Geospatial Analysis for Foreign Labor force Distribution and Housing Services in Kuwait, from 2003 to 2012

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Geospatial Analysis for Foreign Labor force Distribution and Housing Services in Kuwait, from 2003 to 2012
Geospatial Analysis of Foreign Labor Force Distribution and Housing Services in Kuwait from 2003 to 2012

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Geography

by

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August 2014
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This thesis is approved for recommendation to the Graduate Council.

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Abstract

Human influences on the urban environment depend on the population size, population concentration, and land use organization. In Kuwait, the urban organization relies heavily on the population structure and concentration. Daily practices and occupations which result in changes in land use in Kuwait lead to changes in the formation of the urban environment. Surveys and fieldwork were conducted, and interviews were performed, to analyze the population structure in Kuwait and the general organization of each province, specifically on housing foreign labor force. In addition, official data were analyzed to examine the population distribution and type of land use in each province in Kuwait. Measuring the connection between the increase of immigration and general land use was significant to measure the concentration of foreign workers in specific places which affected the demand on related services. Analyzing these data is important to reveal the changes in social organization which was associated with changing land use and alleviating pressure on general services. With the increase of low-wage workers in industrial and commercial areas, the congestion increases and leads to overcrowding in residential areas associated with these activities. Also the daily cleaning process is at a maximum in these areas. The demand on low-wage workers is not reflected in a beneficial way to improve the country’s development status, but the government requires a lot of effort to prequalify these workers for a job. At the same time, the foreign workers reflect a different social background that might affect the social structure in Kuwait and must be taken into consideration. Also, uncontrollable outsider behaviors can affect the general structure of some cities especially in the context of the function of every province specifically on housing units and residential areas in Kuwait.
Acknowledgements

I would like to express my gratitude to all those who made this thesis possible. I would like to sincerely thank my advisor Dr. Thomas Paradise for his continued support and guidance; no words can describe how grateful I am to him. I would also like to thank my committee member Dr. Fiona Davidson who taught me a lot throughout my college years. I am very grateful for Dr. John Dixon for all his support and hours of revising my thesis and his great help with the statistics part of this work. I would like to express my special appreciation and thank the Director of the Department of Sociology, Dr. Anna Zajicek for her willingness to contribute in this work, her kindness is indescribable. I would also like to thank Frank Jacobus for his help and advice in the field of architecture. I owe a debt to Dr. Mohammad Ghuloom; his contribution to my thesis is greatly appreciated. I would also like to thank my wonderful and skilled classmate, Christopher Pryor for his help with Illustrator CS6.

I would also like to express my sincere gratitude to the State of Kuwait, HH Sheikh Sabah Al- Ahmad Al-Jaber Al- Sabah, the Ministry of Foreign Affair, Ministry of Social Affairs and labor, Ministry of Public Works and Civil Service Commission for their help and cooperation. In addition I would like to thank Kuwait University and The Embassy of Kuwait for their sponsorship that made this thesis possible. And I would like to thank all the staff of the Geosciences Department at the University of Arkansas for their help, and a great thanks to my family and friends for their continuing support.

Finally, I would like to thank the foreign population in Kuwait who participated in this research, which would not be possible without their participation.
Dedication

To My Father...
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Chapter One: Introduction

The foreign labor force in Kuwait represents a large percentage of the Kuwaiti population. The distribution of foreign laborers in their living areas was based on nationality, ethnicity, education, and salary. With the increase in foreign laborers, their housing distribution has changed systematically and has become more concentrated in some areas than others. This has led to many problems such as the decline of services, especially housing. The purpose of this study was to provide a reasonable evaluation of the housing distribution based on land use and work zones. In this geospatial analysis, the distribution of the foreign population was examined and evaluated between 2003 and 2012. In addition, examining the variables and the changes that have led to overcrowding may identify the suitable future distribution for housing for foreign laborers and promote the project of “The City of Laborers.”

1. Background

Since the official establishment of Kuwait City, there has been a flow of large numbers of foreigners into the city. Due to many attractive factors, many different nationalities converged on Kuwaiti society and became a significant part of its society, leading to substantial growth in the population of Kuwait (Al-Marzooq, 2013). Thus, the population in Kuwait has become a mix of Kuwaitis, Indians, Pakistanis, Bangladeshis, Iranians, Koreans, Filipinos, Egyptians, Palestinians, and Jordanians. However, the configuration of the foreign population changed over time in number and concentrations. There are many factors that affected the immigration of foreign population to Kuwait: these include economic, governmental, geographic, and historic factors. Among them, the discovery of oil is the most distinguishable factor that instigated a wave of immigration to Kuwait (Walker & Butler, 2010).
Kuwait’s population began to grow steadily after the discovery of oil in the 1930s, when the economy flourished on account of the petroleum industries. Before the discovery of oil, when the economy was based on fishing, the foreign population was confined to a minority of people from nearby regions. The income of the country increased over time because of the prosperity of the oil industry, which raised the living standards and led to an increase in the population. While Kuwait’s total population in 1965 was 467,339, it grew to 1,575,570 in 1995, and has reached 3,823,728 in 2012 (ASA, 2013). In addition to high salaries, the government of Kuwait provided free health services, free education, and free transportation to Kuwaiti citizens, and the non-Kuwaiti population as well (Craman, 1996).

However, that growth in population when foreigners moved to Kuwait did not pose a problem because of the vast land area that was available. With fewer structures, it was simple for the new immigrants to build housing. Later, however, the problem of slums appeared, and was exacerbated when the process of reconstruction began. Many structural plans of Kuwait City and the surrounding urban areas included studies about foreign laborers and their distribution in every province and city. This phenomenon had an impact on the indigenous population. The expatriate laborers differed from the native population in their traditions and customs; and with the absence of social control, these differences became more explicit (Walker, 2010). The Kuwaiti government tried to keep the neighborhoods where immigrants live separate from the areas of the city where Kuwaitis live.

The influx of foreign populations also impacted the country with regard to general urban planning. The unbalanced city structure was reflected in the general layout of the city. Most of the areas where foreign laborers live constitute the parts of the city where living conditions are unsanitary and below par. Some of the houses in these areas were very old and deteriorated.
Despite the enormous cost of daily cleaning and other services provided by the Municipality of Kuwait, these cities, such as Murgab and Hawalli City, lack the healthy structure of a city with clean streets and public spaces.

The origins of this problem are twofold. First, most of the labor force in Kuwait came from very poor countries. Some of them came from villages or cities with very limited municipal maintenance services. In addition, the laborers’ background and their educational level play a role in how they treat their living units and how they maintain the environment. In the case of the foreign laborers in Kuwait, most of them had an educational background that did not exceed the primary level. In 2009, only 52% of the foreign laborers were literate and 43% had an intermediate educational level (Shah, 2010). Consequently, there has been much neglect on the part of the immigrant population with regard to the city structure. However, foreign population, it was the responsibility of governmental institutions to maintain the general appearance of the city and its urban structure. This can be achieved by increasing awareness about the importance of paying attention to the physical appearance of the city.

In response to these perceived problems, the Kuwaiti government has a set of policies related to the foreign labor force, such as prequalifying the foreign labor force and guiding it to production through suitable training. There are many other revised laws by the Ministry of Social Affairs and Labor. These policies and laws can help to determine the demographic structure in the country.

The population of foreign laborers was recognized as one of the distinctive features of the Kuwaiti population’s development. With the continuous increase of immigration to Kuwait, the population of non-Kuwaitis increased, making non-Kuwaitis the majority in the country. According to the 2005 census, the population of Kuwaitis constituted 33.9% of the total
population in 2005, while the non-Kuwaitis constituted 66.1%. And in 2012, the number of non-Kuwaitis increased to 68% of the total population, while the Kuwaitis made up 32% (The public Authority for Civil Information (PACI), 2013). These statistics indicate an increase in the number of immigrants in Kuwait; even though it might seem like a small difference, in a small country like Kuwait it might make significant changes in the social and infrastructural bases of the country.

This change in the demographic structure poses major concerns for a social and a security base, requiring major services for the work force in Kuwait are provided, especially with regard to housing. Non-Kuwaitis have a choice of investments and commercial rental units in six provinces in Kuwait. The distribution of laborers in every province is centralized on account of commercial activities which have caused overcrowding in certain areas. This overcrowding in turn has led to a serious problem that the country is dealing with. That is, providing housing for as many foreign laborers as possible by creating fully prepared cities for laborers. The laborers are distributed in Kuwait’s provinces also based on their nationalities (Ghuloom, 2013).

However, within the new projects of building cities to house laborers with full services provided in these cities, there was no social, cultural, or occupational consideration included in the plans for the cities of laborers. The proposal lacks the organization of laborers in these housing units. It would be more efficient for the city to be organized by professions and educational status rather than nationalities (Labor, 2009). As a matter of fact, it would be more professional if laborers were distributed based on their occupation and specializations, where doctors live together in the same units, teachers share another unit, and so on. Such a distribution would prevent problems resulting from the interaction between residents from different
educational backgrounds, where doctors and construction workers might have different lifestyles and habits (Ghuloom, 2013).

The goal of this study was to examine the variables and the changes that led to overcrowding of the foreign laborers in Kuwait from 2003 to 2012. The objective of the study was to identify suitable housing services for foreign laborers – for the purpose of organizing land use in Kuwait and the surrounding areas.
Chapter Two: Study Site

2.1 Physical Geography

Kuwait is a small Arab country in South-West Asia, located in the Northeast part of the Arabian Peninsula. The name "Kuwait" is a diminutive form of the word "kut" which means village surrounded by a wall. For a long time, Kuwait was a village, even in the early twentieth century when the population of the capital city was about 15 thousand people. Nowadays, Kuwait is among the smallest countries in the world. Its total area is 17,820 km\(^2\) which is slightly smaller than New Jersey (The world Factbook, 2013). The country is located between latitudes 28°.30 and 31° N, and longitudes 46°.30 and 49°30 E (Kuwait Online Government, 2012).

The shape of the country resembles a triangle. A long border of 250 kilometers with Saudi Arabia stretches in the Southern and Western part of Kuwait. Kuwait shares the North-West border of 240 kilometers with Iraq. The Persian Gulf washes the Eastern coast. The length of the shoreline is about 195 kilometers. Overall, the coast is slightly dissected, except for the central part where the narrow Kuwait Bay jets out for about 30 miles in depth. Kuwait Bay is a single deep-water harbor on the entire Western coast of the Persian Gulf where the capital city Al Kuwait is located (Craman, 1996).

Generally, the coastal zone is rather shallow. A chain of nine low inhabited islands owned by Kuwait stretches a short distance from the shore. Bubiyan Island appears to be the largest heavily waterlogged island. Failaka Island used to be populated; however, people did not return to their homes after the Iraqi invasion; thus it remains uninhabited at the present time (Al-Razzaq, 1985).
2.1.1 Physical Terrain and Topographic Features

Kuwait territory lies on the East Coast of the Arabian plain and is almost entirely flat desert. The existing oases are not numerous. Low-lying flat relief of the coastline gives way to the central hilly strip and the low plateau in the far South-West where the highest point of the country (306 meters above sea level it) is located. The main geological peculiarity is the flat landscape of Kuwait covers ancient rock formations which contain nearly a tenth of the world’s oil reserves (Al-Razzaq, 1985).
The low coastal strip is abundant in salt marshes and during the rainy season, they turn into salty lakes named "Sabkha". Sabkha also covers Bubiyan and Warbah Islands which make up 5% of the country’s land surface and form a natural defensive buffer against the short coastline of Iraq on the Persian Gulf. Kuwait Bay, south of Bubiyan, is considered one of the finest natural deep water harbors in the Persian Gulf. Failaka Island “guards” the east entrance to the bay and three tiny islands of the southern coast serve as commercial or security outposts and wildlife sanctuaries (Craman, 1996).

The wide network of riverbeds of ephemeral streams (wadis) deeply dissects the central and southwestern parts of the country. Wadi systems of dry valleys and depressions experience
infrequent rainfall and may quickly channel sudden heavy rainstorms into the desert (Underwood & Guth, 1998).

Figure 3. Wadi Al-Baten (Pope, 2010).

Within the northern half of Kuwait, common rocky desert lies in the southern part, namely a sandy desert with a dune relief. The Ahmadi chain, a massif with an altitude below 150 meters, separates the desert from the sea. In spring, the chain becomes a beautiful meadow, particularly in Wadi Al-Batin (Figure. 3), where an elegant carpet of yellow chamomile covers its surface. In the west of the country, a large, moderately deep valley catches seasonal waters and marks the boundary with Iraq (Underwood & Guth, 1998).
### 2.1.2 Desert and coastal life influence pre-oil industry

After the settlement of the Al-Otob Family in Kuwait in the 18th Century, they chose the area where they could find enough surpluses to keep them alive in the desert environment. They chose the eastern side of Kuwait to reside, and they found the Persian Gulf as a surplus provider. Professions were related to the sea where they worked in pearl diving, and usually in six-month fishing and pearling journeys, and fishing and maritime trade to and from India. The economy of Kuwait in its early stages was based on the pearling industry until it faced a serious drop because of the Japanese artificial pearl industry. Water was brought from the north and northeast from Shatt-Alarab. At that time, the Failaka Island was the only area where people could grow vegetables. In contrast, Bedouins used to live in the desert outside the walls and away from the gulf; these surpluses were not accessible for them. The life in this environment was harsh. Bedouins used to move a lot looking for water; they usually settled in one spot for a month then left to another (Craman, 1996).

### 2.1.3 Kuwait Natural Resources

Kuwait is rich in oil and associated gas, the reserves of which are of global importance. By most estimates, the Kuwait oil resources compose about 10% of all the world’s deposits (94.8 billion barrels) and in terms of the explored oil reserves, they rank third among the Middle East states after Saudi Arabia and Iraq. At current rates of oil extraction, it will be enough for more than 100 years. Kuwait soil is sandy and barren. Besides, it is depleted in mineral and organic compounds (Hassan & AlGharaballi, 2011).

It is worth mentioning that in Kuwait there are rivers, but some underground water storages do exist. All the available water resources are represented by the mountain sources in
the Eastern part of the peninsula. Because of the lack of fresh drinkable water, much of the water is cleaned at refineries and desalination plants.

The fauna is rather sparse. The most numerous rodents are gerbils, jerboas, and mice. Occasionally foxes, hyenas, jackals, and gazelles can be met. Wild sheep and antelope reside in the most elevated southwestern areas. It is common knowledge that reptiles are more diverse. Wild pigeons, larks, bustards, gulls, eagles, falcons, hawks and other birds, including waterfowls, represent the avifauna (Kuwait Online Government, 2012).

Figure 4. Locations of oil, gas and water fields in Kuwait (Kuwait Oil Company, 2012).

Coastal waters are a habitat for more than 250 species of fish (The world Factbook, 2013). For the reason that the coastal waters are full of shrimp and fish, fishing has great commercial importance. Fifty years ago, Kuwait was self-sufficient in marine foods and despite
a 20 fold increase in population, fishing still provides 50% of the country's seafood requirement. At the same time, stocks are being depleted through overfishing and the breeding grounds are polluted by increased sediment due to marsh draining in southern Iraq (Embassy of Kuwait, 2014).

2.1.4 Agriculture and livestock

Agriculture has a very significant role in improving the economy of the country and has a great contribution in the development of the general economic status of the country. Through the additional demand on food in relation to the population growth of Kuwait, the country is seeking to develop the agricultural sector and encourages farmers through providing financial support and agricultural services for the improvement of the national income. Despite of the fact that Kuwait’s climate is dry and under the effect of its subtropical climate, Kuwait has a decent production that fills the local demand for food (Table.1). The livestock poultry industry also contributes in the general income of the country beside the fishing industry that has a significant role since the establishment of Kuwait city. In 2011, the total income from the fishing industry was 130,000,000 USD.

Table 1. Production of crops by type, area, quantity and value 2009/2010 (ASA, 2013).

<table>
<thead>
<tr>
<th>Type of crops</th>
<th>Area (Acres)</th>
<th>Quantity (Tones)</th>
<th>Value (Thousand USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Crops</td>
<td>65,422</td>
<td>201,385.0</td>
<td>61,400</td>
</tr>
<tr>
<td>Summer Crops</td>
<td>21,391</td>
<td>43,933.2</td>
<td>15,500</td>
</tr>
<tr>
<td>Semi-Sustainable Crops</td>
<td>53,879</td>
<td>470,347.4</td>
<td>43,030</td>
</tr>
<tr>
<td>Greenhouses crops</td>
<td>23,636</td>
<td>155,883.9</td>
<td>72,800</td>
</tr>
<tr>
<td>Total</td>
<td>164,328</td>
<td>871,549.5</td>
<td>193,548</td>
</tr>
</tbody>
</table>
2.1.5 Climate and Weather

As mentioned, Kuwait is located between latitudes 28° and 31° N, and longitudes 46° and 49° E of Greenwich (The World Factbook, 2013). Therefore, it has a subtropical climate.

Kuwait receives little rainfall (100-150 mm a year), and there are droughts every 3-5 years. The average annual temperature reaches +27°C. The year is divided into two seasons: the winter season and the summer season (Cavendish, 2007).

Summer is extremely dry and intensely hot, with occasional rainfalls. Daytime temperatures in summer are very high; they can even rise to 50°C even in the shade. An average July temperature is 32°C. The humidity is also very low, except for the coast. Winter, on the contrary, is rather short, wet, and cool. An average January temperature is 13°C. Winter months are slightly cool, especially in the evenings. However, daytime temperatures hover around 18°C. Winter rainfalls are irregular and vary in quantity from year to year. Autumn and spring seasons are peculiar by their short periods; for example, in spring, rain is possible. During spring, the desert and the city are planted with petunias, gossamer of lime green laces. It is the most favorable time for tourism (Isiorho & Gritzner, 2002).

Kuwait also suffers from natural hazards, typical for the climatic zone in which it is located. It includes sudden cloudbursts from October to April. Often these cloudbursts are likely to bring great amount of rain that can lead to serious damage. In the period between March and August, sandstorms and dust storms are also common, but they can occur throughout the year as well (Isiorho & Gritzner, 2002).
Figure 5. Dust storm hit a drilling site in Kuwait in 2011 (King, 2011).

Figure 6. Dust storm approaching Kuwait City in 2011 (Paksima, 2011).
2.2 Human Landscape

2.2.1 Kuwait History

The first people settled around RasSubiyah on the northern shores of Kuwait Bay in 4500 B.C. The people of Dilmun inhabited the Failaka Island and built a large city there. The remains of the city represent a good evidence of life in the Bronze Age (Lutsky, 1969).

In the third century B.C., the Greeks led by Alexander the Great discovered Failaka Island. A Hellenistic settlement on the Failaka Island, named Ikaros at that time for its buried Ikaros stone, prospered between the third and first centuries B.C. Some of Kuwait’s islands, the north-east and the eastern part of the country grew and became an important spot for traders gathering. In addition, in 127 B.C. Charax was funded by Alexander the Great and was the capital of an ancient kingdom of Characene, which was originally called Alexandria of the Persian Gulf. Furthermore, the port called “The Fort of Hyspaosines” was a major trade point and route from Mesopotamia to India and further north to Tigris, also facilitated the movement further to Suasa (Frye, 1984).

Over the course of time, the majority of people moved from the islands to the continent. The families living permanently in the area around RasKhazimah lived in contrast to the nomadic families, managed to become successful traders. Kuwait City was officially founded in 1613 and flourished as a commercial city on the shores of the Persian Gulf. Al-Otob tribe fled to State of Kuwait away from the terrible drought which perished the Arab Peninsula. Sabah bin Jaber was chosen to be the governor in 1756 (Isiorho & Gritzner, 2002).
As time passed, the location of this small town of Kuwait was beneficial, overlooking the head of the Arabian Gulf and thrived through fishing, pearling, and trade. Hence, Kuwait was considered the most prosperous among other countries in the region. Since 1756, the Al-Sabah family has ruled Kuwait. The family of Al-Sabah, whose descendants now reign in Kuwait, took responsibility to rule the settlement and made it prosperous through development. From 1760 walls were built surrounding Kuwait City to protect the city from outsiders. Now, after the walls were removed the doors of these walls were kept as tribute (Isiorho & Gritzner, 2002).
In 1899, Sheikh Mubarak al-Sabah (1896–1915), a very important figure in the Kuwait history, signed a mutually beneficial agreement with Great Britain. According to it, Kuwait enlisted British support and naval protection in exchange for the promise not to make important decisions in international relations without British approval. In 1914, Kuwait became "an independent principality under the protection of Great Britain" (Lutsky, 1969).

The Sykes Picot agreement put Kuwait under British control, and Kuwait was under British protection since 1899. Even after Kuwait independence in 1914, it suffered from boundary issues with neighboring countries. Kuwait called for British protection because of a series of attacks from neighboring countries (Culcasi, 2008).
In the 1920s, the army of Bedouin warriors of Abdul Aziz Ibn Saud, the modern Saudi Arabia founder, attacked Kuwait. At the Red Fort, the remains of which are still at Al-Jahra, a famous battle took place, in which the Kuwaitis held a heroic defense. Abdul Aziz recognized the independence of Kuwait in 1923 (Walker, 2010).

