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Urban and planning problems for the residential sector (A study of the cities of the Hashemite district in Babil Governorate)

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Abstract

This study was concerned with the study of the residential sector of the cities of the Hashemite district located in the southern part of the Babil governorate, as the residential sector is one of the developmental sectors that are related to the life and stability of the population and is one of the elements that greatly influence the formation of the city, which shows its repercussions on all urban, social, economic and service aspects. The study dealt with the residential sector and the urban and planning problems related to it by studying the population and its growth and analyzing the urban characteristics to reveal the problems that the cities of the study area suffer from and to develop appropriate solutions to get rid of them. The study relied on the descriptive and analytical approach and using the field study. The study also showed that the cities of the study area suffer from a number of problems, including those related to urban aspects such as urban wear and tear, random housing and urban encroachment, and problems related to social aspects such as housing ownership, housing change and housing fragmentation. And one of the most important reasons The emergence of these problems is the weakness of planning and the weakness of the state in taking decisive measures in finding solutions, providing and developing services, and working to build horizontal and vertical housing complexes that contribute to improving the reality of the housing sector in the cities of the study area.

Introduction

The residential sector is one of the basic and necessary requirements for theaA person has to overcome natural conditions such as climate and its elements and human conditions, and housing works to achieve human idiosyncrasies and satisfy individual, family and social desires to obtain comfort, safety and stability. Thus, the residential sector represents one of the most vital sectors in urban development plans.

Therefore, the study of the residential sector gained aIt is of great importance in most countries of the world because this sector has many problems, because aFinding advanced and sophisticated solutions to develop and solve the problems of the housing sector in order to achieve the urban development and progress of cities, and this is what His geographers sought to achieve the best results in this field. Also, the increase in the urbanization rate in cities has led to an increase in the importance of housing, as no city is devoid of residential use, as it may be devoid of other uses, but residential use is indispensable.thatThe continuous increase in the number of the population, whether natural increase orThrough immigration led to increased pressure on city centers, specifically on residential use and so on Accompanied by pressure on the rest of the services such as electricity, water and other services, and thus led to a rise in housing prices, and thus solutions must be found to these problems in order to achieve urban balance.

This study came to shed light on the housing reality and its problems in the cities of the Hashemite District and its impactThe WorkerThe demographicBased on this reality and analyze the characteristics of the residential sector of the cities of the Hashemite district related to the planning and urban aspects of the sector and find advanced solutions to them.

As well as.On the study of the reality of the problems of the residential sector of the study area represented by the urban aspects such as urban erosion, construction age, random housing and urban encroachment, And theSince the housing problem has become one of the most complex and important problems, not only in the study area, but in most of the cities of Iraq, as it has been increasing year after year, this topic has been nominated as a title for research in an attempt to reveal the complexity of the housing problem in the cities of the Hashemite district in light of the changes taking place in those Region.

First, the search problem

What are the urban and planning problems facing the residential sector in the cities of Hashemite District?

Second, the hypothesis of the study

The residential sector suffers from actual urban problems represented by

urban wear and tear, housing fragmentation, urban encroachment and random housing.

Third, the research methodology

The research relied on the analytical method and the descriptive method based on statistical methods, as well as the use of the field study.

Fourth, the limits of the study

The spatial boundaries of the study were represented in the sub-districts of the Hashemite district within the province of Babylon, and they are represented in the districts (Al-Medhatiyah, the Hashemite, and the Shomali). As for the time limits of the study were: Studying the reality of residential plots according to the data and information available for the year (2020-2022).

The first topic \ the housing reality of the cities of the study area

that the study of reality Population is one of the important and basic matters in the geography of cities that geographers are interested in in various urban studies, as life in the city is nothing but an interaction between the population and the city represented by facilities and urbanization, as man created it to serve him and it is unreasonable to pay attention to what man made and neglect the man who created those establishments⁽¹⁾.

Or not \ population growth

Population growth is one of the most important demographic phenomena in the modern era, as it is a challenge to humanity, especially in developing countries where population growth exceeds the increase in economic sectors.⁽²⁾

The table statistics (1) indicated that the population of the Hashemite district in its urban centers (the Hashemite, Al-Midhiyah, and Shomali) reached in 1977 (23808) people and then began to rise to reach (51941) people in 1987 with a growth rate of (8,11), as a result of the improvement The health, security and social conditions, and the population increase continued in 1997 with a decrease in the growth rate as a result of the difficult living conditions and the impact of the economic blockade and the effects of the Iran-Iraq war Where the population reached (63,963) people with a growth rate of (2.10) until it reached (87,672) people in 2007 with a growth rate of (3,20), and in 2020 the number of population reached (120994) people.

