

The Implementation of Residential Projects on Sulaimani Master Plan

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Article Info

Volume 5 – Issue 1 – June 2020

DOI:

10.24017/science.2020.1.18

Article history:

Received: 04 March 2020

Accepted: 15 June 2020

Keywords:

Master plan, housing project, Sulaimani municipality, housing and roads directorate, investment directorate, Sulaimani.

ABSTRACT

Urban planning is a science that is reflected in the methods of land uses especially housing use, which is one of the most important sector in the city. It is considered the most important human requirement after food and wearer. The master plan is considered as one of the most important urban frame. It contains all the structural plans to control the urban expansion of all service sectors for the land uses in the city. It is planned for present and future status for the cities. The city master plan guarantees the equal distribution of urban land expansion from all sides. It secures the provision and implementation of housing projects to all residents in the city, Because of the economic growth that the city of Sulaimani witnessed after 2003. The city was suffering from a lack of attention to the issue of preparing a master plan. It did not have a master plan except for old studies that were carried out by the federal government. The master plan studies began from 2006 to 2009, then in 2009 it was recognized. Therefore, this subject is very substantial and the problem is that the implementation and site projection of housing was done in inappropriate manner with the stages of the master plan and the absence of evidence to invest in a housing sector. The purpose of this study is to identify a clear vision of housing investment projects, and shed the light on the necessary policies to be considered. Geography information system has been used to indicate the locations of housing projects in the city of Sulaimani. There is conformity with allocated lands for housing in the master plan. Then questions were addressed to specialists and agencies who had worked in housing projects such as the Directorate of Housing, Directorate of Investment, and the municipality. The questionnaire was proven after seeking the assistance of 9 experts to know the extent of the credibility of the questions that were laid down. The research found there are non-planning factors that affect the implementation of housing projects. Absence of laws and administrative errors in the implementation of housing projects playing the main role of having no clear housing implementation vision.

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1. INTRODUCTION

Urban master plan is a comprehensive and long-term planning document that guides a city's future growth and physical development [1]. It includes analysis, recommendations and proposals for a site's population, economy, housing, transportation, community facilities, and land use [1]. It shows the direction of urban growth in short and long-term phases and connection and spatial distribution of different land uses. Master plan plays a critical role in the environmental management of urban landscapes [2]. It includes information about population density and plans for accommodating expected population increase [3]. In doing so, it aims at avoiding random physical development. As a large part of city growth and development, residential areas have significant impact on the master plan and implementation. residential projects and housing strategies get a significant amount of attention when it comes to the master plan development and implementation.

Detailed studies and reports in the population housing strategy (as part of the overall strategic plan) from the city of Riyadh is an example for such attention. Housing master plan's considerations need to appear in many cases such as the update of the Al-Haidariyah – Najaf's master plan to achieve housing efficiency [4]. Despite of their availability and importance, many cities in developing countries do not adequately implement these physical plans. As a result, a mismatch between the actual master plans and land-use outcomes occurs [5]. It is the result of normal variation in the planning and development process, or be indicative of problems in the planning process [6]. Given the high rate population growth in the developing countries in Asia and Africa, where urban planning regulations, policies, and enforcement are in poor condition [7]. Illegal or mismatched residential development of urban lands is increasing at an alarming rate [8]. For example, the high population growth of India has resulted in the neglect of the urban areas and development of slums in many of its cities [9], [10].

The city of Sulaimani has suffered from rapid economic development, due to the rapid economic development during the last decade in the city of Sulaimani, the city faces the same issue. Absence of a well-designed master plan leads to a strong need of preparing a clear strategy for creating a functional and successful master plan, especially in the housing sector. The continuous urbanization and rapid expansion of the city from east, west, and south are mostly residential projects. Housing projects were implemented from three sides that are formally authorized between housing and construction. The Investment Authority and Municipality, despite some mismatch between them. A continuation in the status accelerates the unsustainable development of the city and urban sprawl which led to an urgent need to prepare a well-designed master plan. This research addresses this need by comparing the residential land uses in Sulaimani master plan to the actual implementation and housing needs. The research also undertakes an in-depth examination of the root causes behind the mismatch and nonconformance in order to decrease the city's rapid sprawl and unsustainable residential developments.