In 1936, the first oil wells were found. This discovery was a kind of salvation for the Kuwait economy which suffered from the decline of the pearling industry, as the Japanese learned to produce artificial pearls. During World War II, the Kuwait Oil Company had to pause its activity. However, when the war finished, economic growth increased. In 1950, Sheikh Abdullah
al-Salem al-Sabah became the first so called ‘oil sheikh’. During his reign, the country gained its prosperity; education and healthcare improved and the living standards reached higher levels. In Kuwait, there had been only 40 doctors in 1949; in 1967, there were 400 (Schulte-Peevers & Shearer, 2010).

Figure 10. Sheikh Abdullah Al-Salem with the British councilors signing the declaration of independence 1961 (Diwan Amiri, 2013).

On June, 19, 1961, His Highness the Amir, Sheikh Abdullah Al-Salem signed Kuwait’s declaration of independence. The new era of independence imposed taking many new phases of constitutional, legal and diplomatic procedures, the most important of which was the issuance of a royal decree that called for general elections for a constituent assembly that was authorized to draft the state constitution. The 9 months of the assembly date, resulted in the accomplishment of the constitution’s draft which consisted of 183 articles and was presented to HH Sheikh Abdullah Al Salem who ratified it and issued it on November, 11, 1962 (Clifford, 2010).
2.2.2 Early Kuwait City

When the early Kuwaitis first resided on the coast, their city extended few kilometers from the shore. Because of the harsh environment, they only had the gulf as a source of living and communication with the region around them to build a trading system. As a practical way of life, they were attached to the sea. Further within the structure of the city, there was no plan for corridors and streets distribution. Most streets were narrow and zigzagged with few straight streets at the beginning of the settlement in Kuwait, which made movement harder for merchandise and goods in 2-5 meter wide streets. In most cases inner corridors, which connected houses together, were closed at the end. There was no specific plan for organizing the city in the early 1900s. One distinct feature for Kuwait City planning at the early and mid-nineteenth century was establishing the walls around Kuwait as a form of fortification. The walls also provided the city with more organization for trading beside the main purpose, which is protection (Al-Jassar, 2009).

Figure 11. Early Kuwait City's corridors (Kuwait-History, 2012).
The city was built on a system which reflects no class distributions. High class families used to live next to middle class families; there was no difference between the rich and poor in location and design. However, rich families’ houses were easy to recognize because they were vast. House designs were made to make people adapt with the hot weather. It consisted of a large courtyard with many rooms surrounding it; it also has a purpose of privacy, where it separates the rooms from the streets and most windows were opened on the yard (Figure 12). This architectural design allowed the courtyard to ventilate the house, keeping cool at night and after sunset (Al-Marzooq, 2013).

In the summer, most Kuwaitis preferred to sleep in the yard or on the roof. A room on the roof was used to store mattresses for napping, and a bathroom is attached to the room. Building materials were rock and mud, and some walls were decorated with white gypsum. The ceiling of the house was usually built from many layers of trunks, bamboo and straw mats, covered with 30-40 centimeter mud layers. In winter, especially when the rain was heavy, they maintained the ceiling and the walls by adding more mud. The poor houses included only necessary living conditions, while rich houses decorated their houses with gypsum for protection and beautifying purposes, and the floor was covered by tiles, and marble, which is imported from neighboring countries. Wooden gutters for sewage disposal were used to let the water flow from the roof to the outside (Al-Jassar, 2009).
For water supplies, in each house there was an underground water well. These rich houses were divided into a number of courtyards, and each one had a different purpose. There were male guest’s courtyards and women’s courtyards, associated with servant’s rooms and bathrooms. A third courtyard could be used as a kitchen or for food storage. Also some courtyards were made for animals and livestock. House designs allowed people to live in this sharp environment; also a natural air-conditioning systems (wind towers) were important in every Kuwaiti house. After the discovery of oil, a series of master plans appeared to enhance the city structure and services and expand the urban area; and also house designs changed and courtyards gradually disappeared. Later, these traditional houses were completely removed and replaced with modern houses (Al-Mutawa, 1994).

Figure 12. Old traditional Kuwaiti house (Kuwait Archeticture, 2011).
2.2.3 Electricity and Water

The sector of electricity and water is getting more attention from the government of Kuwait than the other sectors, and it is reflected in constructing and improving the desalination stations and power stations as well. At the same time the government of Kuwait is keen to raise the public awareness on consuming water and power.

Table 2. Water production and consumption (Million Gallon)/ Electricity production and consumption (Million Kilowatt/ Hour).

<table>
<thead>
<tr>
<th>Production &amp; Consumption</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- production</td>
<td>119,878</td>
<td>123,046</td>
<td>125,279</td>
<td>128,236</td>
</tr>
<tr>
<td>2- Consumption</td>
<td>120,005</td>
<td>122,904</td>
<td>125,304</td>
<td>128,026</td>
</tr>
<tr>
<td>Slightly Saline Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- Production</td>
<td>29,284</td>
<td>28,334</td>
<td>22,628</td>
<td>21,622</td>
</tr>
<tr>
<td>2- Consumption</td>
<td>18,985</td>
<td>21,447</td>
<td>18,456</td>
<td>19,265</td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- Production</td>
<td>51,749</td>
<td>53,218</td>
<td>57,082</td>
<td>57,457</td>
</tr>
<tr>
<td>2- consumption</td>
<td>45,233</td>
<td>46,603</td>
<td>50,186</td>
<td>50,374</td>
</tr>
</tbody>
</table>

*Kuwait Annual Statistical Abstract 2013*
2.2.4 Administrative division

1) *The Capital Province (Kuwait)*: which is the capital of Kuwait, and the governorate that includes the House of the Government. All islands in Kuwait and the territorial sea are pertain to the capital.

2) *Al- Jahraa*: The largest governorate among the six governorates in Kuwait. It is an agricultural area of fertile soil and underground water.

3) *Hawalli*: this governorate is famous for its variety of Arab communities, and densely populated by various segments of the society.

4) *Al-Farwaniya*: One of the smallest provinces in Kuwait. It is famous for its landmarks and especially the airport of Kuwait.

5) *Mubarak Al-Kabeer*: The latest founded governorate and took its name from the seventh governor of Kuwait, Sheikh Mubarak Al-Sabah, and Known as Mubarak Al-Kabeer.

6) *Al- Ahmadi*: Named after the Prince Ahmad Al-Jaber, and distinguished by its oil fields.

2.2.5 Economics

Trade was the only source of income in the eighteenth and nineteenth centuries. The line was opened to India. This maritime advantage made Kuwait the heart of commerce from the gulf to Asia, Africa and Europe. Despite its small size, it has a fine natural harbor. In the nineteenth and early twentieth century the main economic activity was pearl diving, Kuwait had more than 700 boats and more than 15,000 men for the six-months diving journeys. The Kuwaiti pearl was the finest until the 1920s when the Japanese invented the artificial pearl. At that time, when the economic activities of the pearling industry subsided in Kuwait, and agriculture faced minimal development, the country flourished with the oil industry (Vatanka, 2011)
Today, the economy of Kuwait is developing at a rapid pace, allowing the state to play an important role on the world stage. However, it was not the case earlier. The economic growth of Kuwait is associated with oil extraction, the large deposits of which were discovered only in the 1930’s. This opening of huge oil reserves determined the path of the economic development of the state and influenced its role in the world considerably (Hassan & AlGharaballi, 2011).

The leading position in the Kuwait industry belongs to oil refining and petrochemicals. Power engineering is entirely based on the use of fossil fuels. Annually, the country produces about 31.6 billion kW/h, which exceeds its domestic consumption significantly. Construction, consumer goods, fertilizer production, and food industry are also highly developed. Big industrial plants operate for the desalination of seawater. With an increase in the quality of education, such high-tech industries as electronics and electrical engineering improved and developed. The country's banking sector is also active; the service sector is (Vatanka, 2011).

Figure 13. Firemen at an Oil Field after the war with Iraq 1991 (McCurry, 2014).
The economy of Kuwait suffered greatly during the Persian Gulf War (Figure 13 and 14). During the period of the Iraqi invasion, a great deal of oil extraction and refining enterprises were destroyed. It exhausted the financial, natural and human abilities to restore the oil industry. Moreover, the country committed itself to compensate the military spending of the international coalition. All of these factors contributed to the growth of the external debt and the budget deficits. However, by 1992, the Kuwait Oil Industry Complex had been completely rebuilt and oil extraction had reached the prewar level (Askari, 2013).

![Satellite Image for the oil fields which were burned during the war with Iraq (NASA, 2012).](image)

In 2000, due to rising oil prices and the favorable situation in the oil market, the GDP amounted to 29.3 billion dollars, or 15 thousand dollars per capita. The dynamics of the GDP is represented in the graph (Hassan & AlGharaballi, 2011).
In general, the overall economic development strategy of Kuwait differs from the economic policies of other Arabian monarchies. Similar to those countries, it is directed towards the rapid industrialization and diversification of the economic structure in order to prepare an economic mechanism that can function normally after the "oil era." In order to bring this strategy to life, the most technologically armed economy was created. The oil policy was renewed for the sake of increasing state control over the oil production and export (Askari, 2013).

Figure 15. Kuwait real, nominal, real growth and nominal growth GDP (Central Statistical Office and International Monterey fund, 2012).

**2.2.6 Population**

Kuwait census for 2011 is considered part of the chain of census for population, facilities, building and houses that began in 1957. 2011 census is the second census for the twenty-first century since it occurred in April 2011. The results of this census was that the population of Kuwait reached 3,065,850, with 1,089,969 Kuwaitis and 1,975,881 non-Kuwaitis.
Table 3. The Structure of the population in Kuwait every major census (SAS, 2013).

<table>
<thead>
<tr>
<th>Year</th>
<th>Kuwaiti</th>
<th>Non-Kuwaiti</th>
<th>Total</th>
<th>% Kuwaitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>168,793</td>
<td>298,546</td>
<td>467,339</td>
<td>36.1</td>
</tr>
<tr>
<td>1975</td>
<td>307,775</td>
<td>687,082</td>
<td>994,837</td>
<td>30.9</td>
</tr>
<tr>
<td>1985</td>
<td>470,473</td>
<td>1,226,828</td>
<td>1,697,301</td>
<td>27.7</td>
</tr>
<tr>
<td>1995</td>
<td>653,616</td>
<td>821,954</td>
<td>1,575,570</td>
<td>41.5</td>
</tr>
<tr>
<td>2005</td>
<td>860,324</td>
<td>1,333,327</td>
<td>2,193,651</td>
<td>39.2</td>
</tr>
<tr>
<td>2011</td>
<td>1,089,969</td>
<td>1,975,881</td>
<td>3,065,850</td>
<td>35.6</td>
</tr>
</tbody>
</table>

Figure 16 indicates the population density in each province. Hawalli is the most dense province with 6,000 people per square kilometers (p/Km\(^2\)) and Al-Jahraa is the lowest with 20 p/Km\(^2\), while Mubarak Al-Kabeer and The Capital are equal in density.

Because of the high migration rate, the country has an irregular population pyramid (Figure 17). The population pyramid of the Kuwaitis in both 2005 and 2011 has regular shape which reflected a rapid birth rate and gradually decrease in size to reach the peak, however the non-Kuwaiti Pyramid for 2005 indicated high rates of middle age population, especially males, and in 2011, showed high rates in both males and females in specific age categories (from 25-30).

![Population Pyramid](image)

Figure 17. Population pyramid of Kuwait, to the right Kuwaiti population pyramid, to the left non-Kuwaiti population pyramid in Kuwait (ASA, 2013).
2.2.7 Current and Future Plans for Kuwait City and the surrounding areas

Now, neighborhoods in Kuwait have become more glorified with large houses of 2-3 stories and big parking lots. Every neighborhood has a mosque and a shopping center with a main grocery store of 2 stories associated with small shops like florists, butchers, and electronic repair shops, also co-op malls where many other shops could be found. Each city in Kuwait must have a satisfactory numbers of schools in all levels, the government provides schools from kindergarten to high schools, and some areas have more than one school for each level. Entertainment is also important to be provided; playgrounds and public parks are a significant part of each structural plan of the country (Third Revision of Kuwait Master Plan, 2005).

Madinat Al-Hareer/ the City of Silk, the massive future establishment of 250 square kilometers, was approved in 2009 to be completed in 2030. The project will cost an estimated 94 billion USD. The main purpose of the project is to accommodate the population density and provide a variety of services in order to reduce the population congestion in Kuwait City. The project includes a duty free area which will be close to the new airport; also attached will be a large business and conference center, environmental, athletic areas, and areas based on media, health, education, and industry as a main function. The City of Silk will also include tourist’s attractions, of congestion in Kuwait City. (Goldschein, 2011).

Kuwait municipality council adapted new methods to develop the city structure. The council handled the responsibility of new city projects, which included oversight of all professions; industry, work, workers, health, trade, roads, lightning, landscapes and what is related to it in the land’s organizations. Also, the project includes advanced ports and connection points from the City of Silk which extends from north Kuwait City further along the northern coast. In addition the plan is designed to connect the City of Silk and Kuwait City and Bubiyan
with a bridge (Fig 18). At the very first beginning of proposing city projects there was no professional technical devices to conduct technical studies and follow up implementations. City planning and determining land use, buildings, paving and planting methods come in the form of suggestions from the council members or other administrations (Walton, 2011).

Figure 18. Digital view for the City of Silk (Walton, 2011).
Chapter three: Literature Review

The increase in the number of foreign laborers in many regions has a noticeable impact on Kuwait City’s structure and the pattern of landuses distribution of land uses. Focusing on Kuwait’s expatriate laborers, the numbers have been increasing since the discovery of oil; thus, the problem of increasing numbers of laborers is directly connected to the city’s urban planning. The increase in the number of foreign laborers increased the demand for housing services. In this section, the literature on housing for foreign laborers in the United Arab Emirates (UAE), Kuwait, the United Kingdom (UK), and the United States (US) was examined.

The thrust of this study was to examine the laborers’ distribution over ten years of their concentration in some provinces rather than others and the reasons for these concentrations. The study also evaluated the efficiency of these services. Within the new housing project in Al-Shedadiya and Sabhan, since the project was not accompanied by social and cultural considerations, laborers were not housed in certain sections of the city of laborers based on specializations and work sectors. They were segregated by nationality and ethnicity which was important for security and helped to prevent many consequences. This study focused on examining the connection between the numbers of laborers in each province and the houses provided for them. It also examined the distribution of laborers in different parts of the city.
3.1 The United Kingdom

It was possible to connect the distribution of the expatriate labor force in Kuwait by considering the living conditions of the workers during the Industrial Revolution in Europe. The situation in Kuwait is similar to the condition of the laborer houses during this period in the United Kingdom. With the increase in the numbers of laborers due to the shift from agricultural activities to intensive industrial activities, there was an increase in the number of towns in the United Kingdom that were especially established to house the labor force. Some of these houses were created by the laborers, which also led to the problem of slums. This was a consequence of the growth of industrial activities in Europe, which made housing the laborer population quite a challenge. The improvements in housing conditions made ordinary people in the region experience higher living standards, which in turn resulted in higher income communities as well as other poor and deteriorating communities in UK (Spielvogel, 2012).

During the Industrial Revolution in London, Birmingham and Manchester, the living conditions of workers were based on class segregation and brutal indifference in society. The isolation of the low-wage working class crowded groups of individuals crowded together in the same space, while the capitalist and the interest groups seized the high-quality land. Many of the English work-men suffered from low-wages or not getting paid, while others died from starvation. This was called “social murder” by many in the English society. Homes for working-class were provided by factories or business owners; however, dwellings of the working-class during the Industrial period were badly planned and built, also maintained in the worst conditions almost everywhere in Europe. These inhabitants were confined to a very small space such as a family of five sleeping in one room (Engles, 1891).
Manchester stretched in the west from Salford to Pendleton stretching to the north to Irk Cheetham Hill following the west bank of the Irwell and two other smaller streams to the right bank with sharp curves to Chorlton to the east of Manchester (Figure 20). The city was designed and built to accommodate four hundred thousand inhabitants, and was built particularly to eliminate contact with the working-class. The city lies between a large commercial district and labor district which was under a systematic shut-out of the working class from the decent part of the city where the middle class and the upper-middle class live. In this labor district, the houses were old, dirty and deteriorating, in rows of almost uniform housing construction with minimal infrastructure quality. These houses were built in a method that saved space, the houses surrounding the labor court of Manchester were usually built back-to-back with rare wall in common; however, this was an insufficient inadequate method of building because it prevents ventilation. Later on, another type of housing was introduced and spread widely in the city. Workmen cottage were built in pairs back to back rows. In comparison this construction method
provides better ventilation. In Manchester in 1844, 350,000 laborers lived in damp, wretched, and filthy cottages in miserable conditions (Engles, 1891).

In these industrial cities, the population increased by migrant from rural to suburban locations, caused by the increased demand for low wage labor during the industrial era in the industrial areas. The less educated population of the working class fled to these cities. That migration as well, as the high birth rate, increased the population. This led to overcrowding in most cities in the UK with an emphasis on child labor and overcrowding and unhealthy cities (Timmins & King, 2001).

Similarly, Kuwait industrial and commercial areas are attractive point for laborers who already live in the state of Kuwait or even outside the country. The increase in demand for low wage laborers from Southeast Asia and other regions has also led to many consequences.
The increase in the population in the region led to a need for building regulations, which had a great effect on the living conditions in the UK. Many of the poor people in the UK during the Industrial Revolution were living in overcrowded and dirty conditions. The laborers were living in unpleasant houses within walking distance to the factories where they worked. The windows of the houses faced the factories, which prevented the flow of fresh air in these houses, creating massive health problems. The toilets used by the residents in the area were outside the back-to-back houses and were shared. And in multi-story buildings where laborers’ families were housed, all facilities like toilets and laundry rooms were shared (Spielvogel, 2012)

Skilled workers lived in houses of better quality which was also the case in Kuwait’s laborers housing on account on professions. However, the fact that the towns were becoming overcrowded made their living conditions horrendous. Despite constructing unsanitary and shoddy houses, the workers had to face another problem, which was high rent. However, some employers and manufacturers came up with good housing strategies for their employees so that they could have suitable housing services. During the early 19th century, Councils of many areas banned cellar houses by passing some of the Council’s by-laws. Consequently, these Councils forbade the back-to-back houses, prompting demolition of these structures across the region. These houses were replaced with better quality buildings. In addition, many social communities focused on providing a proper housing supply in the region, which was considered a step for the people of the United Kingdom to live in a better environment compared to the dwelling units in the 19th century. Consequently, improving housing supplies would also mean cheaper and more affordable houses to members of the community (Reed, 1997). David Mullins and Alan Murie (2006) argue that there was a need to change the planning systems, which were to be in line with the changing housing demands of the British communities.
The similarity in foreign migration matters and patterns between UK and Kuwait is back to the early eras of colonization by Great Britain and early settlements in Kuwait by tribes. The United Kingdom has a very effective historic factor for its migration movement, which was related to colonial relationship and Kuwait was a trade point for merchants and travelers along the region. Foreign workers in Europe were contracted by both governments. This led to the overlapping of many other minority groups in the working sectors. For example, western Indian workers spread in Britain and were recognized as a working class minority and were called “guest workers.” Generally, large-scale immigrations from less developed and economically depressed countries created some forms of social segregation. Housing segregation based on income and social class was noticeable but in the foreign migrants case, this segregation was specifically ethnic, which was likely to be affected by governmental housing policies. In some cases, workers housing was provided by the employer, but these houses were in deplorable condition. However; until the 1990s these houses were not seen as a major concern because they were considered temporary houses. In a similar case to Kuwait, migrant workers in Britain had a very limited ability to reclaim a social housing unit. It was proven that these ethnic groups had more difficulties for finding a good quality house, and thus received less attractive housing deals and least popular real estate. Regardless of the situation of these poorly skilled migrants, as economic migrants they surely affected the job and housing markets by strengthening their ethnic and regional ties (Huttman, Blauw, & Saltman, 1991).

In contrast to the UAE, the UK’s housing services for laborers was created by a great movement after the Industrial Revolution. The British government realized the destructive impact of the housing services which were provided at that time. These houses served many purposes such as providing workers’ families with homes connected to the workplace. These
houses were segregated based on socioeconomic factors under several conditions (Schoenauer, 2003). This fact was also supported in housing segregation based on social class and expertise. According to this segregation much literature describes such societies as stratified (Fox, Mourtada-Sabbah, & Al-Mutawa, 2006).

The United Kingdom’s housing services were pushed by major economic and political factors related to the labor market. In 1980, the number of houses provided for the farming sector was cut to 25 houses per year because of the damaged strength of the labor party in the UK (Mullins & Murie, 2006). The implementations of the new planning systems would ensure the availability of more affordable housing supplies. To achieve this objective, the government was relying on the private sector. Many policies were modified to meet the social and demographic changes. The policy changes included building good quality houses for rental purposes, ensuring that the houses were affordable and offering help to people who would want to buy a house, such as offering housing loans. The most important aspect of the policy changes was to support decent shelter for the laborers (Sinn, 2011).

