائات الصلبة مسؤول بشكل كامل و منفرد فيما يتعلق بتمويل عملياته.
<input type="checkbox"/>	49. يحق لأي بلدية عضو في المجلس المشترك لإدارة النفائات الصلبة الإنسحاب منه في حال تدني مستوى الخدمة.
<input type="checkbox"/>	50. تُعتبر خدمات إدارة النفائات الصلبة في حال أفضل بعد انشاء المجلس المشترك لإدارة النفائات الصلبة.
<input type="checkbox"/>	51. تُعتبر تكلفة إدارة النفائات الصلبة لكل طن من النفائات أقل بعد إنشاء المجلس المشترك لإدارة النفائات الصلبة.
<input type="checkbox"/>	52. يُعتبر الدافع الأساس لإنضمام البلديات للمجلس هو اقتصادي بالدرجة الأولى (أي بداعي توفير النفقات).
<input type="checkbox"/>	53. يُعتبر الدافع الأساس لإنضمام البلديات للمجلس خدماتي بالدرجة الأولى (أي بداعي تحسين الخدمات المقدمة للمواطنين).
<input type="checkbox"/>	54. يُعتبر الدافع الأساس لإنضمام البلديات للمجلس هو التماشي مع سياسات الجهات المانحة (أي بداعي الاستفادة من المنح المقدمة).
<input type="checkbox"/>	55. تُعتبر المجالس المشتركة نموذجاً ناجحاً لقطاع إدارة النفائات الصلبة في قطاع غزة.

مع جزيل الشكر و التقدير

## **Annex IB: Questionnaire Form (English)**

The Extent of Applicability of  
Municipal Cooperative Service Provider  
Solid Waste Management Council  
in North Gaza Governorate

For the partial fulfilment of a Master's Degree in Business Administration

**Supervisor:**  
Dr. Wassem Al-Habeel  
Faculty of Commerce

Student Name Nouredin Talab Al-Madhoun  
Student ID No. 120100230

---

Questionnaire Form

---

### **Instructions to Respondents:**

1. Read each paragraph carefully and place your rating in the columns to the right.
2. This questionnaire uses the 1 – 10 scale where number “1” indicates you “strongly disagree” and number “10” indicates you “strongly agree” with different degrees of “agree” and “disagree” in between, and where “5” indicates “neutral”.
3. Respondents from municipalities express their opinion to the respective Joint Service Council for Solid Waste Management.
4. The abbreviation “JSC” refers to the phrase “Joint Service Council for Solid Waste Management”.

## Demographic Data

Sex	<input type="checkbox"/> Male <input type="checkbox"/> Female
Employer / Institution	<input type="checkbox"/> Ministry of Local Government <input type="checkbox"/> Municipality, specify _____ <input type="checkbox"/> Solid Waste Management Council – North Gaza <input type="checkbox"/> Solid Waste Management Council – Governorates of Khan Younis and Middle Area <input type="checkbox"/> International Agency, specify _____
Years of Experience with current employer	<input type="checkbox"/> Less than 5 years <input type="checkbox"/> 6 – 10 yrs. <input type="checkbox"/> 11 – 20 yrs. <input type="checkbox"/> More than 20 yrs.
Position	<input type="checkbox"/> General Manager and above <input type="checkbox"/> Mayor <input type="checkbox"/> Head of Department <input type="checkbox"/> Administrative Staff <input type="checkbox"/> Technical Staff <input type="checkbox"/> Other, specify _____
Education	<input type="checkbox"/> High School <input type="checkbox"/> 2 year diploma <input type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Master's Degree and more
Residence	<input type="checkbox"/> North Gaza <input type="checkbox"/> Gaza <input type="checkbox"/> Middle Area <input type="checkbox"/> Khan Younis <input type="checkbox"/> Rafah