2. LITERATURE REVIEW

The evaluation study of Mutare city in Africa, focused on the matching between the conformity of the sector responsible for building housing projects and the master plan designed for the city requirements. From this study, it was confirmed that many violations occurred and the surpassing of the areas allocated for entertainment also happened. This study utilized the geographical information data known as geomeia [2]. A study by Fathallah 2000 analyzes the main usage of the land within the master layout in order to determine the direction of the urban growth of the city of Sulaimani. It helped a lot to analyze the classes of the population and their age groups in the city. It also helped to determine which age groups are most dominant and the type of housing units that are required and the grouping of these units within the city. It also analyzes the overall usage of the land in general to choose the most appropriate direction for the urban growth. The study concluded that the western direction in the route Sulaimani – Kirkuk is the best available and appropriate for the residential use [11]. While a study by Muhammad

2005 determines the sources of demand on the housing and specifying the factors affecting the shortage of the overall offers for housing units in Kurdistan. It is due to the misuse in the distribution of the lands and shortage in funding the investment in housing projects and the bad exploitation of the lands as a subject of housing. According to the study, its conclusions lead to essential recommendations of economic concerns and to the goal of revising the stated investment law [12]. Meanwhile, a study by Shamma 2009 does focus on the important role and contribution of the private sector in executing housing projects. Also, the necessity of abiding by the investment regulations conducted in Kurdistan for all other governorates in Iraq through applying the investment law of 2006. This law provides very comfortable facilities for the investor and attracts many investors to apply for such projects [13]. A study by Bedoui 201 concentrates on utilizing the modernization of the master plan of Haidariya town in Najaf to provide sufficiency. This can be accomplished by specifying the total population, number of families and the actual need for units through stating a housing plan each 5 years [4]. The researcher in this paper did study housing projects from another point of view, which is identifying and taking details about all housing projects in the city of Sulaimani, the researcher studied housing projects in terms of their implementation by the Housing Department, Investment Directorate and the Municipal Directorate.

3. CASE STUDY

Sulaimani city is one of Kurdistan region province. The limits of the study are divided into spatial, that was represented by the city of Sulaimani, including the boundaries of the city master plan. It is divided into four main sectors, which are the provinces of Bakrajo, Tasluja, Raparin, and the city of Sulaimani. As shown in figure number one, it was obtained from the municipal directorate. The temporal limits of the paper are from the base year of the master plan in 2009 to the end of 2039. The master plan is divided into three phases; the first stage is from 2009 to 2019, the second stage from 2019 to 2029 and the third stage from 2029 to The year 2039.

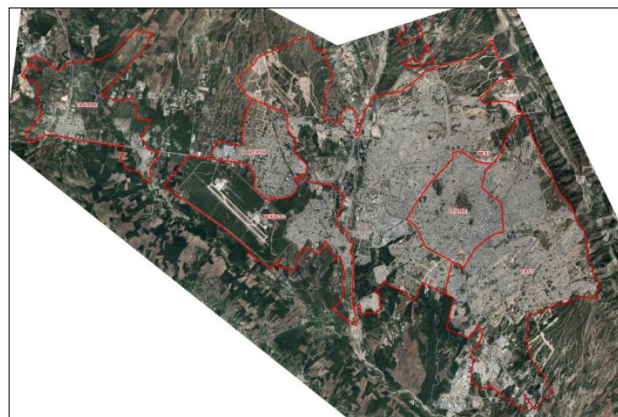


Figure 1: Master

plan sectors

4. METHODS

AND

MATERIAL

Through the research topic of the implementation of housing projects in Sulaimani master plan. And the entities that belong to its housing projects like the Sulaimani municipality, the Directorate of Construction Housing and Roads and the Directorate of Investment. The master plan prepared by a German company with the local entity represented by the municipal department that guided the company when preparing a report for the city master plan. The research sample included the crew of the master plan with the engineering staff who works in housing projects from the three entities that the housing projects refer to. The data was obtained

from the authorities who concerned with the housing sector and the researcher intends to follow the steps indicated in [14].

Taking experts opinion on the credibility of the questions listed in the questionnaire:

The researcher took the expert opinion on the validity of paragraphs of questions in the questionnaire. A group of experts in the field of urban planning clarified the validity of the questions and the question that obtained apparent validity with a score of (80) or more have been approved [14].

The questionnaire was presented to (9) experts who are specialized in Urban Planning. The results of the experts' opinion on the questionnaire and on the validity of paragraphs are shown in the table number one:

Table 1: The degree of validity of the questionnaire

NO	The Questionnaire	Valid	Not valid	Editabl e	The proposed amendment
1	Does the presence of a joint committee from the municipality, investment and housing department determine the type of housing projects that are being implemented?	x			
2	Building vertical residential buildings in residential areas located within Sixty Street.		x		
3	Does equal distribution of tasks between the Municipal Department, Investment and Housing help to implement housing projects?	x			
4	Supporting the distribution of housing projects in all proposed housing areas in the master plan for the city of Sulaimani.		x		
5	The higher prices indicate the higher residential units in the vertical buildings, as they are the most in demand in the city of Sulaimani.		x		
6	The higher height of the vertical housing units within the same population density, then it is possible to obtain wide green and recreational spaces between those buildings, and thus increase the possibility of preserving the natural environment of the city of Sulaimani within the residential areas.		x		
7	Do you agree to change the official approved green areas to residential?	x			
8	Do you prefer vertical housing units?	x			
9	Do you agree with reducing the implementation of housing projects in residential areas that are located near the city's entrances?	x			
10	Does the absence of planning put impacts on implementation and and locating some housing projects outside the housing areas in the master plan?	x			
11	Is it preferred that the municipal directorate provides more housing units that the investment and housing directorate?	x			
12	Is the Investment Department directed to execute residential units more than the Housing Directorate and Municipality?	x			
13	Do you agree with going towards implementation of residential projects instead of individual units?	x			
14	Is it preferred that the Housing Directorate provides more housing units than the Investment Department and Municipality?	x			

When we analyzed the results of experts' opinion on the validity of the questions, we found there were some questions that did not obtain a degree of apparent validity, which led to their cancellation. The statements number two, four, five and six, and ten remained.

5. RESULTS AND DISCUSSION

5.1. Characteristic of the selected sample

The questionnaire was distributed to (40) people related to the topic and the largest percentage of respondents are planners. In order to obtain accurate results, the researcher used five-digit measure, strongly agree, agree, neutral, disagree, and strongly disagree.

5.1.1. Experience in urban planning for the selected sample

We notice in table 4 that the experience in the field of planning for the selected sample is higher for those who have experience between one to four years. It indicates the less planning staff in the departments that have a relationship with the study problem and the lowest percentage is for people who have experience ranges between fifteen years or more.

Table 2: Percentage of the selected samples' experience in urban planning

Experience in urban planning				
	1-4 year	5-9 year	10-14 year	15- more
Percentage	32.5	27.5	25	15
Number	13	11	10	6

5.1.2. First question: Does the presence of a joint committee from the municipality, investment and housing department determine the type of housing projects that are being implemented?

By observing the figure number 2, 87.5% support the existence of a joint committee between the municipal departments, investment and housing. It determines the type of housing projects that must be implemented and their locations. This percentage varied between 45% of them strongly agrees and 42.5% agree to their existence. On the other hand, the percentage of those who did not agree with the existence of the committee was only 12.5%.

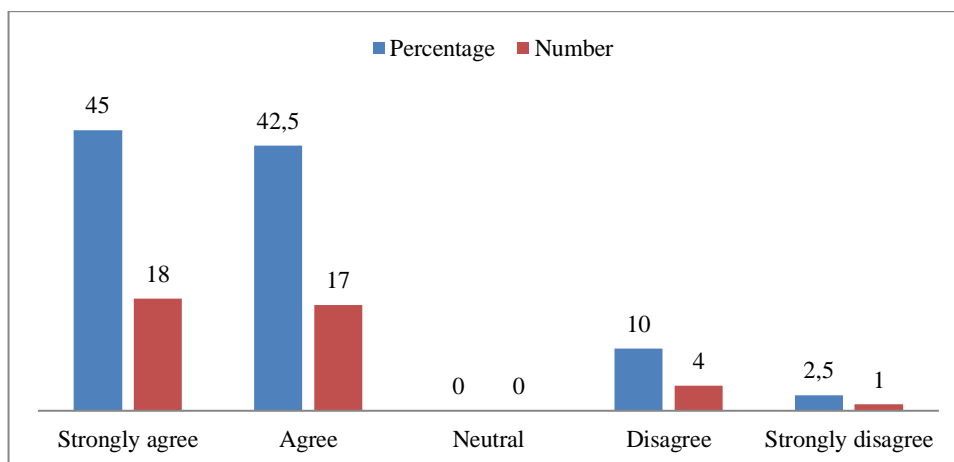


Figure 2: The ratio of the sample's answer to question one

In order for this committee to do its work correctly, many studies must be addressed for each of the three agencies concerned. In terms of investment, studies should be available on the preferred size of housing units, the type of construction and the preferred locations for housing projects. As for the municipal directorate, studies should be provided on the preferred areas for plots of residential land and study of the preferred sites in the basic plan. But for the housing directorate, economic studies must be considered. These studies determine the annual income rates for the family and determine the number of families that are unable to provide adequate housing.

5.1.3. Second question: Does equal distribution of tasks between the Municipal Department, Investment and Housing help to implement housing projects?