The situation in Kuwait is very similar to the situation in the UK in attracting foreign laborers. The industrial revolution was the reason for the increase in the number of expatriate laborers; similarly, the discovery of oil was the beginning of the migration of laborers into Kuwait. However, in Kuwait, there were no communities to push for a movement to provide decent housing services. However, the Kuwaiti government as a whole had a structural plan and an implementation plan. In addition, each employment sector had the responsibility to provide housing for its employees. For example: foreign college professors’ houses are provided by the university itself in locations that are very close to the educational institutions where they teach. Also, the municipality of Kuwait provides houses for its employees.
Similar to the UK’s slum problems during the Industrial Revolution, the early Kuwait City also faced the emergence of slums. When oil was discovered, there was an increased flow of immigration from neighboring countries, but there was no regulation of construction, and no plans were set for organizing housing in the city, leading to the emergence of slums. According to Barada (2007), slums are associated with laborers and foreign migration. For example in Alexandria, Egypt in 2005, there were 54 areas of slums of 1,360,000 people who made up 35% of the total population of Alexandria. The problem of slums in Alexandria followed the migration of farmers from rural areas to the city, which made them build their own agricultural land surrounded by their houses. However, this led to the devastation of the general city structure and exhausted the soil (Barada, 2007).

3.2 Kuwait

Historically, there is a strong bound between the United Kingdom and Kuwait. Since 1899, Kuwait was under the British protection and control, and later in 1914, The Sykes-Picot Agreement declared Kuwait as protectorate until it independence (Culcasi, 2008). With the discovery of oil in the mid-twentieth century, The British existence in Kuwait became stronger, where they built their own city in Kuwait and until this day it is called the City of British (Al-Ahmadi). As the British started helping in the process of locating oil fields and drilling, they also, had a great role in setting the Mater Plans in Kuwait. With the discovery of oil, Old Kuwait started changing to another phase of development (Al-Salem, 1941).

In 2011, Kuwait was boasting that out of its population of about 3,065,850, non-Kuwaitis made up 1,975,881 (ASA, 2013). Most surveys conducted in the country stated that Kuwait was registering immigration rates. In a country such as Kuwait, most expatriates engaged in labor services to enhance their living standards back home, as they sent their income to their home
countries (Chalk, 1997). Some of the sectors in which most foreigners worked include the commerce and banking sectors, construction areas, cleaning services, and manual workforce.

High rates of immigration into Kuwait had a significant effect on the population growth and distribution in the country. Immigration increased as a result of the availability of employment opportunities and high salaries. This increased the population size, and led to overcrowding in cities like Hawalli and Murgab. Also, it decreased employment opportunities for the Kuwaitis, creating an imbalance in the total employment, and overlapping in land uses (Al-Moosa & McLachlan, 1985). For example; when a mechanics shop is opened for business, the entire family works in the same shop and they choose to have their shop on the first floor of a building and the second floor is an apartment for the family which also creates an imbalance in land use distribution and lack of specialization in economic activities. This is one significant aspect related to the city structure, when the laborers choose to establish their workshops in areas that are already overcrowded, which heightens the disorganization of the city functions, where it is very common to see a mechanics shop next to a small grocery store in a multi-story building. If any small accident may happen in this mechanics shop with flammable materials, the consequences might be disastrous (Figure 21). Although the government has restricted the changes in land use for health, safety, and for the general function of each city, the changes in activities and functions have continued to increase. There needs to be serious plans to regulate the land use in every city to reduce the consequences in the future. In addition to fixing the recent condition of the city, future plans are even more important because the distribution of laborers, their houses, and activities have a great impact on the country’s foundation (Ghuloom, 2013).
Figure 21. Personal commercial units (Grocery and Mechanical shop) attached to residential buildings (Personal photography).

According to Al-Moosa and McLachlan (1985), the technical labor force was highly concentrated in Salmiya and Ahmadi City, while services manpower who works in fields or for infrastructural services jobs was concentrated in Ahmadi City and Khaitan. Based on a geographical distribution analysis, there is an imbalance within the structure of the population and their occupation areas. The concentration of the population is associated with service quality and other factors like productivity and the economy. In the 1980s, Kuwait City provided 80% of the jobs in the country.

In the same period, the Kuwaiti population in Kuwait City was only 12.4% of the total population and the immigrants made up 60.7%. This was also applied to some governorates such as Hawalli. Hawalli is well known for its active multi-functional activities. Most of the Kuwaitis lived there and they comprised 36.4% of its total population and only 9.1% of the labor force;
however; the non-Kuwaitis who lived there comprised 68.7% of the total population and 26.9% of the labor force. The same was true in the Capital Governorate, where the Kuwaiti population was 12.7% of the total population and the Kuwaiti labor force was 34.4%. The Capital had a great portion of the immigrants. They composed 13.9% of the total population, and the foreign labor force exceeded the Kuwaiti labor force of 51.1%. The Ahmadi Governorate and Al-Jahra Governorate had a very low portion of non-Kuwaiti residents and low work force numbers. For example, Ahmadi had 24.1% of all Kuwaitis and 12.2% of all immigrants. This made the Kuwaiti laborers 50.9% of the total labor force and the foreign laborers just 16.2% (Al-Moosa & McLachlan, 1985).

Under governmental supervision, and investments from construction companies, the houses provided for foreign laborers’ families are provided by the investment housing services for the benefit of the residents at reasonable prices and they are apartments in multi-story complexes. The other type of houses is also defined as investment housing, but it is limited to single laborers. In the past single laborers’ housing in old Kuwait City were the old traditional houses which were deteriorating. These houses were included in the reconstruction plan of Kuwait City and were removed from the City and replaced with modern complexes that can hold greater numbers of residents of single laborers (Ghuloom, 2013).

Dr. Ghuloom argued against critics who accused the government for neglecting the quality of housing for the laborers. He believed that the government has done its job well with respect to the laborers, but that the problem can be found in the background of the laborers. He clarified this point from a psychological perspective, where the low-income laborers try to save money in any way that allows them to send their entire salary to their families back home. For this reason, a laborer who lived in a small apartment with two bedrooms gets more than six
roommates to reduce the amount he pays every month for rent and the same reasoning can be applied to the roommates, where they seek cheap monthly rents, even if they had a decent income and could afford better and larger housing. This phenomenon led to overcrowding in one apartment and in the city, as well as leaving the general services under pressure in one place (Figure 22) (Ghuloom, 2013). According to Al-Salem (1941), with regard to general services in the state of Kuwait, 45% of a surveyed sample of young populations and elders in Kuwait believe the government is providing very good housing to both Kuwaitis and Non-Kuwaitis and 30% believe the government is providing average housing services. However, 25% of this sample believes that the government could do a better job in the quality and quantity of provided houses (Al-Salem, 1941).

One of the important housing concerns was to separate the Kuwaitis and non-Kuwaitis in terms of locations and types of housing to avoid the pressure on the services sector (Figure 134). In addition, the government was concerned about the continuous rise in rent costs, and aimed to create a balance in the housing market. The geographical separation had to do with where the Kuwaitis lived originally, which was in old Kuwait City. Related to many social and traditional factors, the two communities – Kuwaitis and non-Kuwaitis – were not integrated in the same living area. The foreign population settled in the area surrounding Kuwait City like Murgab, and spread further away from Kuwait City to places like Salmiya. The immigrant housing differed from the houses for Kuwaitis in the types of houses built. Living outside of Kuwait City, the immigrant populations established their own businesses, starting with small shops, until they expanded to turn Salmiya and Hawalli into commercial centers (Al-Moosa & McLachlan, 1985).
Figure 22. The Consumption of power from 2005 through 2030 as suggested in the Master Plan, will reach its maximum capacity (3KMPR, 2005).
This separation was determined by the Municipality of Kuwait, and it has set some regulations and housing projects to make the separation possible. In 1992, single male laborers were prohibited from obtaining accommodation in many urban residential areas where families live. Later in 2005 many construction plans were accomplished to house the single laborers on the outskirt of the Capital. These projects provided housing for them and also relocated their housing sections in some cities. Some laborers lived in “Housing Camps” provided with facilities and transportation. These housing camps were provided by some companies to house laborers; however, these houses were overcrowded and in squalid condition (Bergner, 2008). The segregation was studied as a main issue in housing single laborers. Fox, Mourtada-Sabbah, and Al-Mutawa (2006) have synthesized the characteristics of this segregation on economic patterns.
They described the temporary single laborers’ housing as migrants’ residential camps and ad hoc shanty housing compounds. The rooms in these camps were overcrowded and each room typically housed 4-8 men. Also, old houses of five bedrooms were shelter for 40-50 people with low hygienic standards. In contrast to workers camps and old houses, high-rise residential buildings, which are rented by middle class laborers, represent different housing patterns than the camps. They are in good quality and represent Western lifestyle, usually consisting of two or three bedrooms and private bathrooms for each room. Most of these residential buildings have swimming pools, party halls, parking lots, security desks, small shopping centers, laundry services and gymnasiums.

The condition of the houses of the foreign workers is associated with many factors like educational background, job, and income. For example, a European engineer with a high monthly income could afford a better place to live than Bengalis with less professional experience. Housing for immigrant laborers is part of the governmental plan, under the term of “free housing.” There were two types of free houses; first, free houses provided by employer’s contracts based on professions such as free houses for university professors, consultants, and the staff of private companies. The second type was provided for teachers and doctors. In this category, a small portion of their income was deducted as payment for housing (Al-Moosa & McLachlan, 1985). These residential zones are uniformly repetitive, for middle and high class working families, and also single laborers. In contrast with some European countries these residential zones were built to house lower middle-class families in the 1970s. In Kuwait they were established for professional workers like accountants and skilled technical employees like schoolteachers. In most cases, ethnicity and social class play a great role in housing services and housing segregations (Fox, Mourtada-Sabbah, & Al-Mutawa, 2006).
As Kuwait’s population shifted to a mix of natives and immigrants, the labor force in Kuwait became a significant national and international matter. The Ministry of Social Affairs and Labor addressed many problems related to the labor power, such as working hours, and payments. A strong movement toward developing laws in the labor sectors that began in the 1990s was produced by the Kuwaiti assembly. These laws were set for public and private sectors. In 1993 through 1994, the government tried to limit the number of expatriates in the public sector and to place Kuwaitis in the private sector. However, the number of expatriate laborers continued to grow. In 1990, 752,300 foreign laborers were reported working in the private sector. The number kept increasing even after the war with Iraq. In 1994, Egyptians represented the largest portion (26%) of the private sector of expatriates, and Indians made up 18%, while the total number of non-Arabs constituted up to 58% of the private sector (Bureau of International Labor Affair, 1994). These numbers mean that the urban area of Kuwait extended further out, and created more pressure on general services. This made the country more established and better able to absorb the demand on housing. By 1988, housing services had the highest percentage (50-60%) of the country’s general spending (Al-Fil, 1988).

This study focuses on the distribution on the foreign labor force in every province from 2003 through 2012. The analysis of the official data included the total population over ten years and the number of families and single laborers in 2003, 2005, and 2011. Also the distribution and the number of housing units was analyzed for both family housing and collective housing. Kuwaitis were included in this data analysis to illustrate and support the distribution of laborers in these provinces and housing services.

Annual abstracts for the years 2003 through 2012 were analyzed. The main elements of this analysis are the population’s structure of Kuwaitis and non-Kuwaitis in the aforementioned
years. The number of Kuwaitis and non-Kuwaitis was completely available and released from the Department of Statistics in the Ministry of Planning. The second part of this data analysis was based on the distribution of the Kuwaiti and non-Kuwaiti populations in every province in the state of Kuwait. Many challenges arose with the process of collecting data for the population in every province. Some data for years like 2007, 2008, 2009, 2010, and 2012 were missing; because of the routine process of collecting major census data every five years, the last detailed census was released in 2006, and the second detailed statistical abstract for 2012, which includes the missing years, should be released at the end of 2013. The research moves from general data collection about the population to more specific data, where the numbers of non-Kuwaiti collective population and families for every province was be included, allowing us to compare the available labor force of non-Kuwaitis and the available housing services. However, the only data available is for 2003, 2005, and 2011. The numbers of dwellings and households for 2005 were examined as well as some types of buildings.
3.2.1 Demographic Analysis

Figure 24. Kuwait and non-Kuwaiti population in Kuwait from 2003-2012 (ASA, 2013).

Because of the increase in migrations, the total population exceeded the estimated numbers in Kuwait’s Master Plan. For this reason, the Master Plan data was inaccurate and could not be used in this study. As noted, the foreign population has exceeded the Kuwaiti population in every year from 2003 through 2012. The Kuwaiti population has a stable increase rate of 39% over 10 years, compared to the non-Kuwaiti increase of 61%, which indicates an imbalance in the jobs market, services, and real estate market.
The total population in 2012 was 3,823,728 with 1,212,436 Kuwaitis and 2,611,292 non-Kuwaitis. This indicates the massive migration movements to Kuwait and the dominance of foreign workers on the labor force market. The overdependence on the foreign population in all work sectors made the foreign laborers dominate the labor market (Alessa, 1981).

Official annual population statistics were not released for 2007, 2008, 2009, 2010, and 2012 for the distribution of the population in every province; however, the given years show that provinces like Farwaniya and Hawalli have higher numbers of non-Kuwaiti population, which is triple the Kuwaiti population in all given years. First, Hawalli indicates an increase of the Kuwaiti population from 2003 to 2011 of 37,230 Kuwaiti citizens, while the foreign population increased by 101,693 in the same given year. Farwaniya has the highest numbers of non-Kuwaitis. The graph shows that the non-Kuwaitis kept increasing continually in great numbers.

Figure 25. Distribution of Kuwaitis and non-Kuwaitis from 2003-2012 in Kuwait's provinces (ASA, 2013).
There were 465,995 non-Kuwaitis in 2003; this number jumped to 602,346 in 2011. This increase indicates changes in the population structure (Figure 25).

On the other hand, in some provinces like Mubarak Al-Kabeer, the Kuwaiti population was 152,157 and the non-Kuwaiti population was 106,656 in 2011, which is a low number of non-Kuwaitis compared to other provinces.

The Capital province had 179,568 non-Kuwaitis and 146,945 Kuwaitis in 2011, decreasing from 197,955 in 2003; however, the number of non-Kuwaitis kept increasing from 223,744 in 2003 to 263,294 in 2006, and then the graph shows a decrease in 2011.

Al-Ahmadi had a higher number of residents, both Kuwaitis (229,322) and non-Kuwaitis (358,746) in 2011, than the Capital because of its long history of the dominance of foreign laborers. The increase represents 129,593 for non-Kuwaitis and 43,401 for Kuwaitis.

Al-Jahraa has the lowest numbers for Kuwaiti residents through the given years. As noted in the graph, the foreign population is higher in numbers than the Kuwaiti population. Al-Jahraa’s foreign population decreased to 248,433 in 2011, while the population kept increasing from 210,913 in 2003 to 264,383 in 2006.

Overall, the foreign population has exceeded the Kuwaiti population every year from 2003 to 2012. Disregarding the missing data for the mentioned years, the graph indicates a continuous increase for the non-Kuwaitis and a more stable increase for the Kuwaitis.
The figure above (26) shows manpower of Kuwaitis and non-Kuwaitis from 2003 to 2010. The data were not completed for 2011 and 2012 because they were not yet released from their official source. Manpower is the term used for human physical strength and in this case it is the workers who are available for particular physical tasks. It was also defined to be the portion of the population who are able to engage in producing goods and moderating services from the age of 15 to 65 (Alessa, 1981). It is significant to analyze the manpower of non-Kuwaitis in Kuwait, to provide a clear image about the connection between the foreign manpower and the total population of non-Kuwaitis. The manpower could represent official employees in the governmental and private sectors and also, laborers who have their own businesses. As can be seen in the graph, the manpower of non-Kuwaitis is higher in numbers than that of the Kuwaitis. The non-Kuwaiti manpower increased from 1,357,388 in 2003 to 2,119,947 in 2011, which resulted from the migration trend to the State of Kuwait (ASA, 2013). This requires the country to provide more jobs for these migrants for low wages, but also decreases the opportunities for Kuwaitis to seek employment.
Employment is an official paid full-time or part-time job either in the governmental or the private sector. As noted in the figure 27 representing employment of Kuwait for Kuwaitis and non-Kuwaitis, the Kuwaitis’ employment status is stable, with 262,733 in 2003 and 325,602 in 2011, and the highest employment rate of 347,621 in 2010. In contrast, the non-Kuwaiti employment status was the lowest in 2003 with 1,138,010 employments and the highest in 2010 with 1,779,624. This indicates a dominance of non-Kuwaiti laborers in the country’s official departments.

When comparing the non-Kuwaiti collective households, non-Kuwaiti private households and Kuwaiti private households, the numbers and types of households in 2003 varies from one province to another, depending on the type of activities in each province, which will be discussed in depth in the next chapter.

Figure 27. Distribution of employments among Kuwaitis and non-Kuwaitis (ASA, 2013).
Figure 28. Distribution of collective and private households among Kuwaitis and non-Kuwaitis in 2003 (ASA, 2013).

Before analyzing the graph (28), it is important to define “collective households,” which is the term used in all governmental documents to identify single laborers. Figure 28 shows Kuwaiti households are the highest in the Capital, with 41,105 households where the deep-rooted Kuwaiti families live; in contrast, the Non-Kuwaiti private households are only 25,465 households while the collective residents are the lowest in numbers, at 11,315 among the three types of households (ASA, 2013).

It is a different case in Al-Farwaniya and Hawalli, which are considered provinces with high commercial attractions. These two provinces have a high mix of Indians, Egyptians, and Bangladeshis who have built entire communities in cities within Al-Farwaniya and Hawalli. In Hawalli, the private non-Kuwaiti families were 80,375, which is four times the Kuwaiti households, but with less collectives which were 27,751 in 2003. The same case was true in Al-Farwaniya, which had 63,521 non-Kuwaiti private families, which was three times the collective residents of 26,308 in 2003 (ASA, 2013).
The only province that has a very distinct structure of households is Mubarak Al-Kabeer. It has the second-lowest number of Kuwaiti private households at 19,380, and it had the lowest number of collectives (1,606) and had 3,797 private non-Kuwaiti households, which makes it the only province in which Kuwaiti residential units dominate in Al-Ahmadi, the presence of the three categories is similar: the number of Kuwaitis is 36,866, the non-Kuwaitis is 30,774, and the non-Kuwaiti collectives is 14,942. The graph indicates high numbers of private non-Kuwaiti households compared to collective households. Even in Al-Jahraa, the number of private non-Kuwaitis (24,917) is greater than that of collectives (5,345); the reason could be justified by the strong cultural atmosphere of the areas within the province of Al-Jahraa, where outside social influence is not accepted. It should be noted that land and rental prices in Al-Jahraa are cheaper than in the surrounding areas.

Figure 29. Distribution of collective and private households among Kuwaitis and non-Kuwaitis in 2005 (ASA, 2013).
The figure above (29) indicates the number and types of houses available for Kuwaiti and non-Kuwaiti families, and also collective households in 2005. Collective housing is basically apartment complexes for single non-Kuwaiti laborers. Before the arrival of the single laborer to the state of Kuwait, a place where the laborer should live must be prepared in advance. The Capital has a larger portion of Kuwaiti families at 23490 and 9393 non-Kuwaiti families and a small portion of collectives at 2,097. The highest number of non-Kuwaiti families is in Hawalli (69,418), followed by Al-Farwaniya. Hawalli also had the highest numbers of Kuwaiti households (28,632) which is second after Al-Farwaniya (5,222 in collective households). Al-Farwaniya also has higher non-Kuwaiti private families but decreased from 63,521 in 2003 to reach 51,457 in 2005, and the highest collective households with 10,097 residents on account of the increase in economic activities (ASA, 2013).

Al-Ahmadi had a fair number of Kuwaiti families (22,076) in 2005, which decreased from 36,866 in 2003. This decrease was also noticed in the number of non-Kuwaiti households, which decreased from 30,774 in 2003 to 27,815 in 2005, while there were 4,284 collectives in 2005.

In Al-Jahraa, the population decreased in 2005 to reach 10,547 Kuwaiti families and 19,735 non-Kuwaiti families. Also, fewer collectives were recorded at 1,369 during the same year, leaving Mubarak Al-Kabeer with 268 collectives, which is the lowest number of collectives among the other provinces. Mubarak Al-Kabeer also had 2,321 non-Kuwaiti families. Furthermore, this province experienced a decrease in the number of both households, which leaves Hawalli and Al-Ahmadi and the Capital in the forefront for the most-increased population after the 2003 census (ASA, 2013).
From 2005 to 2011 (Figure 29, 30), the population went through a transitional phase and experienced a huge increase in the total population, which reached 3,098,892. That change included private Kuwaiti and non-Kuwaitis households as well. The non-Kuwaiti households doubled from 9,393 in 2005 to 18,892 in 2011. Due to the fact that Hawalli is prosperous in economic activities, the population has increased to reach 108,506 private families; likewise, the Kuwaiti households have also increased to 40,766, while the collective households decreased to 1,772. An outstanding, though unsurprising fact is that from 2003 through 2011, the foreign population increased in every province, where in some cases the population tripled. The foreign population in Al-Farwaniya grew from 51,457 in 2005 to 125,779 in 2011, which indicates more attractive factors for foreign laborers and residents. Rental prices, job opportunities, and private activities are plentiful in Al-Farwaniya and are generally owned by non-Kuwaitis (ASA, 2013).