(1) Muhammad Hussein Ghadban Al-Jubouri, Spatial Analysis of the Residential Reality of Balad City and its Future Trends, Master's Thesis (unpublished), College of Education for Human Sciences, Tikrit University, 2018, p. 31.

(2) Fathi Muhammad Abu Ayanah, Population Geography, 1st Edition, Dar Al-Nahda Al-Arabiya for Printing and Publishing, 2000, p. 132.

Schedule (1) population growth rate (*)In the cities of the Hashemite District for the period (1977-2020)

years	Hashemite		Medhatia		Shomali		the total	
	population	growth rate	population	growth rate	population	growth rate	The urban population of the district	growth rate
1977	8408	-	11780	-	3620	-	23808	-
1987	17117	7,36	27081	8,6	7743	7,8	51941	8,11
1997	20784	1,96	33069	2,01	10110	2,7	63963	2,10
2007	28442	3,18	45316	3,20	13854	3,2	87612	3,20
2020	39253	2,50	62618	2,5	19123	2,5	120994	2,51

Source: the researcher's work based on:

- 1- Republic of Iraq, Central Statistical Organization, results of the general population census for the years (1977-1997) AD.
- 2- Babylon Statistics Directorate, population estimates for the years (2007-2020), unpublished data.

Through the data of the same table, we find that the growth rates have increased and decreased according to the population statistics of the cities (1977 - 2020), as the growth rate of the city of Medhatia for the period between (1977-1987) came in the first place with a growth rate of (8.6), followed by the city of Al-Hashemiah in the rank The second with a growth rate of (7.36), while Shomali came in third place with a growth rate of (7.8). We note the high growth rates in the cities of the study area during this period due to the state's adoption of the population policy to encourage childbearing as well as the improvement of health and social conditions.

In the period between (1987-1997), the city of Medhatia ranked first with a growth rate of (2.01), while the city of Al-Hashemiah ranked second, with a growth rate of (1.96), and in the area of Shomali, it reached a growth rate of (2.7) we note

(*The growth rate is extracted according to the following equation:

$$100 \times (1 - R) = \left(\sqrt[n]{\frac{P_t}{P_o}} \right)$$

whereas:

R= growth rate= The number of years between the two censuses.

Pt = Population at the subsequent census. Po= Population in the previous census.

- Looking at:

- Source: United Nation, Demographic, Yearbook, 1984, the Issue, New YORK, 1986, p.53.

a decrease in the rates of Population growth during this period due to the effects left by wars, including the Iran-Iraq war for the period between (1980-1988), the second Gulf War in (1990) and the economic blockade on Iraq.

As for the period between (1997-2007), the city of Medhatia came in the first place with a growth rate of 3.20, while the Hashemite city ranked second with a growth rate of 3.18, and for the city of Shomali it came in the third place with a growth rate of 3.2) We note in this period a higher growth rates than previous years due to the migration factor. Growth rates decreased between (2007-2020) as a result of the improvement of the cultural and social conditions of individuals and the increase in awareness of birth control, in addition to the unstable security situation at that time as a result of sectarian and ISIS wars. The Hashemite rank came second with a growth rate of (2.50), and in the third rank was the Shomali district, with a growth rate of (2.5).

secondly\Population distribution

Knowing the distribution of the population is one of the basic things in the study of cities, as it shows the relationship between the population and the city in which they live. The distribution of the population varies from one city to another, and in one city from one neighborhood to another, according to economic, social, political and historical factors.³⁾ We will address here several variables, namely, the numerical distribution, the density distribution, and the relative distribution of the population of the study area, as it is directly related to housing development.

The numerical and relative distribution of the population

It means the number of people who are present in different areas or one area at a time and the way in which they are spread within the spatial framework, while the relative distribution means the percentage of the population in a specific city compared to another city.