By noticing the figure number 3, the existence of 62.5% disagree with the equal distribution of housing projects between the municipal and Investment Departments and the Directorate of Housing and Roads. There is a percentage of 37.5% agree to an equal distribution of housing projects among these departments. Although, the Municipality Department fulfilled part of the housing need through distributing residential plots. However, this is related to the provision of housing loans, and the establishment of this type of housing unit is very expensive compared to the housing units. The Investment Directorate housing projects are more expensive than the housing units implemented from the Directorate of Housing and Roads.

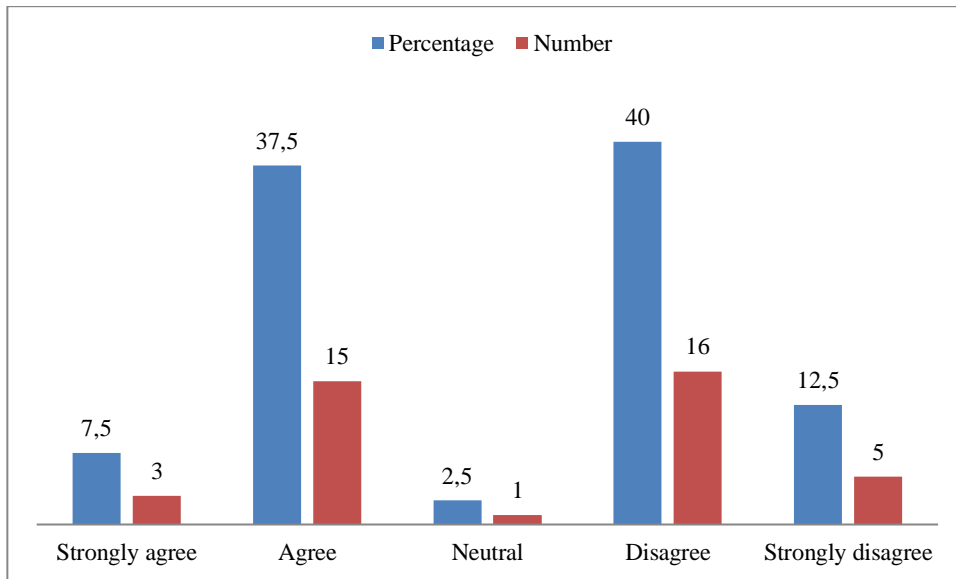


Figure 3: The ratio of the sample's answer to question two

Rising in the number of housing projects implemented by one of these three agencies depends on the nature and importance of the housing problem to be solved at that stage. For example, if the aim is to provide housing for poor families, the implementation of housing projects belonging to the Housing and Roads Directorate shall increase to achieve this aim.

5.1.4. Third question: Do you agree to change the official approved green areas to residential?

From figure number 4, the presence of 67.5% does not support changing the classification of some green areas to residential areas in the master plan. Even if it gets official approval because this change has negative effects on the urban scene and negative environmental impacts. On the other hand, there is a rate of 25% that supports changing the classification of some green areas to residential areas in the basic plan. If this change is in a studied manner, there is an essential housing need in the city of Sulaimani.

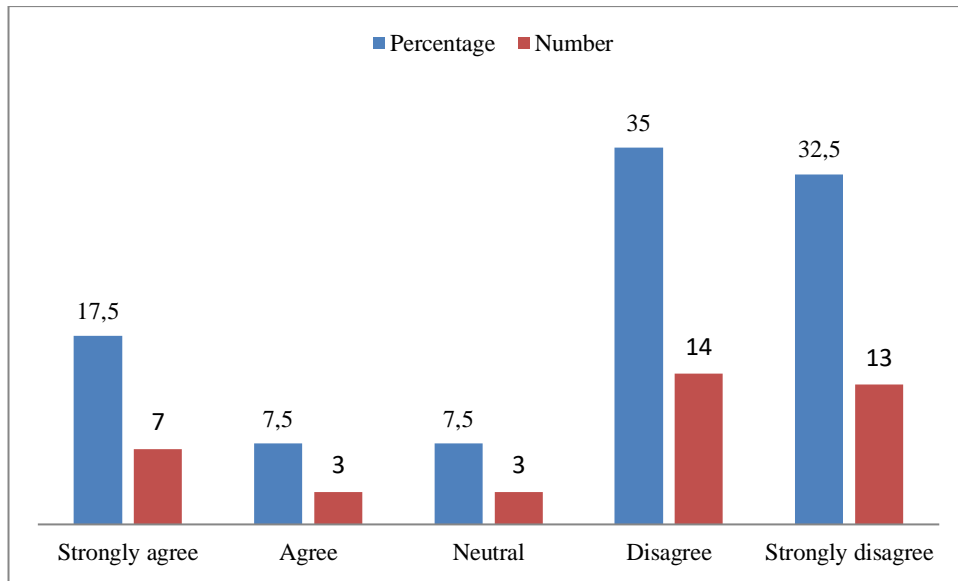


Figure 4 : The ratio of the sample's answer to question three

5.1.5. Fourth question: Do you prefer vertical housing units?

By observing the figure number 5, it appears that 87.5% agree with the necessity of determining the spatial distribution of vertical housing in the residential areas that proposed in the master plan. But, in a way that ensures the achievement of the required urban landscape. On the other hand, the proportion who did not agree was only 12.5%.