In Mubarak Al-Kabeer, the non-Kuwaiti households have doubled to reach 4,172. While Al-Ahmadi keeps its stable population of Kuwaiti and non-Kuwaiti households, the number of
non-Kuwaiti households surpassed that of Kuwaitis between 2005 and 2011 to reach 52,444 non-Kuwaitis versus 34,081 Kuwaiti households in 2011, while there were only 27,815 Kuwaiti households in 2005.

Comparing these significant changes in these provinces, Al-Jahraa’s residents are less accepting of the dominance of the foreign population living in their province. The foreign population increased from 27,815 in 2005 to 28,304 in 2011, and the number of single laborers decreased from 1,369 in 2005 to 1,284 in 2011, which proves the strong existence of a conservative society in Al-Jahraa (ASA, 2013).

Comprehensive and detailed data were released for 2005, which included numbers of households in every province. As with the previous figures, for the same year the distribution for private families and collectives, the numbers of housing units and their condition can be observed in figure 36.

With regard to the numbers of collectives and private families, dwelling numbers and types also should be examined for 2005. Figure 31 shows the distribution of dwellings in every province based on the type of dwelling. Some dwellings are specifically provided for families, such as apartment buildings, which do not allow single laborers. Upon signing a residency contract, the family is required to provide a marriage certificate. However, that does not mean that there is no place for singles to live. There are also apartments; 23,762 apartments were established specifically for 23,337 single laborers. The total number for private family dwellings is the highest in Hawalli (99,587) and also had the highest number of vacant dwellings (13,262) in 2005, which are buildings not ready to be resided in and are in the process of contracting with residents or under maintenance (ASA, 2013).
Hawalli and Al-Farwaniya are in the same sequence of increasing population and housing units. Farwaniya had 70,548 housing units for private families in 2005 and 10,101 collective units and 7,176 vacant dwellings in 2005. There were 88,809 under construction, which is the second most after Hawalli 119,933. Since Al-Ahmadi has a high number of private families, private units (50,946) are also often provided by private companies or governmental departments for their employees and their families; single laborers also have the right to be housed in different types of units (4,393) and the province has the second-highest vacant units after Hawalli. The vacant units could be temporary houses provided by the farming land owners for their employees and field missions’ private company houses. The Capital had 31,492 private houses and 2,098 collectives in 2005. Compared Al-Jahraa to the Capital AL-Jahraa had 29,248 private family dwellings and fewer collective units (1,371), which is close to the dwellings in the Capital despite the difference in the province sizes. Mubarak Al-Kabeer is a province which mainly provides housing for Kuwaitis; in addition, there are 21,169 non-Kuwaitis and 268
collectives. Al-Kabeer also has the least number of under-construction units (317) in 2005 (ASA, 2013).

![Total Dwellings](image1)

Figure 32. Distribution of total dwellings in the provinces of Kuwait in 2005 (ASA, 2013).

![Total Households](image2)

Figure 33. Distribution of total households in the provinces of Kuwait in 2005 (ASA, 2013).

To make the image clearer, the figures 32 and 33 examine the total numbers of families and dwellings. The percentage of dwellings and households are commensurate in every province in 2005. This is a good sign that there are fair housing services for all categories.
The government of Kuwait is concerned about housing for the foreign labor force for many reasons, among them, health. The City of Laborers is one of the governmental projects to house expatriate laborers in Al-Shedadiya (on the map: in red, labeled: 27.29) and Sabhan (on the map: in red, labeled: 1). The area of the land which is allocated for this project in Al-Shedadiya is 100,000 square meters, which will be enough to house 8,096 people. Sabhan has an area of 60,000 square meters to house 3,200 people. These cities are fully prepared with services of roads and free transportation. Also the residents are provided with all infrastructural needs such as electricity, water, and sanitation services. The security services are also covered, including guarding services, police stations, and security cameras, which are very important to maintain the safety of the laborers. The project also concerns providing green spaces and public fields. In 2010, it cost the country 35 million Kuwaiti Dinars (123,640,000 million USD). These buildings consist of bedrooms, kitchens, dining rooms, laundry rooms, and private toilets (Housing Services, 2011). These projects are considered as major improvements toward human rights and enhancing the quality of living for migrants.
3.2.2 The City of Laborers

The project of the City of Laborers was designed, constructed, and maintained for expat housing in the city of Al-Shedadiya in Al-Farwaniya province and the City of Sabhan in Mubarak Al-Kabeer province. The project was implemented by the Ministry of Public Works in Kuwait in two cities and two different provinces. The first project in Al-Shedadiya was on an area of land of 100,000,000 square meters in Al-Shedadiya, which was used to construct an entire city for laborers, with a variety of activities and facilities. An abstract of this project which was provided by the ministry addressed the most important aspects of the project and its goals.
The city was still under construction while the timeline of the project required completion in two years. The construction work was started in 2009 and was supposed to be completed in September 2011. This project in Al-Shedadiya cost the government more than 101,798,946.85 USD through 2011, while only 76% of the work was completed. The project was designed to cover single laborers’ housing needs (8,096 people) and attach other services to it such as transportation and security facilities (City of Laborers, 2009).

The second project is in Subhan, which is a governmental land in Mubarak Al-Kabeer province, consisting of an area of 60,000 square kilometers. The implementation of this project is under the supervision of the Ministry of General Works. The project of Subhan was 89% completed in 2011, while the plan targeted the year 2010 to finish the laborers’ city. By October 2013, the project was 100% completed and the housing facilities were ready to be furnished for the residents. This city will be able to house 3,200 single laborers and provide them with general services (City of Laborers, 2009).

The components of the project for both cities consist of medical services, security services, as well as management of the building, six secondary transfer stations, two Bus waiting stations, water purification plant station, a main water tank, and a main electricity station. The buildings within the city were divided into residential blocks and general services buildings. First, the residential buildings consist of 23 blocks of four-story residential buildings. The area of each story is 1,090 square meters and the total surface covers 100,280 square meters, consisting of 2,024 rooms which accommodate 8,096 people (City of Laborers, 2009). Second, the general service buildings include a mosque, medical services, security services, a main electricity station, the administrative building, transformers’ electricity stations, a water purification plant station, water tanks, and bus waiting stations.
3.2.3 The Components of the Project

The main goal for these projects is to provide housing for single laborers away from the urban area, where private families live. This relocation will also provide a chance for the government to make some changes toward enhancing and cleaning the mass adverse concentration of land use in the same geographic location. In addition, with this reorganization movement in some commercial centers, such as provinces like Al-Farwaniya, the government will concentrate on enhancing housing services in terms of residential land use. Besides benefiting the laborers by providing better living areas and housing units, this initiative will lead to relocation of many economic activities and the ability to reorganize lands in appropriate activities that match the general function of every city.
It was very appropriate for the government to create a new system of distributing housing for the laborers and break up their dominance in some areas over others. For urban planning to enhance the general look of the city, it would be more efficient to locate the laborers’ houses on the outer limits of these cities, where they will be closer to industrial areas. Even if they do not work in these areas, the government provides a transportation system that links every city in the country. Relocating the laborers’ housing creates more flexibility in land use. It also allows for mobility for the Kuwaitis because of the conservative nature of the traditional Kuwaiti society (Ghuloom, 2013).
3.3 United Arab Emirates

Many studies have been concentrated on the foreign labor force and their distribution based on occupation, age, nationality, and living areas. These studies have been conducted to address the importance of the distribution of the labor force in connection with their numbers and economic activities; unfortunately, not many studies focus on the real conditions of the foreign laborers’ living standards and the services provided for them. The UAE as a gulf state which has many problems regarding the expatriate labor force, should serve the purpose of this research in supporting housing services improvements.

Laborers’ housing is associated with expatriate labor force economic activities. In the United Arab Emirates, the expatriate labor force represents a large percent of the Emiratis population, where the foreign population exceeds the numbers of the native population. In 2009, the foreign population reached 80% of the total population in seven emirates. The increase of the imported labor force in the UAE was associated with many social, political, and economic problems. The expatriate labor force in the UAE has a widespread influence in governmental as well as the private employment sector (Al-Shaheen, 1999). Because of the continuous increase in the number of imported laborers in the UAE, an imbalance in the demographic structure was also accompanied by social, cultural, and economic changes (Abdullah, 1999).

The imported labor force in the UAE was 75% in 1997 and reached 80% in 2001, which makes the native population the minority. However, a study examining the opinions of the UAE’s citizens showed that the UAE’s population depended on foreign laborers, and native citizens preferred to have the imported laborers run businesses in the UAE. The UAE government recognized this portion of the population and met all their needs; therefore, foreign workers are widely distributed throughout the country (Al-Kaabi, 2002).
An outstanding feature of the demographic structure of the United Arab Emirates is its high numbers of foreign workers and the pattern of their distribution. Because of the wide spread of foreign workers and their dominance in the region, many studies have focused on the reasons for the high rate of migration to the UAE and the living conditions of the foreign laborers. Also, many studies have examined the foreign workers’ housing conditions. The general image of the expatriate laborers’ houses was overcrowded rooms with many people living poorly in an unhealthy environment. This was considered a serious national problem, and was discussed in the European Union (EU) (Spiegel, 2012). Because of the lack of proper housing provided for this community, the EU also claimed that the United Arab Emirates failed to satisfy international workers’ rights (United Arab Emirates Yearbook, 2005).

Generally, the United Arab Emirates has set a plan to improve the living conditions of the foreign workers. Through the UAE’s Federal National Council, the organization is planning on ensuring that most of the region’s foreign workers have fair wages, good working conditions, and proper housing. Despite the noticeable efforts made by the UAE in refining the region’s
foreign workers’ housing conditions, the EU was overlooking a maximum fundamental change in labor laws in the United Arab Emirates. Generally, the EU discussed the neglect of the UAE to improve the living conditions for foreign workers (Van, 2009).

Many complaints were made by foreign residents in the region regarding the poor living conditions in the laborers’ housing. The complaints were mainly about the sizes of the rooms; small rooms of about 10 square meters, shared between 3-4 workers. In some other cases, some residents were complaining about the lack of hygiene. Some foreign workers who were interviewed in their residences in Dubai claimed that they had to share a single and small room. Most of the foreign residents in the UAE were not satisfied with their living conditions. Three Egyptians during the interview stated that they even felt lucky to be sharing the room between just three of them, because in most cases, six people ended up sharing one room (Spiegel, 2012). In Dubai, the complaints were continuous about the expatriate laborers’ living standards.

Figure 38. Jabal Ali Free Zone Map (Jabel Ali Free Zone Map, 2012).
In west Dubai, the Ali Free Zone (Figure 38), which is a commercial area with low global importing restrictions where unskilled laborers of low wages are widely hired, the workers are mostly Indians with a $140-200 monthly income. Houses are provided for them by the employers, of $40 each per month. However, this housing is overcrowded with eight men in one bedroom, and without air conditioning, disregarding the harsh weather in Dubai. These labor camps were widely spread in Dubai in many areas other than the Ali Free Zone. The total laborers living in these camps were 300,000 in 2002. (Fox, Mourtada-Sabbah, & Al-Mutawa, 2006). This fact is highly supported by Geisel (2011); workers’ housing facilities range from labor camps and shared housing units in converted commercial lots with services provided with a great effort from the government to improve laborers houses. However, the quality of living for these workers is low. Migrant workers live in an overcrowded environment with the lowest safety and health standards and lack of personal space. Several deadly accidents had been recorded for construction workers in these camps, and 500 labor houses caught fire. For this reason, in 2007 The UAE government stated that 100 labor camps where these laborers resided in Dubai were closed for violation of health and safety standards. However, abuse of foreign laborers escalated in these camps, when in 2009, the camp population increased 40% over its original population, and workers’ meals were cut from three meals a day to one meal only (Hepburn & Simon, 2013).

Compared to the UAE, Kuwait in the same region has less intense issues with the dominance of foreign laborers in the country. However, the population is a mix of natives and a large percentage of foreigners. The main reason for foreign migration is seeking employment, which is the same case in the UAE.
Despite the fact that there is a great similarity in laborers’ existence and distributions in these two countries, housing services provided by the governments are very different. For example, Office of Inspector General (OIG) mandatory housing inspection found that the janitors in Kuwait have better accommodations than other workers in the Gulf States, where they share residential apartments with personal space and single beds and other furniture provided, adequate sanitation, common areas, laundry services and kitchens. In contrast in the UAE, OIG found that janitors’ housing in Abu Dhabi had been converted from office spaces, which violated safety rules in the building. This janitor house had total 450 residents with 15-20 toilets, and eight to ten workers were bunked in 12x18 foot rooms (Geisel, 2011).
3.4 United States

Housing for foreign laborers has become an international concern, where many governments and organizations concentrate on providing houses for this portion of the population. In the United States, researchers have connected the immigrant movements with the condition of housing for incoming immigrants. New York City in 1866 was a great industrial city that attracted nationalities such as Italians, Russians, and the Polish. New York City in the 19th century was recognized as the most crowded industrial city, where 89% of the people lived in 50% of the city and only 15% of the population was native New Yorkers. For this reason, after the housing crisis in the 1840s, the government built six-story buildings designed to house the workforce. Private homes for working families were provided. However, there were no utilities provided, and facilities like bathrooms were shared and generally, this type of housing was provided for working class through all working zones and industrial areas in the US in the 19th century. (George, 1886).

Leavitt (2005) indicated that the labor housing crisis could be involved with federal organizations, and the support of these organizations played a role in designing housing strategies for laborers. However: since the early time of emerging foreign laborers of Hispanic and African-American decent within the working class in the states, racial segregation in housing and living areas occurred. The northern states did not absorb unskilled farm workers as much as the southern states. In some states in the south, housing shortage for racial minorities, and poor foreign domestic laborers contributed to racial discrimination (Leavitt, 2005). This segregation was based on ethnic classification, and contributed economically to American society. As a consequence, the segregation was not only in the quality and location of houses but also led to neighborhoods separation. However, the real explanation for this racial separation in housing
depends on economic factors: wealth and income. Until the open occurred through services in the United States. These housing laws came to reduce housing segregation, and preserved rights for these minorities. With the increase of foreign workers these law were highly needed. The Fair Housing Act provided new laws to ensure the integrity in housing services among all social groups, specifically the working class of these minorities (Huttman, et.al, 1991). The United States is facing a very challenging situation in labor trafficking, where in 2009, 82% of foreign adults and 56% of foreign children were victims of labor trafficking who were recognized by Health and Human Services (HHS) also put housing services under pressure (Hepburn & Simon, 2013).

Figure 40. Migrant workers in Texas with no shelter (James, 2011).
In terms of housing provided by work sector and employers, in 2001 80% of the total migrant population in the United States was working in farming industry. Many studies have been conducted by every state in the US on migrant farmworkers. Annually, practically 8,000 foreign farmworkers assisted farm owners to accomplish many tasks; however, the challenge in providing housing for farmworkers kept escalating because of the complicated process of getting land approvals and housing permissions. However, in 2002, the State Health Department which is the responsible authority provided 380 migrant workers with houses under assessment of New York law. These houses included general services and infrastructure maintenance such as lighting, fire safety, and general facilities maintenance (Sigler, 2003).

Housing camps are more likely to have substandard and unsanitary temporary housing for farm workers and their families. These camps are generally crowded and are supplied with no service or faulty service for electricity and plumbing. Also, these camps lack food storage facilities and also refrigerators and freezers. Hygienic standards were thus mold and insects spread in the camps. Many cases were recorded for overcrowded camps, such as in North Carolina where up to 4 persons share one bedroom and six or more share the same bathroom (Stobo, 2008). Crowding is often associated with high rental prices, so in most cases in the states, laborers attempt to lower their rental costs by increasing the number of residents which is exactly what can be found in Kuwait laborers housing units. Adding to the interior problems with laborer housing in the states, there are also many structural issues with these housing units; these problems include peeling paint, broken windows, gutter problems, damaged roof and many others. These dwellings suffered from many damages while laborers resided in them since these disparities in housing quality lead to health problems in the low-income population, changes have to be made. The United Nations’ International Bill of Rights recognizes affordable and
adequate housing as basic human rights, as well as ensuring access to water and sanitation significant to meet adequate living standards (Arcury & Quandt, 2009).

Kuwait provides housing for laborers in field missions away from the urban area, which is the same case in the states. These are called workforce housing, which is the assistant serving households with workers in the labor market. Employers in the US provided housing for mining workers and other industries like textiles. Companies develop towns which are located in isolated and unsettled areas but still within the work zone of these companies. These companies’ facilities include housing for the workers and in most cases they are in the suburbs. Through time, some of these mining towns increase in density and become highly settled. The quality of these houses depends mostly on the nature of the working site and the income of the workers. These houses are usually temporary bunkhouses that house many workers. Some workers with less income lived in cheap shanties, while skilled workers families lived in houses of better quality. However, it was proven that the house rent paid to companies was much cheaper than independent housing in towns (Carswell, 2012).

Housing policies in the US have been a challenge, especially when housing costs are enormous compared to what the migrant laborers make. In most cases, the cost of housing in the United States has consumed a bigger share of the residents’ allowances. Generally, the downturn in the economy around the world has affected some issues like the one-week salary pay for rent, which no longer exists. In the state of Texas, most migrant farm workers prefer short-term rental houses, while some migrants prefer to live in quarters controlled by their employers or bosses. In Texas, the establishment of houses varies from one place to another; they also differ depending on their configurations, sizes, and capacity. Only wealthier workers are able to live in
apartments. Families initially constructed normal housing units and trailers, while working stations were also used for housing purposes.

The migrant workers overcrowding affected the general service which is the same case in Kuwait. One of the problems in the US with migrants farm housing is problems with sanitation, related to the types of housing units affecting the quality of the facilities. This problem has increased since the increase in the numbers of immigrants in the state of Texas where they were between 700,000 to 1.4 million in 2010. The migrant workers contribute greatly to improving the economy in agricultural and farming productions (Lima & Martins, 2012). In comparison with Kuwait and the UAE, the United States has more intense problems with housing migrant workers, especially in the farming sector. Part of that reason goes back to the lack of farming lands in the Gulf States comparing to the US. While the US has vast farm lands which require permanent housing of a decent quality, Kuwait and the Gulf States farm lands have seasonal importance with temporary housing for workers during the harvest season.

With the lack of housing services, some of the foreign laborers lived in camps, and slums developed to cover the laborers’ need for private living space. However, compared to some of the slums into which the migrant workers were forced to move, laborer camps offered much better living conditions. The lack of housing for farm workers is associated with low income and high land prices (Johnson & Greene, 1994). Separate from purely economic factors, there are some socioeconomic factors that prevent access to good quality housing, such as large families in Texas. Maintaining an affordable home in the United States has continued to be a problem especially for the working class in the country (Bennett, 2006).

Overall, the increase of the expatriate labor force in any country could be followed by a number of consequences. The problem is determined by the size of the society including the
native population and the foreign as well. It is also affected by the political, the economic, and the cultural situation in the country. In addition, the ability of absorbing foreign population should need a solid foundation in any country to be prepared to providing general infrastructure services (Findlay, 1985).

The effect on Kuwait and the UAE is more complicated than the United States and the UK. The United Kingdom had the situation of labor force and the services provided for them under control since the establishment of labor parties and improving the law of human and labor force rights. The condition and the quality of life were low during the Industrial Revolution. For Example, Manchester went through major modifications to improve the quality of life and the city structure by relocating factories and developing new housing plans. Likewise, in the United States, in the early establishment of the industrial cities, these city were an attraction for many workers from Europe and Asia. Public housing was provided for some of these workers with few services and until the recent time, the housing labor force was still challenging in the United States, the increase of the number of migrant workers required more efficient plans to improve the housing conditions in the United States (Leavitt, 2005).

In comparison to Kuwait, many ministries in Kuwait provides housing for low-wage laborers and some manage to rent their own housing unit, however, it is still a problem in Kuwait to provide general services especially in overpopulated cities. The problem is deeply rooted in the background of these laborers and their lifestyle. Similarly in UAE, and especially in Dubai and Abu Dhabi where the laborers camps are located, these camps were evacuated by the authorities many times for many accidently death which are related to safety matters (Bergner, 2008).
Chapter Four: Methodology

The methodology used for this study consists of two parts: First, I collected data based on field observations on areas within six provinces in Kuwait where the laborers living units are located. As an evaluative approach, the houses were examined within the context of the urban area in relation to the surrounding activities. Second, the data which was provided from several ministries and governmental departments in Kuwait was statistically analyzed. A brief explanation on the development of the research instrument is provided below.

4.1 Research Instrument

The research instrument in this study was a plan for field observation and data analysis. It was developed following the guidelines of (Ocejo, 2013), which concisely explain how to approach fieldwork in an urban context, analyze the data, and describe how to introduce the findings based on urban observational methods. The research instrument consists of two sections. The first section was based on a collection of demographic data from various official governmental sources on the structure of the population in Kuwait’s provinces. From these official references, manpower and employment over ten years were reviewed to measure the effect of foreign labor force on the job market compared to Kuwaiti manpower and employment. Then, data for some given years such as 2003, 2005, and 2011 for household types – Kuwaiti families, non-Kuwaiti families, and collective households – were examined. Last, the number of dwellings for both foreign private families and single individuals were analyzed to create a clearer vision of the number of foreign laborers, their distribution and the houses available for them between 2003 and 2012.