Table data (2) indicates that there is a difference in the numerical and relative distribution according to the administrative centers in the study area, as we note that the number of urban residents is constantly increasing, which has led to an increase in demand for housing units, as the number of urban population in the cities of the study area amounted to (23808) people in 1977 Then the number rose in 1987 to reach (51941) people and continued to rise in 1997 to reach (63963) people, and then the population rose in 2007 to (87,652) people until it reached in 2020 to (120994) people. It is noticeable that the population numbers are rising in the cities of the study area due to several reasons, including economic, functional, social and religious reasons.

⁽³⁾Elaf Salah Mahdi Shaalan Al-Taj, A Geographical Analysis of the Reality of the Residential Job in the City of Al-Mahaweel and its Future Directions, Master's Thesis (unpublished), College of Education for Human Sciences, University of Babylon, 2020, p. 25.

Schedule (2) The numerical and relative distribution of the urban population in the cities of the Hashemite District for the period (1977 - 2020)

years	1977		1987		1997		2007		2020	
	populatio n	%	populatio n	%	populatio n	%	populatio n	%	populatio n	%
Administrati ve units										
Hashemite Center	8408	35. 3	17117	32. 9	20784	32. 4	28482	32. 4	39253	32. 4
Medhatia	11780	49, 4	27081	52. 1	33069	51. 7	45316	51, 6	62618	51. 7
Shomali	3620	15, 2	7743	14, 9	10110	15, 8	13854	15, 8	19123	15, 8
the total	23808	100	51941	100	63963	100	87652	100	120994	100

Source: the researcher’s work based on:

- 1- Republic of Iraq, Central Bureau of Statistics, results of the general population census for the years (1977-1997).
- 2- Babylon Statistics Directorate, population estimates for the years (2007-2020) unpublished data

From the data in the table (2) We note that the Al-Medhatiyah district in 1977 occupied the first place in the population, reaching (11780) people, at a rate of (49.4), followed by the Hashemite city, as the population reached (8408) people at a rate of (35.3), and in the third place is the Al-Shomli district. Where the distribution reached (3620) people, at a rate of (15.2). As for the estimates of 2020, the hierarchy of ranks remained the same, as it came in the first place in the area of Al-Medhiyah, as the distribution reached a population number of (62618) people, at a rate of (51.7), and the Hashemite city came in second place, as the population reached (39253) people, at a rate of (32). 4, and comes third in the area of Shomali, with a population of 19,123 people, at a rate of 15.8.

Through the foregoing, we note that the population is increasing in the urban centers of the cities of the study area due to its social, economic and functional advantages, in addition to the distinguished location of the area. The first in number for the study area, while the city of Al-Hashemiah came in the second place as a result of the small number of residents and its small area, as it does not include rural settlement centers within its administrative borders, as well as the weak commercial movement. Al-Jazirah region, as well as its small population, compared to the city of Medhatia.

Density distribution

Studying the numerical and relative distribution of the population according to the data (absolute numbers or percentages) does not give a true picture of the nature of the population’s spread and how it is distributed in any region, so

resorting to population density indicators will allow these possibilities, because they clarify and express the relationship between the population size of any region of regions and between the area of that region)⁴⁾.

General Density of Population

It is one of the simplest measures of density, as it calculates the population numbers to the total land on which they live, regardless of the use of that land.

notes from table (3) The general density rate for the year 2020 in the cities of the study area reached (201 people / hectare), which is considered a high rate when compared to neighboring cities such as Al-Qasim and Al-Tali'a. At a rate of (56 people / hectare), and then the Hashemite District Center ranked third at a rate of (43 people / hectare). We note that there is a discrepancy between the cities of the study area and the reason is due to the disparity in the urban areas of the cities of the study area.

Schedule (3) The general density in the cities of the Hashemite District for the year 2020

City	Area / hectare	population	general density
Medhatia	609,25	62618	102
Shomali	338,11	19123	56
Hashemite	900	39253	43
the total	1,847,36	120,994	201

Source: the researcher's work based on: Republic of Iraq, Ministry of Planning, Central Statistics Organization, Babylon Statistics Directorate, Babil Governorate population estimates, unpublished data, 2020.

Areas were calculated using software Arc Gis (10,2,2).

Spatial distribution of family size, degree of occupancy, and the amount of the housing deficit

The size of the family is one of the most important planning indicators that are relied upon in development programs and studies, and in particular in the design of homes, their areas and the total area of the housing unit. The size of the family varies from one place to another and from one environment to another, depending on the cultural and civilizational level of the state, as well as the nature of the prevailing economy.⁵⁾.