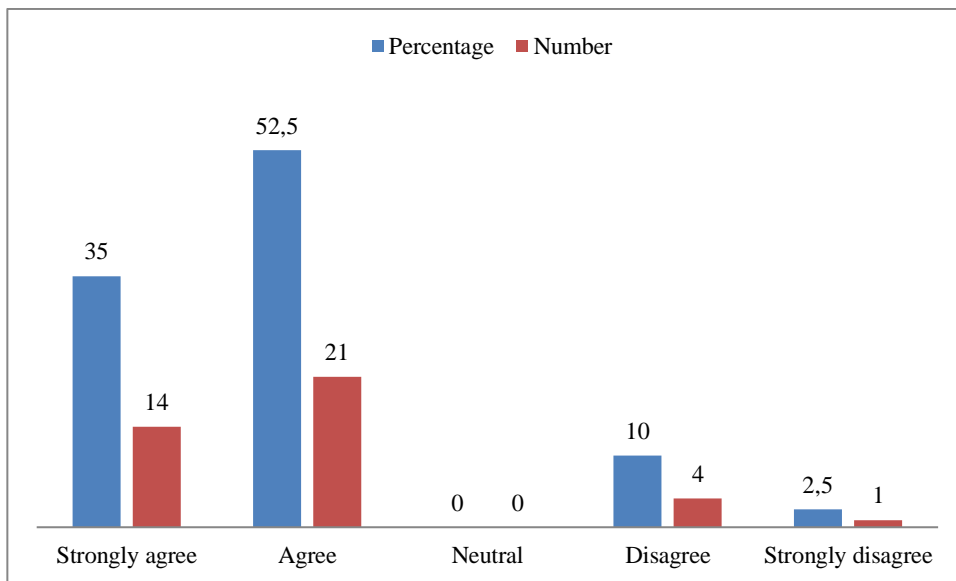


Figure 5 : The ratio of the sample's answer to question four

According to these factors, it will be logical to create a study should be carried out by a competent authority, by the municipal department, especially the master plan department, such as studies of the heights of residential buildings and the identification and distribution of housing blocks.

5.1.6. Fifth question: Do you agree with reducing the implementation of housing projects in residential areas that are located near the city's entrances?

By observing the figure number 6 is observed that the proportion of 85%, they agree with this question. This evidence is the higher percentage that agrees to reduce the implementation of housing projects in the areas that are located near the entrances to the city in order to keep the entrance of the city from traffic congestion, which is the main road for the city with other provinces. Also, housing projects are not implemented because they lead to risk people lives. According to these factors, it will be logical to create roads link the new residential blocks with the city away from the main roads. Furthermore, the percentage of 15%, disagree because they believe that providing alternative roads will lead people to use them as main roads.