The second section covered fieldwork observations of a chosen sample of houses and apartments in the urban area and the surrounding areas, and measured the distribution of foreign
laborers in the six provinces in the state of Kuwait. It also included measuring the quality and conditions of the chosen housing units and related that to the income of the residents and rental prices, as well as the factors that influenced this phenomenon which was gathered by surveying 100 foreign workers. The sample surveyed for this research was mainly foreign low-wage single workers as well as working families. Some of the single workers who participated in the survey were under the supervision of Dr. Ghuloom working in one construction site. These workers’ roommates were also surveyed. Other laborers were approached in their working places and were asked to participate in the survey. The sample also included working families and the majority of them were surveyed in their work places. Some of the families who participated in the survey were approached through Dr. Ghuloom, and their houses were examined. The participants were notified of their rights before starting the survey, and after their approval they were kindly asked to answer the survey questions.

This systematic sampling was approached in advance by planning the visits to agencies and official departments like the Ministry of Planning, the Ministry of Labor and Public Work, The Ministry of Electricity and Water, and The Ministry of Education, then visits were arranged with the residents of the buildings which were examined. A random and arbitrary sampling scheme was not possible for this research for the purpose of this study of examining low-wage laborer’s life quality and their housing units. Also, to conserve time and cost, a systematic sampling scheme was implemented for more efficient results.

The research instrument defined the gaps within urban planning strategies related to the existence and distribution of the foreign labor force. The fact that these laborers lived in the old section of Kuwait City did not mean that they worked within the area itself, which might have decreased the congestion in Kuwait City. In fact, the opposite was true. The concentration of the
laborers in specific areas and specific buildings which were already deteriorating had led to many different problems that the government was trying to address. For this reason, this instrument was developed to emphasize the condition of the current houses provided for the laborers which were maintained by the laborers themselves in addition to the municipality’s cleaning routine. Fieldwork included the examination of a sample of 10 houses, 15 apartments and 10 temporary houses in the urban area and its surroundings (see appendix). With the approval received from the survey’s participants to examine their houses, trips were organized with Dr. Ghuloom to examine the participants housing units. Some of the houses indicated in the survey as a housing unit were only one floor of a house. Also, traditional houses which were targeted as part of the survey were dropped from this research because they were removed and replaced with apartment complexes. In addition, temporary houses were visited outside the urban area in Alwafra where the farmland was located.

These houses were picked after locating the high density areas in the Kuwait provinces; the reason for picking this specific sample was that these houses were located in areas where low-wage laborers lived. The goal of surveying workers in their living areas and their housing unit was to have a closer look on their life style and daily habits.

Collecting official, governmental data were a very significant part of the study, as well. The governmental data of population statistics and distribution in every province was essential to the distribution of housing. This official data included Kuwaiti and non-Kuwaiti housing availability in specific years; however, regarding the foreign laborers and foreign population, the data included their living areas and their concentration, whether in a house, apartment, or in temporary housing.
4.2 Procedures

Governmental departments were contacted for different reasons, such as the Department of Statistics in the Ministry of Planning for demographic statistical data. In particular, the annual statistical abstract for the years from 2003 through 2012 were used in this study specifically to provide overall population statistics. Also, population statistics for the Kuwaiti and non-Kuwait population in every province were collected. Statistical abstracts were also useful in identifying the numbers and types of families in every province and the dwellings provided for them during the same years and in the same provinces. In addition, the master plans of Kuwait from the Municipality of Kuwait were examined which provide the general scheme of housing projects. In particular, the Implementation Plan Review of the Third Master Plan Review of Kuwait (3KMPR) was examined about housing types and the population structure in Kuwait.

The details about the project of the City of Laborers were collected from the Ministry of Labor and Social Affairs, the data about the City of Laborers were mainly about the area, the buildings, and the facilities in the city, as well as the general services provided for the residents of the City of Laborers. A scheme of the City of Laborers was provided in this study to provide a more realistic image of the governmental solutions for the problems related to the distribution of laborers within the provinces in Kuwait. The main purpose for providing statistical data was to accompany the observational part with more detailed official statements about the distribution of laborers which justifies the reasons for the concentration of laborers in specific provinces rather than others.

Some of the governmental data were sent by email as soft copies such as the reviews of the Master Plans of Kuwait. Others were collected as hard copies in person from these governments, such as the annual statistical abstracts. Data analysis of the official data were
essential to fieldwork observations. The results of the data analysis of the governmental data and
the survey responses about the distribution of the expatriate labor force and their living areas,
and some other information about rental prices and incomes, which resulted in matched
geographical analyses.

Fieldwork included observational activities on examining the conditions of houses and
living areas of the foreign laborers. A trip to some areas like Khaitan, Sharg, Shuwaikh and Al-
Mergab, Hawalli, and Sallmiya among others was arranged with Dr. Muhammad Ghuloom to
examine the buildings’ condition, capacity, rent, and the residents’ income by using a survey
instrument and an interview. The total sample of the examined buildings was five apartments in
three different complexes in the province in Al-Farwaniya, one House in the Capital and two
floors of two different houses. In Hawalli, four apartments were examined in three different
apartment complexes. In Al-Jahraa two temporary houses were examined while in Al-Ahmadi
three. The residents of these housing units were surveyed, and the data collected was visualized
into graphs and maps. The results of each examined home matched the results of the others,
despite the differences in the types of houses which made it possible to generalize.

The houses that were chosen as a sample were for mixed workers, mostly construction
workers and low-wage government employees. Other foreign family apartments were visited and
examined. The results also depended on the income of each family; however, family houses are
not comparable in their condition with the other laborers’ houses. This examination was
sufficient to support the results in the actual conditions of these houses and for the geospatial
analysis for the location of the houses, which will support providing justification for the
connection between housing and locations related to land use.
4.3 Limitation of the study

This research was based on spatial analysis of Kuwait’s provinces and areas by concentrating on field work to examine the quality of houses and the services provided in these areas based on the concentration of laborer. Field work included apartment complexes, houses and temporary houses in Kuwait City’s area, however outside the urban area, where some of these housing forms are less intense, were examined as well. Data were collected from the annual demographic surveys from the department of Statistics in the Ministry of Planning in Kuwait and statistical studies from the Ministry of Social Affairs and Labor, in addition to statistics from the Master Structural Plan of Kuwait. However, domestic laborers were excluded from this study because every host family should provide a residential section within their house for the domestic laborers. Under the results of this statistical and geospatial analysis, the conclusion could be generalized to the rest of the housing services and its distribution in different cities.
4.4 Data Analysis

Over the ten years covered in this study, the analysis of the population structure shows that the foreign population exceeded the Kuwaiti population in numbers, especially in economically active areas. For example in 2003 the number of the Kuwaiti population in Kuwait City was 197,933 and the number of non-Kuwaitis was 223,740 (3KMPR) and increased to reach 209,451 for Kuwaitis and 263,294 in 2006. This number was expected to decrease for the Kuwaiti population to 191,027 and 209,425 non-Kuwaitis in 2030 (figure 41). The data which were collected from governmental resources was converted into electronic format using Microsoft Excel for analysis.

Figure 41. Population Increase Between 1965 and 2004, and Population Projection every Five Years up to 2030. (3KMPR, 2005).
First, graphs and tables were made to represent the population of Kuwait and the number of foreign laborers compared to Kuwaitis in every province from 2003 through 2013. Then graphs were made for the employments and manpower in Kuwait to provide a measured image of the foreign labor force in numbers compared to Kuwaitis. Graphs were made for the number of houses in connection with household types (private families and collective singles) over the ten years. Besides the electronic format of the data produced by Excel, the cartography and mapping software Adobe Illustrator CS6 was used to exemplify the population and its distribution on maps over ten years in each province. In addition, a modeling program in 3D was used to design the City of Laborers’ buildings and facilities from the given details from the Ministry of Labor and Social Affairs.

Descriptive data based on the examination of the houses and inferential analysis of the statistical data was also used in analyzing the data for more correspondence results. In addition, a statistical attribution was provided based on a geographical analysis which represented the provinces in Kuwait and demographical analysis of the total population in general, then of the total population in each province in particular. This data collection was significant for testing the hypothesis by comparing the changes that occurred over years and the current status of the services for laborers’ housing, as well as future expectations from these services.
Figure 42. Flow chart of the procedures and methods used in collecting and analyzing data.
Chapter Five: Results and Data Analysis

In connection to the official data which were collected from the ministries in Kuwait and the data from the master plans, this section discusses and analyze the data which was collected by using the survey’s instruments to reach a conclusion on the distribution of foreign workers in the provinces of Kuwait and the housing services.

5.1 Reliability Analysis of Results

The minimum size of the sample (n) used in the survey was determined in such a manner that the error of the estimated measure of the criterion was less than 0.169 of the standard deviation within the criteria in the equivalent sample size at a sureness intermission of 95% (Nadoum, 2013).

One hundred respondents were surveyed. The majority of the participants completed the entire survey. However, some of them left a large number of questions unanswered, which rendered the rest of their responses useless for purposes of this research. Consequently, responses from five participants (5%) were rejected, while the remaining Fill survey (95 or 95%) were included in the analysis.

The following section discusses the validity of the analysis performed in this research. With these qualified 95 responses, two types of analyses were performed. The first test involved analyzing the distribution of the respondents on how well each participant responded to the survey, which determined the qualification of that respondent. The second test involved analyzing the distribution of responses by indicating the response level that each statement received.

Figure 43 provides the total count of answered items of the survey’s instrument for each of the 100 respondents. A criterion was applied to exclude respondents who answered fewer than
80% of the survey questions. As mentioned earlier, respondents who left out more than 20% of the questions were disqualified from the study, thereby excluding 8% of the respondents from the research. The number of questions answered by 95 respondents is shown in Figure 43. As seen in this figure, more than 88 respondents answered more than 21 questions out of the total 26, while fewer than 7 respondents answered between 16 and 21 out of 26 questions in the survey.

Figure 43. Number of questions answered (R) in the Survey.

With regard to the second test, the response level for each question in the survey is shown in Figure 45. The missing responses indicate the response level. More than 80 respondents answered most of the statements in Figure 43, which indicates a good response rate. Since the measure of the instrument is concerned with the labor force distribution and housing services in Kuwait for the foreign labor force, the statements in the second set of the instrument are accurate for inclusion in the analysis.
Participants were selected from various sectors representing in Kuwaiti society, such as municipalities, governmental departments, local businesses, and companies in the State of Kuwait. Figure 44 shows the distribution of the participants based on the area in which they resided worth to mention, this question received 95 answers. As seen in this figure, the majority of the participants (38%) live in the province of Al-Farwaniya, which is a high populated province, 27% of the participants live in Hawalli, while only 2% live in Mubarak Al-Kabeer.
Figure 45. Distribution of living areas in which the respondents live.

Figure 45 shows the citizenship of participants in the survey. Notably, none of the participants overlooked this question. This result may indicate common behaviors and habits in making a housing choice among similar nationalities. The majority of the participants were from Arab countries (53%) while 40% were Asians and only 4% were citizens of countries like Iran and the USA; in addition, 3% represented the non-Kuwaiti Arab population. To highlight, the citizenship represent the country of birth.

Figure 46. Distribution of citizenship among participants in the survey.
Figure 47. Distribution of participants relative to their gender.

This demographic representation is significant to emphasize the satisfaction of housing services for the foreign population. By this systematic sample selection, with respect to the gender of the participants, approximately 76% of the participants were male and 24% were female as shown in figure 47.

Figure 48. Distribution of participants relative to their ages.
With respect to the age group (Figure. 48), the majority of the participants were under 25 years old (45%). The next major age group was those between the ages of 25 and 34 years old (33%). This indicates that approximately 80% of the participants are classified as young, and only 6% were between 45 and 54 years old.

![Pie chart showing personal status distribution]

Figure 49. Distribution of participants relative to their personal status.

Participants who were unmarried (58%) outnumbered the married (37%) participants, while widows comprised only 5% of the participants.

![Bar chart showing family living countries]

Figure 50. Distribution of the respondent’s family’s country of living.
As shown in Figure 50, only 20% of the participating families live in the state of Kuwait and 80% live outside the country, and six participants skipped this question. The large number of workers living outside Kuwait indicates a high rate of single laborers or individual workers.

Figure 51. Distribution of the number of children among participants in the survey.

Figure 51 shows the distribution of the number of children in the participants’ families. As can be seen in this figure, participants with no children comprise the highest group. With regard to the previous question, out of the 14 participants who have four children, 12 of them have families living outside Kuwait.
Regarding the education level of the foreign laborers, the level of education of the participants was covered by Question 8 in the survey concerning the highest degree the participants hold. As shown in Figure 52, the majority of the participants had no significant education. In almost equal percentage, elementary and high school graduates held the second place among other educational levels. The third largest group was two-year college diploma holders followed by secondary-school graduates. University degrees came last, and master’s degree and Ph.D. holders were limited to five participants. A quarter (25%) of the participants held no degrees; 17% did not go beyond elementary school; 15% had a high school degree, followed by some college degree holders (15%). Only 4% of the participants had a Ph.D. and 1% held a master’s degree. These numbers indicate a high number of laborers in low-wage but stable governmental jobs, with no secondary resource of income.

Figure 52. Distribution of the respondents relative to their educational level.
Figure 53. Distribution of the respondents relative to their monthly income in USD.

Figure 53 shows the participants’ income. This question has the highest share of no response, with 13 participants who skipped the question. None of the 82 participants received an income lower than $400 a month, and the majority of 35% received an income of $1,501 and more a month. Twenty-one percent of them had an income between $1,301 and $1,500.

Figure 54. Distribution of the respondents’ working areas.
Moving from a demographic characteristics analysis of the respondent data with respect to nationality, gender, age, education, income, and family status, this part of the analysis was concerned employment status and sectors, since they play a significant role in housing conditions and qualities. Questions 9 through 12 in the survey concern employment status and type of job. Figure 54 shows the province where these laborers work. Hawalli and Farwaniya have the highest numbers of workers, while Mubarak Al-Kabeer has the lowest number of workers. This is a significant indicator of the geographical connection between areas where they live and areas where they work and will be discussed in the next chapter.

![Work Sector Diagram]

Figure 55. Distribution of the working sector of the participants in the survey.

Only 89 respondents out of 95 answered the question regarding the employment sector; 71% of the respondents are private sector employees and 29% are governmental employees.
Figure 56. Distribution of the field of employment among the participants in the survey.

Regarding the type of employment (figure 56), although five respondents left this question blank on the survey sheet, 101 participants answered it; many respondents gave two answers to this question. The extra choices were for one’s own business (31%) in addition to another employment. Managerial jobs comprised 29% of the total percentage of possible jobs this instrument asked about. As a support to the previous figure of private and governmental employment sectors, the private firm sector had 23%, while the public agencies had 17%; it is notable that the private sector attracted more workers than the government positions did.

For the next question concerning employment status, 82% of the respondents are full-time employees and 16% have part-time jobs, while 2% are unemployed.
Interestingly, the responses for the type of jobs also received 97 responses, which is more than the considerable number of the respondents. As was reported, 33% of the respondents are employees in the educational system and 25% in the industrial sector; 15% of the respondents chose engineering as their work field, which means they hold an engineering degree.
However, the educational background data had nine respondents with a bachelor’s degree and one with a master’s degree, in addition to 14 high school diploma holders. This may indicate engineering assistant as a job title for some of the respondents with a diploma. Agriculture, tourism, and health have the lowest number of workers, less than 5%, while religion has none. This graph also indicates that 15% of the respondents work in trading, which also may be a personal business or under the government or private sector.

![Figure 59. Distribution of respondents relative to their type of housing units.](image)

One interesting finding in this survey is that a large number of the participants live in groups in compact living spaces. As seen in Figure 59, 59% of the respondents live in apartment complexes. While many Arab families (35%) live in one floor in a house.
As shown in the figure 60, roommates of the same nationality live in an apartment with two bedrooms and two bathrooms. This indicates overcrowding in the housing units.

Figure 61 shows the number of bedrooms and bathrooms for the number of siblings and roommates in (figure 62) in each housing unit where the respondents live. The data shown in this
figure represent the respondents as groups and not individuals. For example: a total 61 respondents live in 2 bedrooms flats.

According to Figure 62, five siblings was the highest number of family members sharing the same housing unit, and some small families of three members lived in apartments with two-three bedrooms and bathrooms. None of the respondents lived in traditional houses, and according to Dr. Ghuloom (2013), the traditional houses were removed from old Kuwait City or were reconstructed for different purposes. Dr. Ghuloom further stated that 5% of the respondents live in temporary housing, and it could be possible that these houses are in some industrial and agricultural areas.

![Figure 62. Distribution of respondents relative to monthly rent.](image)

Figure 62 shows the rents that the respondents indicated for their housing units. One consideration must be taken from this data analysis, which is the large group of respondents share the rent with their roommates. For example, 14 people out of the total respondents responded to the previous instrument in the survey stating that they selected 14 roommates.
These roommates share one rent and each of them pays his share. To clarify this data analysis, the number of residents in each housing unit should be included as a support for the rental prices. However, in some family households, only one person is in charge of paying the rent. In general, 32 respondents live in housing units of a monthly rent between 250 and 300 USD and 12 respondents live in housing units with a monthly rent more than 901 USD. This is an indicator of rental prices based on the living areas and the type of housing units.

To measure the interaction between laborers and other migrant workers and Kuwaitis at work, the participants were asked first if they interact with migrant workers at work and then to rate the level of this interaction. The result of the data analysis is that 100% of the respondents interact with other migrant workers and 93 respondents out of the total 95 interact with Kuwaitis at work. The rate of the interaction with Kuwaitis at work differs from the rate of interaction with migrant workers.

![Interaction with Kuwaitis](image)

Figure 63. Distribution of the interaction between migrant workers and Kuwaitis.

A scale was set to measure the interaction which is as follows: rare: 1-5 times a month/limited; 5-10 times a month/often; weekly and very often; daily. As for the rate of interaction
with migrant workers, 95% of the respondents reported they interact very often; none of the respondents reported rare interaction; 44% of the respondents reported they interact with Kuwaitis weekly and 43% interact with Kuwaitis very often on a daily basis, while 3% only have rare interaction with migrant workers.

![Interaction with migrant workers](image)

Figure 64. Distribution of the level of interaction between migrant workers and Kuwaitis.

![Do you interact with Kuwaitis at work](image)

Figure 65. Distribution of the level of interaction between migrant workers.

A scale ranging from 1 to 5 was used to express the survey questions 23 through 26. A score of “1” represents strong disagreement with the content of the statement, while a score of “5” represents strong agreement. Similarly, scores of “2” and “4” represent agreement and
disagreement, respectively. While a score of “3” was consigned to represent no opinion, this option is neutral, which means the respondents with no opinion are neither agreeing nor disagreeing with the statement.

The last section of the survey was meant to measure the satisfaction of the respondents with their living areas and housing units. In addition, this section considers the respondents’ opinions on the quality of private and governmental housing units. The results showed 11 respondents were strongly dissatisfied with their living areas, and 61 strongly agreed with the question that implies the satisfaction of the participants with their place of residence, while 9 of the respondents had no opinion on their place of residence.

![Distribution of the level of satisfaction in living areas among the respondent](image)

Figure 66. Distribution of the level of satisfaction in living areas among the respondent (Nadoum, 2013).

The next question indicated the participants’ satisfaction with their housing unit; 25 of the respondents strongly disagreed with this question, which means they are dissatisfied with their housing units and 44 strongly agreed, while only 5 had no opinion
Figure 67. Distribution of the level of satisfaction in housing units among the respondents (Nadoum, 2013).

The map in figure 68, shows the distribution of households in 2011 in each province in Kuwait, this distribution may be affected by the function and the activities in every province. Al-Farwaniya has the highest percentage of non-Kuwaiti families (76%) and 4% of collective households and 20% of the total households are Kuwaiti families. Hawalli has less collective households (1%) and more Kuwaiti Families (27%) and the non-Kuwaiti households represent 72% of the total households in this province. Al-Ahmadi comes third in the total number of households with the highest percentage of collective households (7%). Al-Ahmadi has 37% of Kuwaiti households and 57% of non-Kuwaiti households. Al-Jahraa has 3% collective households, 41% of Kuwaiti households and 57% non-Kuwaiti households. Mubarak Al-Kabeer comes last in the total number of households and the lowest percentage of collective households (0.5%), while the Kuwaiti households represent the highest percentage of the total households (85%) and non-Kuwaiti households were 15%. 

![Housing Units diagram](image-url)
There are many methods could be used to identify the pressure center and most importantly is to identify the areas with higher density where the infrastructure services could be overly used and exhausted over time. Denser areas are usually the places who faces the most challenge in providing fair services and maintaining these services.
For the significance of this research, data analysis had a great role in determining the final findings, especially for determining the significance of the respondent’s opinions.

Table 4 provides descriptive statistics on responses for statements 23 through 26, providing the mean, median, standard deviation, and mode. It should be noted that the chosen statements could occur in values above and below the median, while the mode is the most frequently occurring value decided by the respondents’ choices for each statement. The responses in the survey’s instrument for the statements from 23-26 were very close in the evaluation; however, the mean will determine the exact measure of agreement or disagreement with the statements. The mean close to 3 means that the respondents did not choose an option that represents any agreement or disagreement for the survey’s instrument. The mean with a greater difference score than 3 means there are greater agreements and disagreements between the average respondents. The difference representing a greater value than 3 means greater agreement, while less than 3 means greater disagreement.