The size of the family in the study area varies from one region to another, as it varies according to the degree of urbanization of the region and the extent of the impact of rural extensions in it, and from the observation of the table (4) It turns out that the total number of families in the study area amounted to (20,165)

⁴⁾Mansour Al-Rawi, Studies in Population and Development in Iraq, Ministry of Higher Education and Scientific Research, University of Baghdad, 1989, p. 255.

⁵⁾Mortada Majid Mehdi Obeis Al-Awadi, Assessment of the urban development potential of small towns in the Hashemite District, Master's Thesis (unpublished), College of Education for Human Sciences, University of Babylon, 2020p.49

families distributed over the cities of the study area, where the number of families in the center of the Hashemite district reached (6542) families, while the number of families in the district of Al-Midhatiyah reached (10432) families, either in the Al-Shomali district The number of families in it reached 3187 families, either the average family size in the affiliated cities in the cities of the Hashemite district amounted to (6) individuals / family for all the cities of the study area (the center of the Hashemite district, Al-Madhatiyah, Al-Shumali). Thus, we can say that the cities of the study area are among the Medium families (*). The relationship between the number of families and dwellings lies in the knowledge of the degree of occupancy in the studied cities, as the average of the total cities reached (1,07) families / dwellings, and the variation in occupancy rates in the cities of the study area reached (1.05) in the city of Al-Hashimiyah and in the city of Al-Madhatiyah reached (1,07) families/houses, while in the city of Shomali, it reached (1,12) families/houses. This means the presence of more than one family in one dwelling, which shows a state of overcrowding, which shows the role of residential development policies in conducting urban development for these cities. The amount of the deficit in all cities of the study area reached (1434) housing units, distributed with a number of (361) housing units in the city of Al-Hashemiah and in the city of Al-Madhiyah, the housing deficit rises to (725) housing units as a result of the increase in the population and the increase in demand for housing units compared to the balance as well as the Housing unit prices rise, while the housing deficit decreases to (348) housing units in the city of Shomali due to the decrease in the population.

Schedule (4) Average family size in the cities of the Hashemite District for the year 2020.

Administrative units	population	number of families	average family size	number of dwellings	Occupation class Family/domestic	The amount of the housing deficit
Hashemite	39253	6542	6	6,181	1,05	361
Medhatia	62618	10436	6	9,711	1,07	725
Shomali	19123	3187	6	2,839	1,12	348
the total	120.994	20,165	6	18,731	1,07	1434

Source: The researcher, based on: Republic of Iraq, Ministry of Planning, Central Statistical Organization, Babil Statistics Directorate, Babil Governorate Population Estimates, unpublished data, 2020.

The second topic \ urban and planning indicators of the residential sector in the cities of the study area

Residential use is one of the important topics that have attracted the attention of geographers and planners, because of its importance to human life, place of residence, and a sense of security and belonging to society.⁶⁾

⁶⁾Elaf Saleh Mahdi Shaalan Al-Taj, previous source, pg. 79.

The residential areas vary among themselves as a result of the different economic, social, urban and planning characteristics, which in turn differ according to the time and place of any residential area in the city.⁷⁾ In order to know the urban and planning characteristics of the residential reality in the cities of the study area, it is necessary to analyze the urban and planning indicators represented by the age of the building, the type of materials used in construction and other indicators that are as follows:

1- Building area of the dwelling

The area of housing units varied from one city to another and from one time to another, and in one city from one neighborhood to another. This is due to a number of factors such as the availability of land allocated for housing, and the administrative and legal procedures that have a role in determining the area and determining its ownership, in addition to the standard of living and size of the family. social and cultural level)⁸⁾.

from the table (5It turns out that the housing units whose area ranges between (201-400 m²) occupied the largest number of the study area's role with a number of (483) housing units, as the city of Al-Medhiyah came in the first place with (181) housing units, at a rate of (37%), then followed The city of Shomali with a number of (156) housing units and a percentage of (32%), and the Hashemite city in third place came with a number of (146) housing units and a percentage of (31%).

The housing units whose area ranges between (100-200 m²) in the cities of the Hashemite district came in second place with a number of (267) housing units, as the city of Al-Madhatiyah ranked first and amounted to (141) housing units out of the total sample of the study, at a rate of (53%)),As for the city of Shomali, it ranked second as it reached (78) housing units out of the total sample of the study at a rate of (29%), while the city of Al-Hashemiah ranked third with (48) housing units out of the total sample and at a rate of (18%).