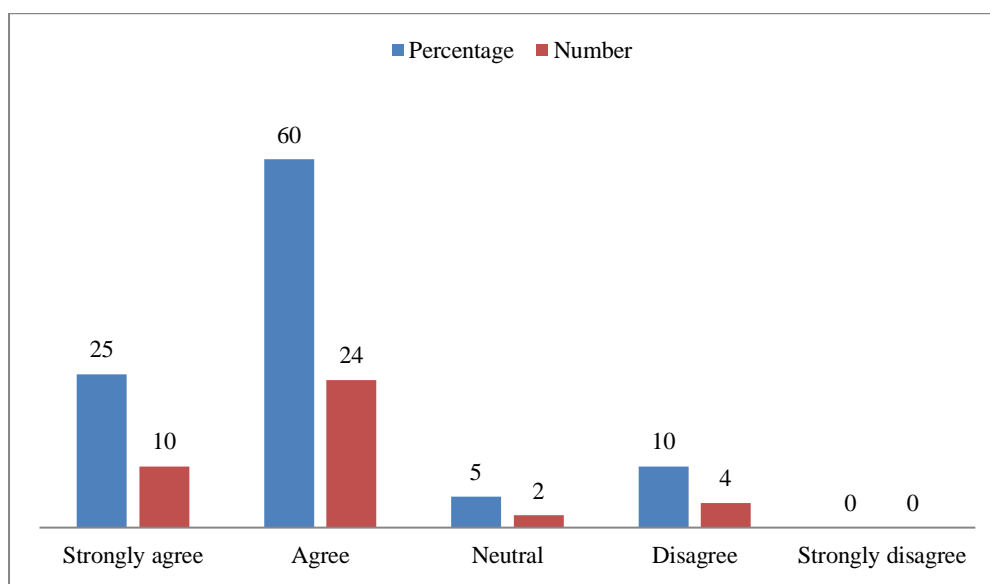


Figure 6 : The ratio of the sample's answer to question five

5.1.7. Sixth question: Does the absence of planning put impacts on implementation and locating some housing projects outside the housing areas in the master plan?

By noting figure number 7, It was found that 77.5% support the existence of non-planning factors that impress the identification and the implementation of housing projects outside the residential areas in the master plan. Otherwise, 17.5% disagree with the presence of non-planning factors that affect the location of housing projects outside of the boundaries in the master plan.

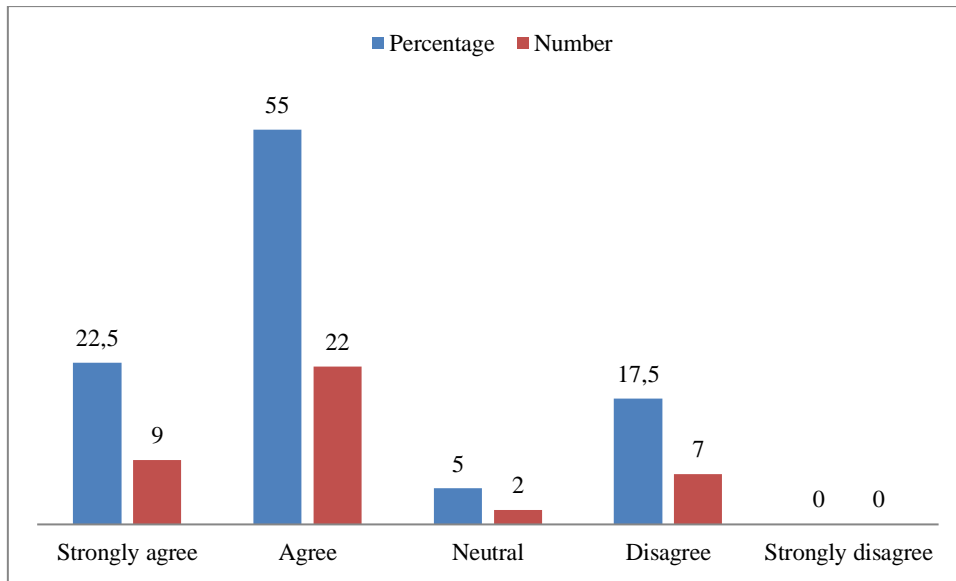


Figure 7 : The ratio of the sample's answer to question six

5.1.8. Seventh question: Is it preferred that the municipal directorate provides more housing units that the investment and housing directorate?

By noting figure number 8 it was noted that 62.5% disagree and strongly disagree, while 35% agree to provide housing units mainly by the Municipal Department. The largest percentage has not approved, for several reasons. First of all, according to the data that are taken from the municipality as it is written that the properties area is between 100 to 200 square meters. While the projects area is 300 square meters depending on the projects' site visits and the department of investment. Second of all, the high cost of a single apartment building implemented, whether by the municipality, investor or the owner. Third, failure to provide housing loans and mortgage loans permanently in addition to the high interest rate, which adds additional cost to the housing units.