Table 4. Descriptive statistics for the mean, median, standard deviation, mode and standard error based on the responses to the statements 23 to 26 of the survey.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Std. Dev.</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>3.91</td>
<td>5</td>
<td>5</td>
<td>5.145</td>
<td>0.149</td>
</tr>
<tr>
<td>24</td>
<td>3.45</td>
<td>4</td>
<td>5</td>
<td>1.73</td>
<td>0.178</td>
</tr>
<tr>
<td>25</td>
<td>3.10</td>
<td>3</td>
<td>5</td>
<td>1.56</td>
<td>0.160</td>
</tr>
<tr>
<td>26</td>
<td>2.93</td>
<td>3</td>
<td>5</td>
<td>1.64</td>
<td>0.169</td>
</tr>
</tbody>
</table>
5.2 Chi-square test

The Chi-square was statistically significant in the relationship between variables measured in this research. The tables in this section provided evidence to prove or reject the research’s hypothesis: to determine the significance in the relationships between the variables and the levels of satisfactions in housing units and residential areas. This will be analyzed in depth in the discussion chapter.

The variable tested for this set of hypotheses was housing units based on the number of bedrooms and bathrooms for each housing unit. The tables below (table 5 and 6) explain the type of houses and the condition of these housing units. In addition, the number of roommates could affect the satisfaction level of the respondent’s housing units. This was applied on hypothesis number one and three.

Table 5. Types of houses chosen by the respondents as their private housing units.

<table>
<thead>
<tr>
<th>Apartment</th>
<th>House</th>
<th>Floors</th>
<th>Traditional house</th>
<th>Temporary house</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>3</td>
<td>32</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

These data were collected by the survey which was used for this research and the responses to these questions about the respondent’s housing units were analyzed according to the selected choices by the respondents.
Table 6. The condition of the respondent's housing units.

<table>
<thead>
<tr>
<th>Responses</th>
<th>bedrooms</th>
<th>bathrooms</th>
<th>roommates/siblings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>13</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>61</td>
<td>63</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>28</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>-</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>14&lt;</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The data in the tables above were collected by the survey which was used for this research and the responses to these questions about the respondent’s housing units were analyzed according to the selected choices by the respondents.

The Chi-square test was used to prove or reject the level of the satisfaction in housing units determined by gender and affected of types of housing units, the conditions of housing units and the differences between males and females in number. The results of this test were discussed in the next chapter.
H₀: There is no significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by gender.

Table 7. Chi-square test for the level of satisfaction of housing units among respondents by gender.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Female N</th>
<th>Male N</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Dissatisfied</td>
<td>3</td>
<td>22</td>
<td>25</td>
<td>0.263</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>0.094</td>
</tr>
<tr>
<td>no opinion</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>0.052</td>
</tr>
<tr>
<td>Satisfied</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>0.105</td>
</tr>
<tr>
<td>Strongly Satisfied</td>
<td>9</td>
<td>37</td>
<td>44</td>
<td>0.463</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>72</td>
<td>95</td>
<td></td>
</tr>
</tbody>
</table>

Actual data test
N*%=

<table>
<thead>
<tr>
<th></th>
<th>Female N</th>
<th>Male N</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.052</td>
<td>18.947</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.210</td>
<td>6.821</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.210</td>
<td>3.789</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.421</td>
<td>7.578</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.652</td>
<td>33.347</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chi-square test 0.004

The second variable tested for this set of hypotheses is residential area based on the function of every province in Kuwait. The tables below (8) show the selected where the respondents of the survey live which the hypotheses was based on. This is applied on hypothesis number two and four.
Table 8. The provinces chosen by the survey’s participants as their living areas.

<table>
<thead>
<tr>
<th>Province</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>23</td>
</tr>
<tr>
<td>Farwaniya</td>
<td>36</td>
</tr>
<tr>
<td>Hawalli</td>
<td>25</td>
</tr>
<tr>
<td>Jahraa</td>
<td>4</td>
</tr>
<tr>
<td>Mubarak Al-Kabeer</td>
<td>2</td>
</tr>
<tr>
<td>Ahmadi</td>
<td>5</td>
</tr>
</tbody>
</table>

H₀: There is no significance in the relationship between residential area by the function of the provinces and the level of satisfaction determined by gender.

Table 9. Chi-square test for the level of satisfaction in residential areas by gender.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Female N</th>
<th>Male N</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Dissatisfied</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>0.115</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>0.063</td>
</tr>
<tr>
<td>no opinion</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>0.094</td>
</tr>
<tr>
<td>Satisfied</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>0.084</td>
</tr>
<tr>
<td>Strongly Satisfied</td>
<td>10</td>
<td>48</td>
<td>61</td>
<td>0.642</td>
</tr>
</tbody>
</table>

Total: 23 | 72 | 95

Actual data test N*%=

2.663 | 8.336
1.452 | 4.547
2.178 | 6.821
1.936 | 6.063
14.768 | 46.231

Chi-square test = 0.210

The next variable tested for hypotheses number three was housing units with consideration of the respondent’s personal status. The tables below show the generated number that determined the result of this chi square test.
H₀ There is no significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by the personal status.

Table 10. Chi-square test for the level of satisfaction in housing units by personal status.

<table>
<thead>
<tr>
<th>What is the significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by the personal status?</th>
<th>Responses</th>
<th>Single N</th>
<th>Married N</th>
<th>total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Dissatisfied</td>
<td>23</td>
<td>2</td>
<td>25</td>
<td>0.263</td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>0.094</td>
<td></td>
</tr>
<tr>
<td>no opinion</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0.052</td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>0.126</td>
<td></td>
</tr>
<tr>
<td>Strongly Satisfied</td>
<td>19</td>
<td>25</td>
<td>44</td>
<td>0.463</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>35</td>
<td>95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the third test could be affected by the differences in numbers between married and single participants. Also, the level of satisfaction/dissatisfaction will mainly depend on the housing unit type and condition.

The final section of the hypothesis testing was to determine the level of satisfaction in residential areas among the respondent depending on their personal status.
H₀. There is no significance in the relationship between the levels of satisfaction in the residential area determined by the personal status of the respondents.

Table 11. Chi-square test for the level of satisfaction in residential areas by personal status.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Single N</th>
<th>Married N</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Dissatisfied</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td>0.115</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>0.063</td>
</tr>
<tr>
<td>no opinion</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>0.094</td>
</tr>
<tr>
<td>Satisfied</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>0.084</td>
</tr>
<tr>
<td>Strongly Satisfied</td>
<td>38</td>
<td>23</td>
<td>61</td>
<td>0.642</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>35</td>
<td>95</td>
<td></td>
</tr>
</tbody>
</table>

Chi-square test

<table>
<thead>
<tr>
<th>Actual data test</th>
<th>N*%</th>
<th>N*%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.947</td>
<td>4.052</td>
<td></td>
</tr>
<tr>
<td>3.789</td>
<td>2.210</td>
<td></td>
</tr>
<tr>
<td>5.684</td>
<td>3.315</td>
<td></td>
</tr>
<tr>
<td>5.052</td>
<td>2.947</td>
<td></td>
</tr>
<tr>
<td>38.526</td>
<td>22.473</td>
<td></td>
</tr>
</tbody>
</table>

Chi-square = 0.073

The results of the fourth and the final test could be affected with the differences in numbers between married and single participants. Also, the level of satisfaction/dissatisfaction in residential areas will mainly depend on the function of the province and condition.

The results of this section were discussed in the next chapter.
The more intense and the higher the density was in some areas requires more housing options for the residents of these areas. Providing these houses depended mainly on the provider, land use and the capacity of the areas. Houses provided for Kuwaitis and non-Kuwaitis depended on the general land use and the city structure. The type of the housing provided depended on the sector that controlled the land and provided services at the same land. These were usually provided by the government or private companies that works under the governments’ supervision. To emphasize on Kuwait city with each type of land use affected the housing; type see map below.

5.3 Types of land use which affect housing services:

1) Private property refers to housing provided for Kuwaitis at a minimal price, which includes land with a property loan. The second choice is that the government provides a ready-built house if Kuwaiti citizens cannot rent a house or an apartment and the government pays their rent.

2) Investment properties are multi-story apartment buildings which are built by individuals or companies. Some Kuwaitis choose to live in these apartments until they receive land and a loan from the government. In addition, these properties are one of the choices provided for non-Kuwaitis, both families and singles individuals. In addition to apartments, these buildings usually contain small markets, a barber shop or diners on the ground floor.
3) Commercial land use: This type of land use includes, the properties which are exploited in commercial activities by companies and organizations to create a prosperous district of multi-commercial functions like malls, restaurants, markets, shops and craftwork businesses. These commercial districts are considered to be attractive points for residents and visitors, because many people like to live near the commercial areas where they can find their daily needs and supplies nearby.
4) Agricultural and farms and livestock: These lands are very limited to two areas within the six provinces in Kuwait. In the north in Al-Jahraa province, and Al-Rawthatain, there is water, which means the land is fertile and able to produce some crops, despite the desert environment. In addition, in the Al-Ahmadi province in the south, there is also Al-Wafra, the main agricultural fertile land. The housing in these areas mostly includes temporary housing or chalets, because they are outside the urban area which comprises only 2% of the total land in the country. There is limited economic activity on these lands, which makes laborers less needed there. Regarding the livestock lands, the government provides facilitated loans for those who want to establish a business, to benefit the country in the livestock market. These potential businesses also necessitate some laborers outside the urban area.

Figure 70. Al-Wafraa agricultural zone in Al-Ahmadi province (Al-Essa, 2012).
5) Industrial properties: There are many industrial properties in the state of Kuwait. Some belong to the government and some are private; however, the government gives these properties to some Kuwaitis with loans to run factories and work in them. These factories are distributed in the country based on the function of the factory. The heavy industry factories are far away from the urban area and Kuwait City, but some factories like food factories can be found in the industrial areas within the Capital. Some of these companies provide housing for their employees, especially when the work sites are outside the urban area. These factories are attractive to the employees because some companies provide discounts on apartments and give their employees other advantages like free supplies of food from the factories where they work (Figure 71).

![Figure 71. Metropolitan area spatial distribution of Industrial land (3KMPR, 2005).](image-url)
5.4 Housing Policies

The policy on private housing is applied to all provinces for Kuwaitis; non-Kuwaitis are allowed to rent any apartment they want; and also sometimes they rent one floor of a house. To illustrate, there are some policies facilitating housing services for the non-Kuwaiti family of a Kuwaiti mother. To obtain this governmental service, these policies require the family to have an income of less than 3,200 USD per month and to own no housing property. In addition, there are no governmental restrictions on where non-Kuwaiti families can live; they have a right to rent any apartment building wherever they choose to live. However, single laborers are not welcome to live in any apartment building because of their lifestyle of living in groups; but there are many housing units under the investment housing program where single laborers can live. It is worth mentioning that there are some provinces like Mubarak Al-Kabeer that specialize in housing private Kuwaiti families with a minority of foreigners; but some provinces have a great number of investment, commercial and private properties that can absorb a great number of collective units and family houses.

Kuwaiti homeowner: Kuwaitis has the right to submit a request to obtain mortgage loan to buy a house or to use the loan (250,000 USD) to build a housing unit. There are some conditions that need to be met to obtain this service. First, the head of the household should be at least 21 years old, hold a Kuwaiti nationality, and have marriage certificate of at least 2 years. However the head of the household cannot obtain this service if they already own a property of 200 square meters, and also, if the head of the household had sold a property with more than 500,000 USD, they will be excluded from obtaining the loan and the property. If the request was for obtaining loan and a land for the family to build their own property, the property (area of building) should
be at least 375 square meters and the total area of the property should be at least 470 square meters.

Kuwaiti non-homeowners: Kuwaitis who submitted a request and are waiting to obtain the previous mentioned services have the right to submit a request to receive a rent allowance from The Public Authority for Housing Welfare. There is one condition to receive a rental allowance, which is that the applicant shouldn't be receiving any alternative housing from their employers.

Non-Kuwaiti homeowner: Housing welfare services are provided for non-Kuwaiti households of a Kuwaiti mother under some conditions. First of all, the monthly income of the family should be less than 3,000 USD. Second, the head of the family should not own a property that provides any housing welfare services for the family. To obtain this service the family must not have received any alternative housing services from other authorities or received housing or housing allowance.

Under the following conditions a foreign worker can obtain one property ownership in a residential areas:

1) The applicant must have legal permanent residency status in Kuwait
2) The entire property should be considered private residence for the applicant and his family
3) The property area should be no more than 1,000 square meters.
4) The applicant shouldn't own any properties in Kuwait.
5) The ownership of the property shouldn't be shared with Kuwaitis.

This first part of the results section below discusses the examined samples from the field work and explains the findings. The sample consisted of houses, apartment complexes, traditional houses and temporary houses in areas within the six provinces of Kuwait.
5.5 Types of housing for non-Kuwaitis

Two types of non-Kuwaiti housing services were emphasized in the Third Master Plan of Kuwait: the first type of housing is provided for families, which are usually rental apartments. It must be noted that foreign non-Kuwaiti families are considered to be laborer families consisting of working parents or even children who are employed. The second type is the collective houses provided for non-Kuwaiti single laborers. These collective housing units can be in many forms, such as rental apartments, housing provided by their working sector, or traditional houses (Figure. 72). The traditional houses were later removed with the renovation movement in Kuwait. In most cases, laborers of similar nationalities live together in the same apartment. For example, Egyptians live in Khaitan and the Levant population in Salmiya. Single laborers in governmental documents are called “collective families” because they prefer to live in groups.

Accordingly, there are some factors that play a significant role in the laborers’ housing market. Both family housing and collective housing are determined by the population size. More specifically, family housing strategies are related to the average size of the house, the rate of overcrowding in housing units, types of houses, percentage of the average rent to the family’s income, investment housing policies, and the construction rate for investment housing.

There are also some factors related to collective housing services, such as the condition of the building, land prices and the ability to re-use the land, the average number of people assigned to each housing unit, the percentage of residents in the collective houses, the number of empty units, and the educational background of the residents.
Figure 72. A floor plan of a traditional house—These houses were replaced with modern houses with the discovery of oil (AlHabashi, 2013)
Chapter Six: Discussion

For the significance of the data analysis, the nominal scale used in this survey for statements 23 through 26, the athematic mean score of responses to each one of the statements in the survey was 3.0, which represents a central propensity of no bias to agreements or disagreements with any of the survey’s statement contents.

6.1 Hypotheses:

As seen in table 7, the sample had more than 50% males which indicates which may reflect some level of satisfaction/dissatisfaction among this category in their housing unit. In addition, under the effect of the type (table 5) and the condition of the housing units (table 6) beside the gender differences, the relationship was determined. This was also applies on hypothesis number three.

6.1.1 HO1:

H₀: There is no significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by gender.

H₁: There is a significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by gender.

The generated number (0.0040) (see table 7) was less than the targeted number (0.05), which was enough evidence to conclude with, that there was a statistical significance in the relationship between the levels of satisfaction in housing units determined by gender and the condition of these housing units in this set of data. It was clear that there was a difference in the actual sample and the difference between males and females in the level of satisfaction from the table above that was enough of a difference to make an inference about the target population which was beyond the sample (Davis, 2011). The Chi-square test proves this hypothesis.
In the result section, table 8 showed the number of respondents who live in each province in Kuwait. Hypothesis number two was to measure the level of satisfaction in these residential areas determined by gender.

6.1.2 HO2:

H₀: There is no significance in the relationship between residential area by the function of the provinces and the level of satisfaction determined by gender.

H₁: There is no a significance in the relationship between residential areas by the function of the province and the level of satisfaction determined by gender.

The generated number (0.210) (see table 9) was more than the targeted number (0.05) which was not enough evidence to conclude that there was a significance between the level of satisfaction between males and females in the residential areas by the function of the province in this set of data. It was clear that there was a difference in the actual sample and the difference between males and females in the level of satisfaction from the table above, however, that is not enough of a difference to make an inference about the target population which is beyond the sample (Davis, 2011). Chi- square test rejected the hypothesis.
For hypothesis number three (table 10), the level of satisfaction in housing units was tested again but under the effect of the respondents personal status. Table 10 shows that 63% of the respondents were singles and 37% were married. From this perspective, this will also affect the results of the tested samples to determine the level of satisfaction among singles and married in housing units and residential areas.

6.1.3 HO3:

H<sub>0</sub>: There is no significance in the relationship between the level of satisfaction in housing units and the quality of these housing units determined by the personal status.

H<sub>1</sub>: There is a significance in the relationship between the levels of satisfaction in housing units and the quality of these housing units determined by the personal status of the respondents.

The generated number (0.0003) was less than the targeted number (0.05) which is enough evidence to conclude with that there was a statistical significance in the relationship between the level of satisfaction and the personal status of the residents (single and married) in the residential areas in this set of data. It was clear that there was a difference in the actual sample and the difference between singles and married in the level of satisfaction from the table above, thus, that was enough of a difference to make an inference about the target population which was beyond the sample (Davis, 2011). Chi- square test proved this hypothesis.
The level of satisfaction in housing units was tested again but with different variable. The personal status of the respondents was a factor to determine if there is a significant level of satisfaction/ dissatisfaction in residential areas.

6.1.4 HO4:

H₀: There is no significance in the relationship between the levels of satisfaction in the residential area determined by the personal status of the respondents.

H₁: There is no significance in the relationship between the levels of satisfaction in residential areas determined by the personal status of the respondents.

The generated number (0.0734) was more than the targeted number (0.05) which was not enough evidence to conclude that there was a significance between the levels of satisfaction in the residential areas by the personal status of the respondents in this set of data. It was clear that there was a difference in the actual sample and the difference between single and married people in the level of satisfaction from the table above; however that was not enough of a difference to make an inference about the targeted population beyond the sample (Davis, 2011). The Chi-square test rejected this hypothesis.
The results presented in the previous chapter make evident the well-known effects of the foreign labor force, living in groups and communities in the six provinces of Kuwait. There was much support for the fact that some foreign labor force living areas are less organized, according to government and moralistic standards. Increased migration and high numbers of foreign manpower (2,611,292) in 2012 have proven to be the outcome of the economic prosperity. The migration of the labor force to Kuwait has been studied since the beginning of this phenomenon. Incidences such as Al-Fil (1988) gave notice of the first signs of rising foreign labor within the country. According to Al-Fil, Kuwait was established around Kuwait City – a city composed of simple structures before the discovery of oil. After this point, Kuwait drastically expanded in size, as increased demand and a newly augmented population advanced all services. Consequently, migration also increased due to the need for manpower over low wages workers who are less educated individuals residing within the country.

The demand for expatriate labor force has amplified pressure on the country’s services. Providing quality housing incorporating quality was a challenge in the 1950s because of the massive influx of persons from other regions. However, the country progressed to a modifier phase of providing services (especially housing) for Kuwaitis and non-Kuwaitis (Al-Salem, 1941). The implementation and adaptive plans of Kuwait include sentiments to provide suitable housing services for all residents. From the first structural plan in 1952 to the last revision in 2005, Sir Buchanan reports long range plans with future expectations continuing until 2030. In this report, the housing sector retained the highest percentage (33%) of all other land uses (Al-Fil, 1988). Although these plans were only intended for a short term development regimen, many unexpected events occurred, – such as the second Gulf War, which substantially affected the economy. Most importantly, the plans demonstrated a prediction of the increase of population
over time, but these short-timed plans were not able to absorb the changes in the population structure. Because of this, housing services were under pressure as the government struggled to follow these changes by implanting some housing projects outside urban areas by establishing new cities like Al-Kheran in the Al-Ahmadi province (Al-Salem, 1941).

Figure 73. Governmental housing projects in the 1950s (Mark, 2009).
As noted, the housing services provided for non-Kuwaitis differ by amount, quality and by province. This difference is mainly related to the general structure of the province and its economic status. Also, free working zones, as well as rental prices, are all attractive features of foreign housing. Some provinces of commercial centers like Al-Farwaniya have a greater portion of non-Kuwaiti labor force members (602,346). Others, such as Mubarak Al-Kabeer, have less economic activity and fewer number of foreign residents in 2011; these estimates were supported by the survey responses where only 2% lived in Mubarak Al-Kabeer and 38% lived in Al-Farwaniya. In addition, some of these laborers are housed for free and some pay minimal rental prices as a benefit for working in some companies. These noteworthy results were discussed in more prolific detail in this chapter, organized by the functions of each province (3KMPR).
6.2 Land Use:

To explain the findings from the official data analysis, it was very significant to provide a specific overview about the function of every province and the types of activities involved, a main factor for provided types of housing. This will also allow better understanding and reasonable justification for the laborers’ concentration in some provinces rather than merely referring to some changes in land-use that have occurred over 10 years. This information was in connection with types of housing, dependent on the support of field work and survey’s data analysis.

6.2.1 The Capital: Land-use for housing Kuwaiti and investments properties for housing non-Kuwaitis varies amongst governmental properties. The Capital is also the heart of the main commercial center, Sharg City and its surroundings, are exceedingly active economically. Some economic activities require shop owners and employees to live close to their properties. The Capital is divided into educational, medical and industrial districts, which include governmental and private properties. The Shuwaikh Educational system provides houses for foreign teachers, professors and employees in the educational sector. The same can be said for the medical district in Shuwaikh, which provides houses for doctors and employees with medical degrees and work for the medical sector in the country. These are provided at a low cost in comparison to market value. These projects could be considered both collective and private family houses.