## The Questionnaire

Paragraph	Rate 1 to 10
<b>First: Ministry of Local Government Policies</b>	
1. There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management in Gaza Strip concerning budgetary matters.	
2. There is a continuous coordination between Ministry of Local Government and the Joint Service Councils for Solid Waste Management (JSC) in Gaza Strip concerning JSC's technical performance (collection and disposal of solid waste).	
3. The Ministry of Local Government regularly follows up the latest developments concerning the JSC.	
4. The role of Ministry of Local Government is considered sufficient with regard to JSC.	
5. The Ministry of Local Government intervenes in cases of conflicts and disputes among members of JSC.	
6. The Ministry of Local Government intervenes in regulating the financial relations among members of JSC.	
7. Ministry of Local Government representative always attend the monthly meetings of the board of JSC	
8. The Palestinian internal conflict has weakened Ministry of Local Government role in supporting the JSC.	
9. I have been informed about the National Development Plan (NDP) for years 2011 – 2013	
10. I have been informed about the National Strategy of Solid Waste Management for years 2010 – 2014	
11. I have been informed about the laws and bylaws concerning the sector of solid waste management.	
12. I have been informed about the bylaw of the JSC of 2006	
<b>Second: Sources of Funding</b>	
13. Member municipalities' financial contribution satisfies the operational budget of the JSC.	
14. The solid waste management tariff is defined well to satisfy both the operational and development budgets of the JSC.	
15. The JSC plan its annual budget properly.	
16. Member municipalities' differ in their commitment to paying off JSC dues.	
17. The JSC provide their invoices to member municipalities regularly every month.	
18. JSC financial reports are endorsed by the financial managers in each member municipality.	
19. All solid waste management assets are registered under the JSC.	
20. The JSC always specify their needs and communicate them with donor agencies	
21. The central government covers the deficit in the JSC budget.	
22. The external donor agencies cover the deficit in the JSC budget.	
23. The solid waste management sector is strongly present on the agenda of the <u>Palestinian Government</u> .	
24. The solid waste management sector is strongly present on the agenda of the <u>external donor agencies</u> .	
<b>Third: Organizational Environment</b>	

25. There is a clear organizational structure in the JSC.	
26. There is accurate documentation of daily work orders in the JSC.	
27. The JSC Management encourages career development for JSC staff.	
28. JSC board members effectively intervene in JSC's daily work.	
29. The JSC has an emergency plan concerning daily operations.	
30. The JSC statute clearly defines the relationships among the members, the chairman, and the executive management of the JSC.	
31. The JSC regularly prepare annual report.	
32. The JSC board members discuss the JSC annual report.	
33. The JSC has a clear job description for its key staff.	
34. The board members are immediately briefed on actions and events concerning the JSC.	
35. The JSC executive management takes immediate actions in response to service related complaints.	
36. The JSC has a fair compensation system for its employees.	
<b>Forth: Member Municipalities Perspective</b>	
37. There is a consensus among member municipalities on JSC mission and objectives.	
38. JSC member municipalities understand each other needs within the work of JSC.	
39. Member municipalities acknowledge the independent identity of the JSC.	
40. JSC board decisions are reached unanimously.	
41. Different political backgrounds (if exists) have negative effect on the work of the JSC.	
42. The JSC provides equal level of services to its member municipalities.	
43. The JSC executive management is selected on professional grounds that meet the needs of member municipalities.	
44. The JSC board always discusses the problems and challenges in the areas of respective member municipalities.	
45. The JSC board meets regularly every month.	
46. Member municipalities' staffs of relevance are always informed of JSC activities.	
47. Member municipalities act as owners of JSC assets	
48. The JSC is solely responsible for financing its operations.	
49. A member municipality is entitled to withdraw from the JSC if the level of service dropped.	
50. Solid Waste Management services had improved after the establishment of JSC.	
51. The unit cost for each ton of Solid Waste Management had decreased after the establishment of JSC.	
52. The main motive for municipalities to join the JSC is economic.	
53. The main motive for municipalities to join the JSC is concerned with the level of service.	
54. The main motive for municipalities to join the JSC is concerned with the alignment with donor's agenda.	
55. The JSC is considered a successful model for solid waste management in Gaza Strip.	

## **Annex II: List of Jurors**

Juror Name	Title
Prof. Dr. Samir Safi	Statistical department IUG/ dean deputy of the faculty of commerce.
Dr Nabil Al-Loh	Head of Training department at the general personnel bureau
Dr Wael Al-Daya	Islamic University, Assistant Prof at the faculty of commerce
Dr Yasser Al-Shorafa	Islamic University, Assistant Prof at the faculty of commerce
Mr Hani Abu Amer	Islamic University, Faculty of commerce
Eng. Wael Safi	Gaza Representative, The German International Cooperation (GIZ)
Eng. Adel Qazzaz	Director of Projects, the Ministry of Local Government
Eng. Mutaz Mohaisen	Gaza Office Manager, the Municipal Development and Lending Fund (MDLF)