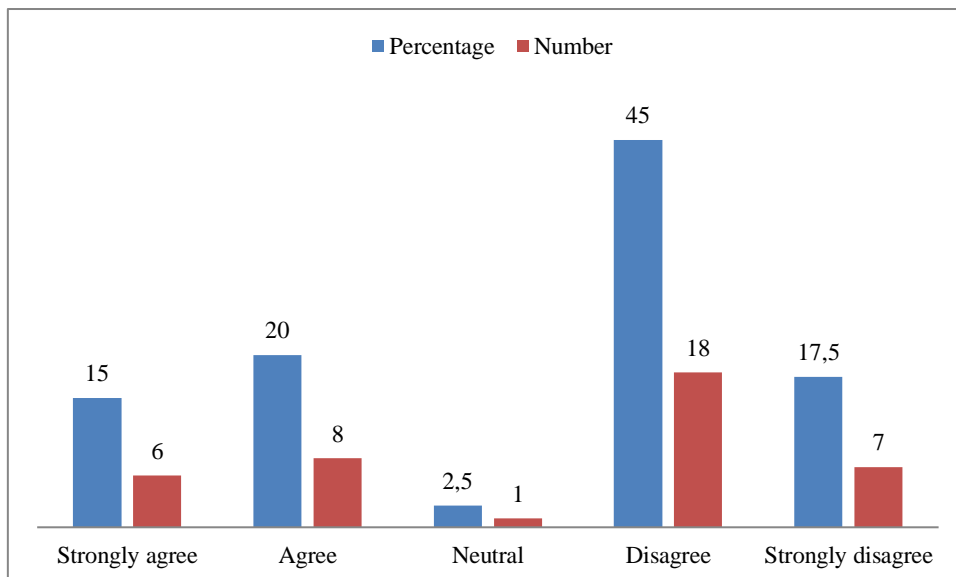


Figure 8 : The ratio of the sample's answer to question seven

5.1.9. Eighth question: Is the Investment Department directed to execute residential units more than the Housing Directorate and Municipality?

By observing figure number 9, it is found that 62.5% do not agree because the investment directorate does not provide suitable and affordable housing units for all classes of society. Investment projects aim only financial interests. Also, these projects were implemented in advanced stages of the master plan. Nevertheless, the percentage of those who do not agree are only 47.5%.

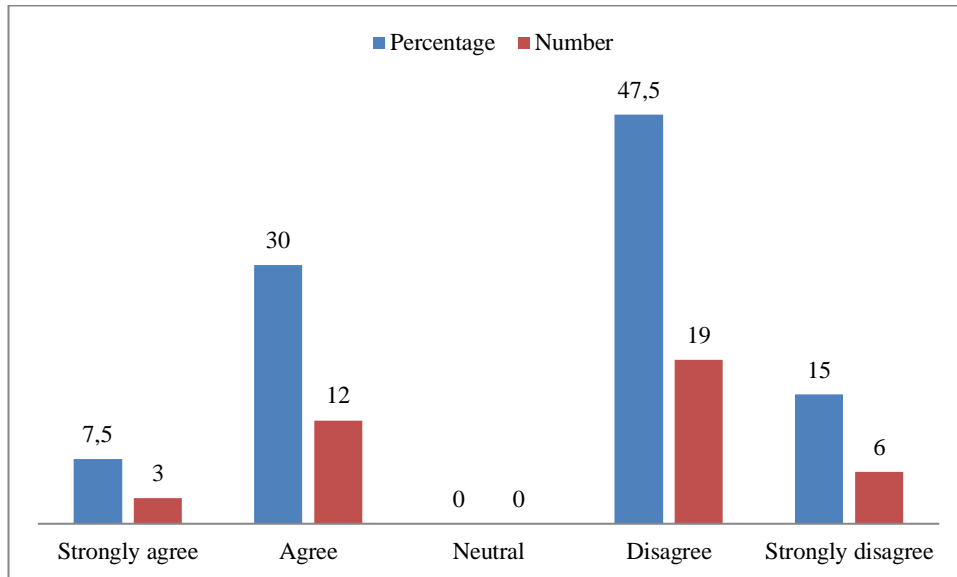


Figure 9 : The ratio of the sample's answer to question eight

5.1.10. Ninth question: Do you agree with going towards implementation of residential projects instead of individual units?

By noting the figure number 10, there is 68% who agree to go towards building housing projects instead of building individual houses. This is because residential projects can be controlled safely, in terms of implementation and provision of infrastructure services . Its method of providing is easier, more economical, and services are always available in the housing projects.

As for the percentage of 27.5%, not acceptable and prefer individual construction of residential houses over residential projects because of the nature of society prefers independent housing construction.