While the housing units with an area ranging between (401-600 m²) in the cities of the study area occupied the least number of residential houses throughout the region, as the number reached (186) housing units. (45%), while the city of Medhatia ranked second, with a number of (81) housing units, at a rate of (44%), and then the city of Shomali in third place with a number of (21) housing units at a rate of (11%).

Through the data of the table, we note that most of the housing units are between (200-400 m²) and this is a good indicator. Compared to the size of the family, there is enough space for comfortable living in the housing unit.

⁷⁾Abdul Razzaq Abbas Hussein, geography of cities, Asad Press, Baghdad, 1977.p. 137.

⁸⁾Jassem Shaalan Karim Al-Ghazali, The Geographical Dimension of the Residential Job in the City of Hilla (Study in the Geography of Cities), PhD thesis (unpublished), College of Education, Al-Mustansiriya University, 2007, p. 147.

Schedule (5) The area of residential units in the cities of the Hashemite District for the year 2022

Administrative units	100-200 m2		201-400m2		401-600m2		the total
	the number	%	the number	%	the number	%	
Medhatia	141	53	181	37	81	44	403
Hashemite	48	18	146	31	84	45	278
Shomali	78	29	156	32	21	11	255
the total	267	100	483	100	186	100	936

Source: the researcher's work based onfield study.

2- The date of construction of the dwelling

Many academic and planning studies have dealt with the history of housing units construction and its adoption as an indicator in their distribution as it reflects the urban style prevailing in each historical stage, the materials used and service facilities within the housing unit and its residential surroundings.⁹⁾ .

through a table (6(12%). The increase in the number of housing units of this category in the study area is due to the improvement of the living conditions of these families in this period and the improvement of the materials used in the construction, in addition to bank loans and grants to facilitate the construction process.

Schedule (6) The date of building housing units in the cities of the Hashemite District for the year 2022

Administrative units	1980-1990		1991-2000		2001-2010		2011-2021		the total
	the number	%	the number	%	the number	%	the number	%	
Medhatia	76	54	74	45	112	39	141	41	403
Hashemite	42	29	52	32	137	49	47	14	278
Shomali	25	17	37	23	35	12	158	45	255
the total	143	100	163	100	284	100	346	100	936

Source: Researcher's work based onfield study.

As for the period between (1991-2000), it came in third place with a total number of (163) housing units. The city of Al-Madhatiyah came in the first place with (74) housing units at a rate of (45%), then Al-Hashemiah city ranked second with (52) units Residential units, with a rate of (32%), followed by Shomali city in third place, with a number of (37) housing units, at a rate of (23%). The existence of this number of housing units in this period is a result of the housing policy at that timePeriodAs well as the role of banks and the loans they provide, which helped increase construction rates in the study area. And the housing units built in the period between (1980-1990) ranked last with a number of (143) housing units, as

⁹⁾Aref Abdel Mohamed Hamed Abdel Mahdi, A spatial analysis of the reality of residential use and its future prospects in the city of Shamiya, Master's Thesis (unpublished), College of Education for Human Sciences, University of Babylon, 2020, p. 107.

the city of Al-Madhadiyah came in the first place with (76) housing units, at a rate of (54%), then the city of Al-Hashemiah ranked second. The number of housing units built during this period reached (42) at a rate of (29%), followed by the city of Shomali with (25) housing units, at a rate of (17%). The decline of housing units in this period and the decrease in their numbers is due to the urban renewal processes, and the high standard of living of families, which helped them to rebuild it.

The materials used to build the walls

The quality of materials used in construction indicates the age of the dwelling and the economic and social status of the families. The materials used to build walls in residential units vary, depending on the stages of development and expansion of the city, and the most common or widespread materials used for building walls are bricks, cement and block, with a percentage of (48.5%) of the total role of the study area, followed by the floors built with bricks and plaster with a percentage of (48.5%) 46.5%), which means that there is (95%) of the role of the study area whose building material is one of the materials that are resistant to climatic conditions. The materials used to build the walls of the housing unit in the cities of the Hashemite district varied according to the varying economic and social level of the individuals living in this area

This is noted in the table (7) The housing units in which bricks and cement were used were in the first place, as their number reached (454) housing units for all cities of the study area, as the city of Shomali occupied the first place with a number of (177) housing units, at a rate of (39%), while the city of Al-Hashemiah In second place, with 157 housing units, at a rate of 35%, and Al-Medhiyah city came in third place with (120) housing units, at a rate of 26%. The high rate of houses built with bricks and cement is a good indicator that these materials are of high quality and have the ability to resist weather conditions and time aging.