The increase in productivity could be attributed to new construction, land reuse and activity organization in the Capital that started in 2010. Official statistics indicated a gradual increase in the total population of the Capital from 2003-2006. The non-Kuwaiti population alone has increased from 223,744 to 263,294 (ASA, 2011). Despite the fact that official data was missing for the years between 2007 and 2011, it is strongly suggested that a decrease in the total
non-Kuwaiti population of 179,568 is related to the changes Capital in land use and reconstruction of old buildings and traditional houses. As noted before, this province consists of a mix of activities and governmental services which make it a great attraction for non-Kuwaiti workers as families or individuals. As noted in the previous section indicated high numbers of non-Kuwaiti private families (25,456) and single laborers (11,315) while in 2005 single laborers became 2,097 and non-Kuwaiti private families 9,393. This implies interesting changes in the Province of the Capital in only two years.

Single laborers steadily decreased, reaching 1,231 in 2011 while private non-Kuwait families increased to 18,892 (ASA, 2013). According to the Third Master Plan of Kuwait 2005, future plans for the Capital residential areas are dependent on plans for the northeast part of the Capital in Sharg City and Al-Sawaber residential project; both were overcrowded areas. The second segment was the residential commercial belt which connects all main streets in the Capital, along the western residential areas.

As predicted in the Master plans, the non-Kuwaiti population will consistently grow in numbers of working families and single laborers. The census of 2005 showed that the total non-Kuwaiti workers households in the Capital reached 33,900 which is 53.06% of the total population in the Capital. However, the population estimated by the Master plan of Kuwait was 28,230 (3KMPR, 2005). This means more plans and reconstruction might have been needed to account for the increased population. Still in 2005, as noted in the previous chapter, the numbers of available dwellings for each type of household was enough to house these families.
Figure 75. General Land Use in the Capital in 2005 (3KMPR, 2005).
6.2.2 Hawalli: This province has major commercial activities, which are considered an attractive point for non-Kuwaitis to reside and open a private business. Non-Kuwaiti laborers’ families are highly concentrated in Hawalli because of the abundance of investments and commercial apartment buildings. These constituted 62.69% in 2005 (3KMPR). Also rental prices are parallel to the income of these families; they resemble 70.87% of the total population of the province of Hawalli in 2005 (3KMPR). Rental prices vary in Hawalli depending on the location. The cities on the sea side are more expensive, while the rest of the province has moderate pricing. Single laborers are prominent in Hawalli, because of the availability of cheap residential units. In addition, it has a major educational district, modeled after the Capital, various governmental departments and the concentrations of companies. The availability of investment housing is the primary reason for the concentration of non-Kuwaitis in Hawalli. Unsurprisingly, the non-Kuwaiti households steadily increased (106,074) to 119,933 in 2005 with available housing because of the increase of investment and commercial housing in augmented numbers for the vacant. Thirteen thousand two hundred and sixty-two houses were under construction 1,861, the highest in Hawalli, were occupied after 2005 (3KMPR, 2005).

6.2.3 Al-Ahmadi: It has a great quantity of private non-Kuwaiti families (52,444) and also collectives (6,233) as reported in 2011. This was because of the economic nature of this province. Al-Ahmadi was called the City of the British as they resided there since the discovery of oil, and no Kuwaitis were living in this province expect the Kuwaiti employees of oil companies. Also these employees mostly prefer the British Hospital and its housing shelters. Al-Ahmadi is the center for private and governmental oil companies, which provide private houses for their employees with minimal rent prices, and apartment buildings are provided for single laborers and general employees. Beside oil companies, many other governmental services are
provided for laborers like the janitors house which is provided by the Municipality of Kuwait. In addition, Al-Ahmadi has farm lands and livestock houses which require single laborers to live close to the farmer’s market in Al-Wafra. In most cases, temporary houses are provided for the collectives within the farms’ properties.

Since 2006, many new cities were established in the province of Al-Ahmadi- cities which are included in the governmental program of housing Kuwaitis such as Al-Aqeela and Al-Fantas residential. Beside this housing governmental move, the province has an economical function which is not older than five years. It establishes resorts, shopping centers and commercial buildings, which also provides housing for non-Kuwaitis related to the commercial activities. This province remains the least dense province for its size. For this reason the total non-Kuwaiti labor collective households and private families increased from 45,716 in 2003 to 58,677 in 2011 (ASA, 2011).

![Image of Oil Company Employers Facility in Al-Ahmadi in the 1940s](KOC, 2011)

Figure 76. Oil Company Employers Facility in Al-Ahmadi in the 1940s (KOC, 2011).
6.2.4 Al-Jahraa: It has some similarity to Al-Farwaniya pertaining to the distribution of activities. However, they are distinguishable by the social and cultural structure of the provinces. Due to its social structure, the foreign single laborers’ housing system is not very much accepted. The dominant of the Bedouin atmosphere which has social restrictions in accepting foreign influence. Although it has astounding numbers of different commercial and investment activities, most single laborers live away from the urban concentration where Kuwaiti families live. For this reason and despite the fact that there are multi-story collective housing buildings for single foreign laborers, the collective households are only 1,284 while the non-Kuwaiti labor families were 28,304 in 2011 (3KMPR, 2005).

Al-Jahraa has governmental and commercial properties, where resorts and shops are very widespread, but mostly inhabited by Kuwaiti families. The workers of this group are either living in the “Laborers House” or in some private family apartment buildings. Some even live in another area and commute during working hours. Due to it big size, the density is low and rental prices are also low in Al-Jahraa. For this reason many laborers choose to live in Al-Jahraa and work in other cities like Shuwaikh Industrial district, although it is far away from Kuwait City. On the other hand, non-Kuwaiti families or laborers who work on field missions away from the urban area in Al-Jahraa often choose to live in Al-Jahraa for its location which is close to oil and water drilling fields and many fertile lands. Alrowthatain is also a water station in the North, which provides temporary houses for single laborers.

6.2.5 Al-Farwaniya: Because of the abundance of investments and commercial housing services, Al-Farwaniya has a high laborers population. Al-Farwaniya is divided into Kuwaiti housing areas, investment housings and commercial activities. Rental prices are low; this gives the residents of this province more flexibility in choosing their living space. However, the prices
vary based on areas’ function. For example, apartments away from the commercial center could be found for 100-160 USD and apartments near the commercial center vary in prices from 190-300. The economic function is very similar to Hawalli and consists of wholesale markets, garment shops, supermarkets, electronic shops, jewelry markets and other establishments.

The number of non-Kuwaiti Families who are residing in Al-Farwaniya escalated in numbers from 51,457 in 2005 to 125,779 in 2011 (ASA, 2013). This increase indicates an increase in all activities and land uses. The collective non-Kuwaiti residents in Al-Farwaniya doubled from they were 5,761 in 2005 to 10,097 in 2011. This is a sign of the economic prosperity, but also an indicator of an overcrowded population. In 2005 the total dwellings for private families and single laborers were 80,649; vacant projects amounted to 7,176, and 984 under construction (high numbers in comparison with other provinces) (3KMPR, 2005).

6.2.6 Mubarak Al-Kabeer: This province has distinct land use, which differs from the other provinces. It had one specific housing service which is limited for Kuwaitis. There is a very humble amount of investments complexes. Most lands in Mubarak Al-Kabeer are governmental or related to the governmental program of providing a plot of a land (500 square meters+) for house-building and land loan for Kuwaiti families to build their houses. Mubarak Al-Kabeer is one of the new provinces and some of its cities are not older than twelve years. A very small number of commercial buildings exist – buildings where laborers can open a business and live beside the investment apartment buildings. Twenty one thousand four hundred and thirty-seven are commercial and 317 are under construction. This indicates a humble increase of non-Kuwaiti families and singles in the province. Mubarak Al-Kabeer has the lowest number of non-Kuwaiti families and singles because of the governmental housing specialty program.
Figure 77. General Land Use in the six Provinces in Kuwait and the Proposed Future Project outside the Urban Area (3KMPR, 2005).
There are some variables influencing the concentration of laborers and the distribution of non-Kuwaitis’ houses. The rent could be considered the most important factor of this occurrence. As observed from the fieldwork and the survey, many single laborers do not consider the quality of the houses as much as the rent and economic activities. One of the surveyed families stated that they are very satisfied living in apartments in walking distance to a supermarket, a governmental health center and other shops in Hawalli in locations considered close and accessible.

6.3 Types of Housing Units

6.3.1 Houses

Since governmental policies do not allow non-Kuwaitis to own houses or apartments, their only choice is to rent a housing unit or receive housing provided by companies and governmental departments. Based on the results of the field work and the survey, the foreign workers either live on the rented floor of a house or rent an apartment. For some housing sites, field observations show that there are some workers who were housed in some private companies housing units for free. In general, many variables have affected the choice of non-Kuwaitis to rent housing units. These factors explained by the following:

First, foreign workers are not very likely to live in houses instead of apartments. Thirty-five percent of the total respondents live in one floor in a house (Nadoum, 2014). There are many reasons for foreign laborers not to live in houses where Kuwaitis live, such as higher rental prices. Based on city functions, most Kuwaitis - for security reasons - prefer to live in areas away from the crowded the commercial centers, unlike non-Kuwaitis. Because of community differences, foreign laborers like to be close to people of similar nationalities. However, it is favorable for some wealthy working families to rent a floor in a house because of the size of their
families. As indicative of the last chapter, 40% of the surveyed sample were Arab and live in Al-Farwaniya.

Second, in regard to rental prices, one floor in a house may have higher rental prices than apartments in most cases. This depends on the varying prices varies from one area to the next. Rental prices also vary on account of the condition of the house. However, some families of laborers’ parents with high income prefer to live in houses or on a floor in a house owned by a Kuwaiti family, for atmospheric situations such as privacy. The location of the house has a great effect on the rental prices even within the same province. To illustrate, the survey responses described one respondent, who lives in the province of Hawalli who lives with four siblings and pays more than 900 USD a month. In the same province, a family of four live on one floor paying only 500-601 USD monthly rent. Based on this research, most of these houses are in good condition and are prepared to be rented. In many cases, the family who owns the house builds it for a purpose of renting one floor. It is noticeable that the house has two exits and/or entrances, private stairs and built-in structure to separate two families.

Third, within the reconstruction plans of old Kuwait City, traditional houses were removed and the land was reused for building complexes or expanding shops and other commercial activities. Some traditional houses were kept in the city but were uninhabited, waiting to be remodeled as museums or traditional social gathering houses (“Diwaniyas”). These renovations mostly took place in old Kuwait City. Temporary houses are essential for agricultural districts far from the urban areas. These temporary houses are only inhabited during the harvest season, and could be removed and reconstructed, contingent on the need for these houses. Moreover, there are some conditions for housing non-Kuwaiti families in governmental houses. Identically, a small percentage of non-Kuwaitis live in houses. This condition is applicable to non-Kuwaiti Arabs of
a Kuwaiti mother or those who served in the Kuwaiti army. These houses are free of charge or of low rent facilities but should not exceed 200 USD a month in Al-Sulaibiys. Some houses in Al-Ahmadi and the Capital are owned by companies to house their employees (Al-Jassar, 2009).

Figure 78. Floor plan for a house with multi private entrances and exits (Abdulhasan, 2009).

Fourth, In general, one floor in a house was inhabited by high income foreign workers like teachers and engineers. In most cases, big companies in the industrial areas provide houses for their workers in a low-price range. Other companies pay the rent for their workers. This is common practice in provinces like Al-Ahmadi where private oil companies and municipality facilities are plenty. Renting one floor in a house is only limited for working families and not for single workers. However, single laborers have the choice of renting apartments (Ghuloom, 2013).
6.3.2 Apartments

With the given variables, apartments are oftentimes the first choice for housing non-Kuwaitis. Apartments are highly abundant in most provinces in the State of Kuwait. They are provided by investors and individuals on non-governmental lands or lands subsidized by the government. This type of housing is provided for non-Kuwaiti and Kuwaiti private families as well as single laborers.

In the event that foreign families choose to rent an apartment close to their working place to reduce fuel consumption and commute times in relation to their jobs and professions. For example, from the survey; Hawalli residents of foreign laborers choose to live in Hawalli because it is also where they work. This does not apply to some single laborers who sometimes reside in Hawalli for its inexpensive rental prices. The same laborers may work in Shuwaikh industrial, because free transportation is available. In this case, commuting from city to city should not be an obstacle to commuting. In provinces, like Al-Farwaniya and Hawalli, low-cost apartments could be found along these provinces. Research reports that most of the respondents live and work in Hawalli and Farwaniya, as well. Most Arab families choose to live in more private units not in close proximity to the single laborers complexes and economic activities, as they mostly seek a calmer atmosphere and safer living areas. These conditions also often effect rental prices.

Based on the survey the rental prices of these apartments are, in most cases, related to the location’s surrounding activities and the quality of the apartment. Based on the survey’s responses, two of the respondents live in the province of Hawalli. However, one pays more than 1,000 USD a month while the other pays 700 USD a month. This difference is an indicator of different locations and qualities of residence within the same province. Families making a
monthly salary in excess of 3,000 USD, such as teachers and telecommunications company employees and private petroleum companies’ production, usually get promotions to live in specific complexes. Some companies may also pay the rent for their employees (Nadoum, 2014).

Housing laborers also rely on professions and working sectors. Teachers and doctors in the governmental sector are provided specific housing services in the medical and educational districts. Doctors and college professors’ apartments were nicely maintained and well-kept. The government provided free or competitively-priced housing for doctors and professors. In the Capital and the Medical District, apartments are shared by two single laborer roommates, of the same degree of doctor and medical staff. When housing families, the size of the apartment depends on the size of the family. The same may be said for housing workers of the educational sector in the Capital Educational District (Ghuloom, 2013).

Company housing in the private sector is provided for workers by foreign workers and their families near the industrial district. Most of these laborers’ families are of high income and high education degrees. There is a strong commitment to quality amongst governmental and private housing services, which reflects the necessity to satisfy the residents of these units (Bergner, 2008). In other cases, some laborers have a lower level of education and a lower employment status while under a governmental contract. This housing is appropriate for them. Low-wage laborers receive $250- 300 as a monthly salary from the governmental sector (Naoum, 2013). Their selected housing is based on their occupation. To illustrate, janitors’ housing is provided by the Municipality of Kuwait and located in Al-Ahmadi province. In the private sector, houses provided to laborers are also based on their occupation. Employees such as gas station laborers have separate houses provided by their employers.
Figure 79. Floor plan for the first floor in one apartment building in Kuwait (Razak, 2010).

Single laborers under government or private contract and individual’s sponsorships, have rights to housing services provided by investment or commercial housing projects. In general, single workers prefer to live in groups and share rent expenses to save some of their income to send to their families in their homelands (Chalk, 1997). This phenomenon is common amongst different nationalities, more so in Khaitan, in the province of Al-Farwaniya, in Murgab, in the Capital and many other cities. This phenomenon created an unhealthy environment for the residents of these cities. Unfortunately, there are no restrictions regarding the number of residents enforced by apartment complex owners since they are pleased with tenant rent.
payments. This has an intensive effect on the living conditions, physical living areas and housing quality of these working individuals.

The living conditions discussed in this research vary based on the income, educational status, and type of jobs workers have. Single laborers live in groups of same nationalities, often in one apartment. Some apartments are overcrowded and exceed capacity limitations. Based on survey responses, one two-bedroom apartment of in Al-Farwaniya is a shelter for 14 Egyptians. This leads to high over-capacity rates and increased commercial activities, affected by congestion in the cities of concentration. It was widely observed that maintaining these apartments depends on the educational background and the birthplace of these laborers. Laborers with low educational levels, who are from poor countries with less social and health maintenance available, have less hygienic and organized apartments. This affects, not only the interior of the housing unit but the general look of the areas. More awareness from the residents of these cities in commercial and residential areas could aid with this socio-environmental ailments (Ghuloom, 2013).

With regard to this research findings, the majority of the respondents were uneducated or have received only primary education. However, they are all employed - some by above-income or self-employment. This makes them capable to rent apartments with fewer roommates. In spite of the fact that these living units are overcrowded and lack adequate health standards for suitable housing units, there is a strong satisfaction with both living areas and housing units. However, the chi-square test proves the hypotheses that there is a significance between the level of satisfaction in housing units determined by gender and personal status, then the test rejects the hypotheses that there is no significance between the level of satisfaction in the living areas determined by gender and personal status.
Finally, to avoid the consequences of this occurrence and reduce the overcrowding of single laborers within the same city housing units, the projects of the City of Laborers was implemented specifically to target single laborers of low wages. The first project was designed to reduce the numbers of single laborers’ residents within the active centers of the province of Al-Farwaniya. Since Al-Farwaniya is one of many foreign workers’ favorite living and working province, this City of Laborers was constructed in the Shedadiya City of full preparation to substantiate 8,096 people and reduce the congestion in teeming cities within the province of Al-Farwaniya.

The second project, as detailed by the previous chapter, was constructed in the province of Mubarak Al-Kabeer in Sabhan City in order to house 3,200 workers. The primary function of this city is industrial and commercial relations, and it has a very low foreign population when compared to the total population of the province of Mubarak Al-Kabeer. These projects not only house persons, but also provide better general services for the foreign workers within the cities of laborers. Despite the fact that these projects are all-inclusive of quality housing attributes, the projects do not emphasize any kind of distribution for laborers in these housing units.

The housing units are divided into blocks and private units but there is no classification for the distribution of laborers within housing unit programs. The social constitution of the cities where laborers live is based on nationalities and communities gathering. This type of distribution has led to the overpopulation of similar nationalities within one geographic space. This is a direct result of the monopoly of manufacturing and free business within the area. For these reasons it is essential for the completion of these projects to provide a clear plan for the distribution of the residents throughout the housing units of the cities of laborers, which incorporates collected occupational and educational status data.
The plans are considered to be a step forward in the governmental policies for housing foreign laborers in affordable units. Through these cities, laborers could manage decent living standards without having problems with overcrowding. These cities have a good foundational preparation, with all services provided and strong infrastructure, which will prevent the consequences that are facing the current cities in the country. On the other hand, the cities of laborers the city design is open to criticism. These cities seems to have a unified design and structure. The repetition of building form has ruined the identity of the city and made every block look exactly the same as the neighboring block.

The problem might not be easy to solve by establishing cities for laborers, there is no similar case to the city of laborers, however; a laborers camp in Dubai might provide an evaluation for the concentration of expatriate laborers in one living space. To provide an evaluation supported by a example which are the laborers camps in Dubai. Although Kuwait hasn’t reached that level of unsolvable problem, it is significant to keep this similar case in mind to reduce the consequences in the future. In Dubai, United Arab Emirates in Muhaisnah City, the laborers are distributed on housing camps. Muhaisnah is divided to four sections by numbers, the first one is Madinat Muhaisnah 1, Muhaisnah 2, Muhaisnah 3, and Muhaisnah 4. Muhaisnah is the one of the most populated communities in Dubai with 90,000 residents. Muhaisnah 1, 2, and 3 is a home for many foreign workers and especially for collective labor. These localities contain labor houses and labor accommodations mainly for South Asian workers who work in the industrial areas around the Muhaizns. These Muhaizns are called the "Land of Gold" by the residents of the expatriate laborers. The residents of these camps lack safe and healthy living environments. The living conditions of the workers in Muhaisnah were criticized by the Human
Rights Watch, and this made the government of Dubai close many labor camps in Muhaishnah (Kubat, 2006).

Similarly, Kuwait provides housing for individual workers in separate areas or in industrial and commercial working zones. Kuwait, with the project of the "City of Laborer", provides full cities with full services for foreign workers to reduce congestion, reconstruct and reuse the land where the workers used to live, and also provide good living quality for the workers. The numbers of the residents of the Cities of Laborers are going to be limited, and with the increase of migrations, these cities might end up overpopulated and the services in these cities will be under pressure in the future as well (City of Laborers, 2009). Providing highly secure cities for the workers also doesn't necessary mean that these cities will provide a safe environment for the residents. The collection of ethnic groups and the variety of nationalities in one space might lead to ethnic tension and other problems like sex trafficking and prostitution. On the other hand, these cities will provide the essential living needs for these workers. The cities of laborers are beneficial for the government especially in the implementation of the governmental policy in separating Kuwaitis and non-Kuwaitis in residential areas and also in reconstructing and relocating land. For the Kuwaiti population who were trying to flee away from the residential areas of the non-Kuwaiti single laborers, generally, the cities of laborers will provide a safer environment within the residential areas in the urban area (Nadoum, 2013).

As the demand on foreign labor force increased, the demand on housing also increased as an equal relationship. The discussion emphasis on the educational background, employment status and sector, and the daily habits and lifestyle of these laborers. These factors have an effect on the housing sector and the general organization of the cities in Kuwait. The pressure on the general infrastructural services beside the housing sector are facing a challenge with the increase
of the population in Kuwait. The implementations of many new projects would be a solution to decrease the chaos in the current living areas, however, these projects will need modifications in the future to cope with the changes. According to the finding this problem can be analyzed from different approach considering the general functions of the cities in Kuwait to provide more organization between commercial and investment housing as residential functions and other commercial and investment activities. Overall, the problem of the distribution and housing labor force could be define with plans to relocate some activities and specify land uses in each province.
Chapter Seven: Conclusion

Figure 80. Kuwait City in the 1940s (on the left), Modern Kuwait City (on the Right), (Kuwait-History, 2012).