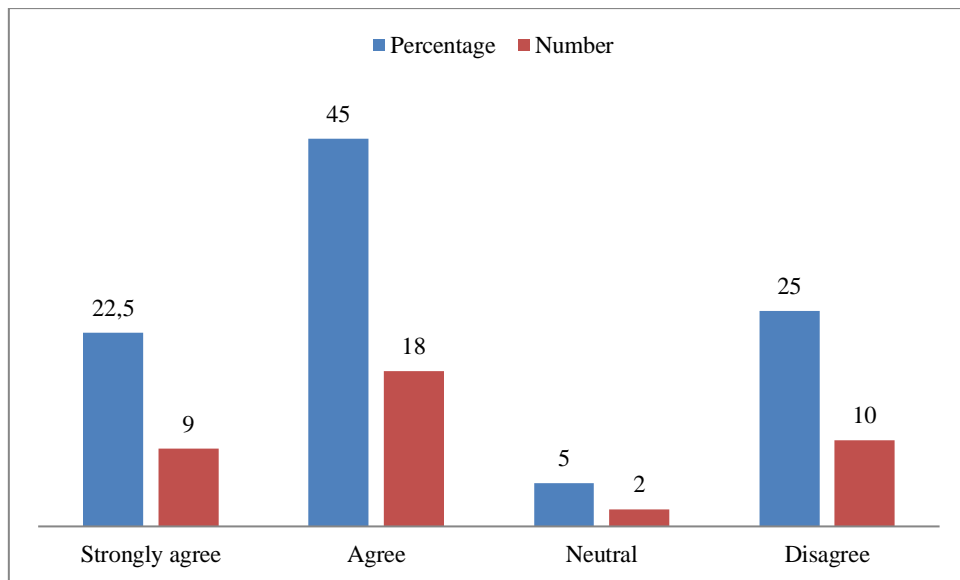


Figure 10 : The ratio of the sample's answer to question nine

5.1.11. Tenth question: Is it preferred that the Housing Directorate provides more housing units than the Investment Department and Municipality?

By observing the figure number 11, it is noticed that 62.5% preferred that the Directorate of Housing provide housing units more than the Municipality and Investment Departments. This is because the Directorate of Housing has implemented housing projects for low-income people at the lowest cost and takes a monthly premium from these families. But, this is not done by the Municipality and Investment Departments. There are 1000 housing units implemented by the Directorate of Housing, while there are 1500 residential implemented but, not taken advantage of it and this information was obtained from visiting the Housing Directorate and interviewing the director, because the municipal directorate has given it lands outside the master plan area, and therefore difficult to provide services to them. While we find that 35% do not prefer that.

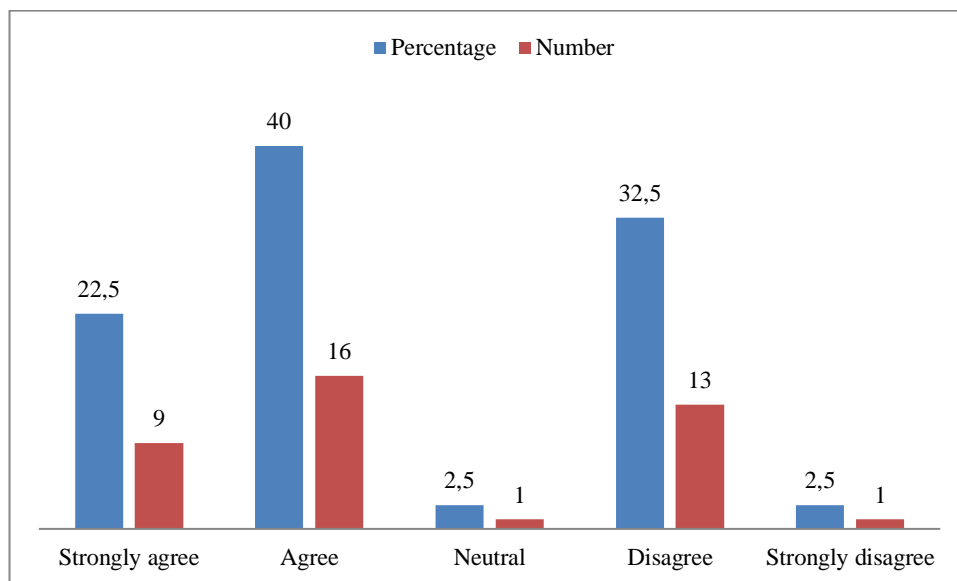


Figure 11 : The ratio of the sample's answer to question ten

6. CONCLUSION

Through this research and according to the questionnaire readings, the researcher concludes that there is a necessity of having a joint committee between the Municipality, Housing and Investment Departments to determine the type of housing projects that are to be implemented and determines the locations of these projects. No doubts making detailed maps to implement multi-story housing projects in line with the availability of infrastructure services is an important factor. Reducing the interference with the not planned zones to identify and implement housing project sites. In addition, minimizing the implementation of housing projects on lands designated for green and recreation due to its environmental impact on the city. The researcher also concluded that there is a strong desire to go towards residential complexes. In fact, there is no law or penal clause to change land uses in the basic plan, which indicates a lack of respect for the basic plan, which is a constitution for the city. Finally, supporting the Housing Directorate to implement future housing projects because it provides opportunities for medium and poor families to purchase housing units according to acceptable specifications compared to the housing investment sector. Finally, this study concludes that the Housing Directorate is the best and most desirable according to the research samples in implementing housing projects that meet the housing needs.

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