Kuwait went through many phases that changed the general population structure and, general land use, so the implemented projects to absorb these changes. From early on when Kuwait City was established on the west coast of the Persian Gulf, this small piece of land attracted merchants and travelers and many people from the surrounding regions to reside in Kuwait City. The City was limited on daily life needs. The city was surrounded by walls for many reasons. I.e. protection. Also the organization of the city was distributed in neighborhoods, a market zone and harbor zone. The neighborhoods were small and the houses were connected to each other, roads were narrow from 1 meter wide between neighborhoods to 3 meters wide in the harbor zone.

Kuwait earned its reputation from merchants and started to attract more workers from the surrounding areas. As they resided in Kuwait the areas became too small to absorb more residents in Kuwait City. For this reason the walls were removed for the expansion of the city
and building more houses, however, slums started to appear and spread across the city (Al-Jassar, 2009).

With the discovery of oil, Kuwait went through a transition phase of development. The population structure changed over time, where the foreign population increased in numbers to exceed the native population. As discussed in this section, many factors played important roles in the dominant labor force in Kuwait, like high salaries. In addition, housing labor force became an important issue in Kuwait because of the continuous increase in the foreign working population, which increase the demand on housing services and other infrastructural services. The
distribution of land use was also affected by the distribution of the working force especially with the absence of law and regulation in changing activities in a certain space, or using the land without considering the general atmosphere of the area.

A city as an economic, cultural, and political space has unique attributes that helps people form mental perceptions about them. People usually create their own image of cities based on their different experience and perceptions. Every location in these cities has its own recognizable image; whether remarkable or unimpressive, the appearance of cities has a significant impact on the perception of the resident. For this reason the reorganization of the city’s structure and its reshaping cities should give them a specific identity that reflects a specific environment of a vivid city picture (Lynch, 1960). The research undertaken explored how the cities in Kuwait reflect the perceptions of the residents.

In the State of Kuwait the appearance of the cities is greatly influenced by the function of the city. Many cities are categorized as industrial zones or commercial zones, enabling them to differ in terms of their charisma and attraction for residents and visitors. Working zones in cities and provinces of industrial and commercial function are usually denser than the residential and light work zones. The image of many Kuwaiti cities changed over time with the changes in its functions, and the behavioral and cultural habits of its inhabitants. As Kuwait had many active and profitable industries, it became an attraction for workers, especially those who migrated from foreign markets. With the increase of skilled class migration, a small country like Kuwait underwent appearance and municipal modifications that need to be addressed by the government in order to reduce the adverse consequences on the public perception of the image of Kuwait’s cities.
Many cities in Europe and the United States were established as working hubs, which separated the city from the zone where labor resided and worked. Until recent 1900s some cities in the United States retained characteristics of worker specific zones like farming industries. In Kuwait and generally across the Gulf States, the number of skilled class low-level workers has exponentially increased. As a result legislation is being employed to regulate migration. In Kuwait, the flow of unskilled workers has significant consequences on growth of the economy and the provision of services as they fill the much needed jobs in the industries. For instance, since the governments is highly concerned about housing services for Kuwaitis and non-Kuwaiti residents, a large percentage of the spending budget is dedicated to housing services. For a small country like Kuwait, with 66% of its population being non-Kuwaitis, the infrastructural and municipal sectors face additional pressure to meet the demands created by the behavioral and cultural living habits of the migrated work force.

A number of characteristics was observed regarding the housing of the foreign working families and individuals. It was found that the multi-ethnic population of the Gulf is divided into housing areas and neighborhoods. The housing patterns have been analyzed by many eco-socialists, who concluded that the division is a form of direct social and economic segregation. This segregation was driven by the onset of oil wealth and the subsequent mining and refining companies that required additional workforce which was attained through hiring of foreign skilled and unskilled workers. After this transformation in the economy, the general lifestyle changed in Kuwait and lead to a traditional formation of neighborhoods and housing change into a modern context of villas and high-rise buildings (Fox, Sabbah, &Al-Mutawa, 2006).
7.1 Implications

The problem identified in the research lies in the organization of land usage and the houses projects in each province, as well as overcrowding in the housing projects. The general appearance of the cities became dependent on the congested housing for projects for labor. As highlighted in the results, laborers preferred to live in provinces like Hawalli and Al-Farwaniya either with their families or as individuals. These two provinces as a result have the highest percent of dwellings for non-Kuwaiti families and singles. The supply of investment projects for both commercial activities as well as commercial housing became abundant, which made it possible for emigrant labor to afford the cheap rental pricing resulting in overcrowding. It has been shown that the concentration of the working class depend mostly on the function of the province. The industrial and commercial activities are more attractive for the foreign workers than other activities. The laborers prefer to live in close proximity to regions where they work except in certain cases, like working outside the urban area when involved in mining, drilling and farming professions. These workers are often single males or females held under a temporary contract for field tasks and typically reside in residential camps (Fox, Sabbah, & Al-Mutawa, 2006).

The housing of single labor can be observed as the main issue with the housing services provided by the government and the investments housing projects. The current labor housing is spread thin in supply due to the increase of manpower which reached 2,119,947 in 2010 (SAS, 2013). Characteristically, the single labor houses are overcrowded with an average of 4 individuals residing in one room. This has increased the consumption of the infrastructural and general services to exceed the planned capacity provisioned for by the government. In addition, the high density of labor in central locations of some cities has changed the appearance,
dynamics and outlook of these cities. It has also given the labor sector the power to influence the economic and political dynamics due to their professions and labor work. It is believed that single labor chooses to live in big groups of seven to ten individuals per apartment which was designed for four residents only. They do so in an effort to save money and send remittances back to their families. On the other hand, the high-rise apartment buildings are rented by the foreign middle-class working families, reflecting their western lifestyles and tastes (Fox, Sabbah, & Al-Mutawa, 2006).

There is significant interaction between Kuwaitis and non-Kuwaitis on a daily basis in some working places. However, the frequency of the interaction does not necessarily reflect acceptance of foreign workers' presence in the same living areas where Kuwaitis reside. Since the percentage of the imported labor is very high, the cultural and economic influence of their dominance can affect the native population. This dominance also has a significant impact on characteristics of the region where new types of activities are adopted that are traditionally not Kuwaiti. The government strives to regulate land utilization, but the massive flow of the foreign workers makes it difficult. On a similar note, housing planning in specific provinces are also depicting problems. The concentration of the labor in specific provinces like Al-Farwaniya, has created a high density cities based on land use and function as a direct result of the housing habits of the working class.

A number of initiatives have been taken by the government to rectify the problems cited above. For social, economic and security matters, the government funds projects the likes of “The City of Laborers” as a solution for decreasing the density of the foreign population, especially single labors within families living areas. On the downside, even though the project
was proposed and has been implemented, its general structure lacks consideration for cultural, social, and education related matters, which undermines its success.

In order to solve the problems highlighted, it was proposed that the State of Kuwait should develop a strategy to determine the population structure by regulating migrations to the State of Kuwait. This is one method to preserve the identity of the local population, its economic and commercial status, and, most importantly, the level of service quality provided by the municipal and infrastructural bodies. The strategy can be implemented by introducing a set of detailed policies on housing services and land use functions, alongside implementing plans to reduce the influx of less educated foreign labor with lower professional status to reduce the pressure on services and attract laborers with higher and more qualified degrees. This will allow the local population to engage in more activities in the market which are presently monopolized by the foreign labor. In addition, specific detailed plans for housing foreign single laborers within the new plans of Kuwait City and the surrounding areas should also be provided. To prevent future consequences and concentration or dominance of foreign labor in provinces, the City of Laborers should include long-term housing plans of distribution under governmental observation during implementation.

Other strategies that are available include cooperation and planning between the employers in corporations and the government regarding regulation of the demand and flow of manpower to prevent social consequences and to reduce the burden on general services. In addition, the government can work with investors to modify the housing services and city structures in specific provinces from concentrated high rise apartment buildings into more diverse city structures.
7.2 Recommendations

The master plans of Kuwait proposed that Kuwait city will become a national and an international cosmopolitan city center for business and finance, as well as a commercial center. In order to approach the implementation of turning the structure of Kuwait City into a business international attraction, some modifications should take place, like redistribution and relocation of some land uses within the city and the surrounding areas.

To improve the general base of services in Kuwait and especially housing, investment, and development, programs are required which can be approached through the cooperation by the government and the private companies, to improve the current infrastructure and be prepared for sudden events. Also, it is more appropriate for the responsible authorities to be prepared for future modifications by improving the master plans of Kuwait in general and Kuwait city in specific for the amount of pressure on services – and eliminate short terms plans.

It is very crucial for the general infrastructure of the country to provide a detailed comprehensive physical plan that organizes the function of the cities by recognizing and identifying the purposes of every working zone in the country. In addition, the master plans take the capacity of services as a serious issue in these zones, however, the problem keeps increasing with the massive increase of migrations. For this reason, as highlighted that the country needs more studies on urban planning and designs and general landscaping for the development of these projects sites. Also regulation on land use should be proposed and taken seriously to reduce and eliminate land use collision.

As discussed, the general image of the cities depended on the habits and the daily lifestyle of the residents, in some areas where increasing the number of janitors and enhancing the daily cleaning process did not making any improvement on enhancing the general look of the
city, radical planning is required. Providing housing for the foreign labor force in the Cities of Laborers will provide a good chance to relocate some land use and regulate activities that do not match the general function of the city in some areas. This will give the government and the private companies as well a chance to relocate some land use and organize the city function.

As the housing scheme is concerned with providing housing according to the functions of the provinces in Kuwait, the new plans are affected by the structure of the zones in each province. For example, The Capital’s new housing plans would divides the province into Kuwaiti housing zone, a Commercial housing zone which connect commercial activities to commercial housing, while also provide housing for employees in the commercial sector. Considering the commercial, industrial, agricultural and investment floorspace, the maximum capacity of these spaces should be organized separately considering the population concentration within these cities.

Generally, the State of Kuwait has defined the aims for its future role as being a regional and international business center. With Kuwait’s strategic location the master plans could be set to improve the existing urban physical pattern and identify clear implementation plans for the future. As well as taking into consideration the population structure and the migration movements into Kuwait, also to promote policies on migrations and buildings as well. In addition, these plans should improve the social and the cultural identity of the country by improving the general look of the provinces. Also, the Government of Kuwait insures that the capacity of the cities in Kuwait can hold the population concentration and provide good quality services for the people.

This research highlighted the connection between the increase of the population in Kuwait and especially the foreign population. The increase of immigration to Kuwait has many
consequences that affected the general employment status in the country. With respect to the workers, the demand on low coast laborers was associated with many other problems and especially importing and occupying workers with low education and social status that differ from the Kuwaiti social construction. This led to decreasing many job opportunities for the native population. Also on a personal businesses, the monopoly of self-employment and personal businesses are in the hands of the foreign manpower. The government facilitated the establishments of small businesses, which resulted in overlapping in landuse. Many functions collided in some cities where the activities did not suit the general functions of the areas, which ruins the government’s efforts in beautifying and enhancing the look of these cities. Also, this research was significant to focus on the demand on services, which is increasing over time. The study was limited on housing services because the country’s spending is the highest for housing. However, other infrastructure services need to be considered, i.e. electricity and water for the future as the demand is in a continuous increase. The availability of housing units, their locations, and their structure within the general structure of these cities which are overpopulated, also exhausted the services provided by the Municipality of Kuwait, which calls for major changes. The governmental solution for this problem was to provide cities of full services but separated from the residential areas where Kuwaiti and non-Kuwaiti families live. However, with this continuous increase, changes might happen in the future, and these cities might not be capable to house enough foreign workers to reduce the congestions in other cities. The government is capable of improving the general plans in the country and setting a long-term structural plans which help to prevent any lack in services and fill the gaps that resulted from exhausting the services. In general, increasing population could be controlled by the government, and immigrations could be also regulated.
3. References


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Chapter Eight: Appendices

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**ANOVA**

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**SUMMARY**

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**ANOVA**

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Appendix C: Surveys and Interviews:

Expatriate Labor Force and Housing Services

UNIVERSITY OF ARKANSAS

Home Country and City? ____________________________ Sex: □Male □Female

Are you married? □yes □no □widowed or widower

How many children? __________

Where does your family reside? □Kuwait □other ________

Monthly income: □<$400 □401-600 □601-800 □801-1,000 □1,100-1,300 □1,301-1,500 □1,501+

Age: □<20 □21-25 □26-30 □31-35 □36-40 □41-45 □46-50 □51-55 □56-60 □61-65 □>65

Education: □Elementary □Secondary □HS □some college □college graduate (BS/BA) □MS/MA □PhD

Employment: □ full-time □ part-time □ unemployed

Type of employment: □ managerial □ private firm □ public agency □ own business

Employment sector: □ agriculture □ education □ health □ industrial □ tourism □ trading □ engineering □ religion

Employment Sector: □ governmental □ private

Where do you live: □ Capital □ Al-Farwaniya □ Hawalli □ Al-Jahraa □ Mubarak Al-Kabeer □ Al-Ahmadi

Where do you work: □ Capital □ Al-Farwaniya □ Hawalli □ Al-Jahraa □ Mubarak Al-Kabeer □ Al-Ahmadi

Your house type: □ apartment □ house □ floor in a house □ traditional house □ temporary house

How many bedrooms? ______ and bathrooms? ______ How many roommates siblings live with you? ______

Rent: □ <$200 □ 201-300 □ 301-400 □ 401-500 □ 501-600 □ 601-700 □ 701-800 □ 801-900 □ 901+

Do you interact with immigrants or imported laborers at work? □ yes □ no

How do you rate the frequency of your interaction with immigrants or imported laborers?

□ Rare (once to 5 times every month) □ limited (5 to 10 times a month) □ less often (weekly)
□ very often (daily)

Do you interact with Kuwaitis at work? □ yes □ no

How do you rate your interaction with Kuwaitis?

□ Rare (once to 5 times every month) □ limited (5 to 10 times a month) □ less often (weekly)
□ very often (daily)
Please circle the number that represents your best response to each of the following statements.

(1 = strongly disagree, 2 = disagree, 3 = no opinion, 4 = agree, 5 = strongly agree)

- How satisfied are you about your housing unit?  
  1 2 3 4 5

- How satisfied are you about your living area?  
  1 2 3 4 5

- Governmental housing units quality?  
  1 2 3 4 5

- Private sector housing units quality?  
  1 2 3 4 5
Interview with:

___________________________________________________________________________

Occupation:

___________________________________________________________________________

Employment position:

___________________________________________________________________________

Degree: ____________________________________________

Age: ________________________________________

What does Expatriate labor force reflect in terms of population distribution?

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

How do you believe the expatriate laborers are affecting the services in the country?

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

What factors do you believe attract immigrants to Kuwait?

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________
What do you believe is the governmental role in providing services for expatriate laborers?

What do you believe is the status/condition of housing services for expatriate laborers in Kuwait?

What types of houses/services do you believe are available to expatriate laborers in Kuwait?
What do you believe are the problems with housing expatriate single laborers?

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

How do you believe the expatriate labor force affect general land use?

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________
January 8, 2014

MEMORANDUM

TO: Shereen Nadoum
    T.R. Paradise

FROM: Ro Windwalker
      IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 13-12-328
Protocol Title: Expatriate Labor Force in Kuwait and Housing Services from 2003-2012

Review Type: ☒ EXPEDITED ☐ EXEMPT ☐ FULL IRB
Approved Project Period: Start Date: 01/07/2014 Expiration Date: 01/06/2013

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form Continuing Review for IRB Approved Projects, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (http://vpcrd.uark.edu/210.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 100 participants. If you wish to make any modifications in the approved protocol, including enrolling more than this number, you must seek approval prior to implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.
Appendix D: Photographs

Old to Modern Kuwait

Figure 82. Aerial photograph of Kuwait City in the 1950s (Yousifi, 2013).
Figure 83. The Timeline of establishing the three walls around Kuwait City (Khalaf, 2012).

Figure 84. The third wall (1920) surrounding Kuwait City after the expansion of the City (Diwan AlRoudan, 2013).
Figure 85. Kuwait City before the reconstruction plans (Mahgoub, 2012).

Figure 86. Men on fishing boats (skyscrapercity, 2009).
Figure 87. A narrow street in the center of a neighborhood in old Kuwait (skyscrapercity, 2009).
Figure 88. Corridors separating houses in Old Kuwait (Mahgoub, 2012).
Figure 89. Old traditional house (Diwan AlRoudan, 2013).
Figure 90. The discovery of the first oil well in the 1930s (Kuwait Oil Company, 2012).

Figure 91. A British family in their residence in Al-Ahmadi City (Mishary, 2008).
Figure 92. Al-Ahmadi houses were famous for their European designs (Mishary, 2008).

Figure 93. Commercial and business buildings in Hawalli in the 1980s (skyscrapercity, 2009).
Figure 94. The Current commercial area in Kuwait City (Budley, 2012).

Figure 95. Oil facilities in Al-Ahamdi province (KPC, 2012).
Figure 96. A map of Al-Ahmadi and the boundary of the master plan on Al-Ahmadi (Al-Rashid, 2010).
Figure 97. Current commercial area in Kuwait city (Kuwait City, 2009).

Figure 98. Business and investment buildings (Hadad, 2012).
Figure 99. Agricultural activities in Al-Wafraa (ASA, 2013).

Figure 100. Temporary houses in the agricultural landscape. (Al-Atwi, 2012).
Figure 101. Qordoba, a neighborhood in the Capital (Qordoba, 2014).

Figure 102. Modern Houses Spread in Kuwait's Provinces (Garrido, 2012).
Figure 103. A Picture for a Neighborhood in Kuwait with New Designs (Abdulhasan, 2009).

Figure 104. The Interior of the Houses in Kuwait Changed into Western Designs (Abdulhasan, 2009).
Foreign Workers Living Conditions:

Figure 105. Middle Eastern family residence in the Capital (Nadoum, 2014).
Figure 106. An old commercial residential building in the commercial zone in Kuwait City (Nadoum, 2014).

Figure 107. Apartment Buildings in Hawalli (Nadoum, 2014).
Figure 108. Apartment buildings in Shuwaikh Medical Zone (Nadoum, 2014).
Figure 109. Low-wage laborers in housing unit (Spiegel, 2012).

Figure 110. Low-Wage laborers housing units (Mahmoud, 2012).
Figure 111. Poor living conditions and habits ruining the general image of the city (Nadoum, 2013).
Figure 112. Eight workers living in a one bedroom apartment in 2013 (Ghuloom, 2013).

Figure 113. Many foreign workers living in a small Residential unit in Dubai, 2010 (Pliskon, 2011).
Figure 114. Single laborers apartments building in Farwaniya, (Looking down from a roof of a neighboring building) (Nadoum, 2013).
The City of Laborers

Figure 115. The City of Laborers in Al-Shidadiya, looking toward the administration building to the left of the apartment buildings in this photograph Nadoum, 2014.

Figure 116. A Digital representation of the City of Laborers (Ghanim, 2014).
Figure 117. Figure 120. The plan of the City of Laborers (City of Laborers, 2012).
Third Master Plan of Kuwait

Figure 118. The Strategic National Natural Plan, 2005-2030 (3KMPR, 2005).
Figure 11.9. The Implementation Plan of the Urban Area (3KMPR, 2005).
Figure 120. The National Physical Strategy (3KMPR, 2005)
Figure 121. Current existing natural resources (3KMPR, 2005).
Figure 122. The Implementation Plan for Kuwait City from 2005-2030 (3KMPR, 2005).
Figure 123. Stretching the metropolitan area boundaries according to the Master Plans of Kuwait (3KMPR, 2005).
Figure 124. Proposed spatial population density in the cities in Kuwait (3KMPR, 2005).
Figure 125. Spatial distribution of commercial floorspace within the boundary if the urban area (3KMPR, 2005)
Figure 126. The distribution of ethnic groups in the urban area in Kuwait in 1995 (ASA, 2011)
Figure 127. The distribution of ethnic groups in the urban area in Kuwait in 2005 (ASA, 2011)
Figure 128. The distribution of ethnic groups in the urban area in Kuwait in 2011 (ASA, 2011).
Figure 129. Population structure every five years in Kuwait from 2000 to 2030 (3KMPR, 2005).

Figure 130. The expected increase of the population in Kuwait, numbers (million) and parentages for the population in Kuwait in 2004 and 2030 (3KMPR, 2005).

Figure 131. Employment sectors and proposed employment structure in 2030 according to the Structural Plan (3KMPR, 2005).
Figure 132. Spatial population distribution in new cities outside the urban area (3KMPR, 2005).

Figure 133. The Development of the population in the new residential cities outside the urban area (3KMPR, 2005).
Figure 134. The demand on private housing from 2005 to 2030 as expected in the Mater Plans of Kuwait (3KMPR, 2005).

Figure 135. The demand on investment housing for collective Families and Non-Kuwaiti private families up to 2030 (3KMPR, 2005).
Figure 136. Metropolitan services capacity in Kuwait up to 2013 (3KMPR, 2005).