Schedule (7) Materials used in building walls in the cities of the Hashemite District for the year 2022

Administrative units	Brick and plaster		Brick and cement		cement block		thermost one		Clay		other		the total
	the number	%	the number	%	the number	%	the number	%	the number	%	the number	%	
Medhatia	219	60	120	26	28	54	24	73	3	100	8	27	403
Hashemite	90	25	157	35	7	14	3	9	-	-	21	73	278
Shomali	55	15th	177	39	17	32	6	18	-	-	-	-	255
the total	364	100	454	100	52	100	33	100	3	100	29	100	936

Source: Researcher's work based onfield study.

And the housing units that were built with bricks and plaster in the cities of the

Hashemite District came in second place, with a number of (364) housing units for the entire study area. Its number reached (90) housing units at a rate of (25%), while the third place was for the city of Shomali, with (55) housing units, at a rate of (15%). We note the rates of these units are decreasing at the present time due to the short lifespan of the houses built with these materials and their inability to resist climatic conditions. While the housing units whose walls were built with block and cement material came in third place, with a number of (52) housing units for all cities of the study area. 17) housing units, at a rate of (32%). The third place was for the Hashemite city, with (7) housing units, at a rate of (3%). Through the foregoing, we note the low rate of use of these materials as they are poor materials resistant to climatic conditions, but despite their weakness to resist the ozone, they were used in construction because of their cheap prices and the speed of completion of their work, so we notice them clearly in the cities of the study area. As for the housing units whose walls were built with thermiston material, it ranked fourth, with a number of (33) housing units in all cities of the study area. The second with (6) housing units and a percentage (18%), then the city of Al-Hashemiah ranked third with (3) housing units and a percentage (9%). We note from the above the low use of thermestone in building walls in the cities of the study area, as it is a weak material that is resistant to climatic conditions and is rapidly deteriorating and aging.

As for the other materials that were used in building the walls, which included the nets, huts, and hair houses, their number throughout the study area reached (29) housing units. As for the city of Medhatiya, it ranked second with a number (8) and a percentage of (27%), while these materials were not used in the city of Shomali.

As for the housing units that used clay in the construction of their walls, we find that their use is low, and they are limited to the city of Medhatiyah, only with a number of (3) housing units, at a rate of (100%).

Through the table data, we find a clear discrepancy in the materials used in building walls in the cities of the study area, and the result of this discrepancy is due to the variation in the economic level of the population and the social and cultural level.

4- The materials used in the construction of the roofs

The materials used in constructing the ceilings of residential units in the cities of the study area vary from one region to another, from one residence to another, and from time to time. This variation is due to the economic and social status of the family. As we note from the table (8) The houses whose roofs were built with shilman and bricks occupied the first rank in the cities of the study area with a number of (591) housing units, as the city of Al-Madhatiyah occupied the first rank with (234) housing units at a rate of (40%), and the Hashemite city ranked second with (115). Housing units at a rate of 36%, while the city of Shomali ranked third with (142) housing units and a rate of (24%). The high rate of use of these materials in the cities of the study area is due to the low cost of these materials as well as the low cost of their work and the quantity of materials used in them compared to reinforced concrete.

While the houses that use reinforced concrete came in second place, with a

number of (281). The city of Al-Madhatiya recorded the first place, with a number of (139) housing units, with a percentage of (49%), while the city of Shomali came in second place with (112) housing units and a percentage of (40). %, while Al-Hashemiah city ranked third with (30) housing units and (11%). The development and progress of the building materials industry has helped the frequent use of reinforced concrete in the roofs of houses, and it has become an expression of the highest degrees of progress and urban development due to the strength and rigidity of these materials and their resistance to weather conditions and the coming time and their ability to withstand several floors, despite this we note that they are relatively lower than the type The first is due to the high materials used in it, as well as the high cost of work, as it is twice the price of the first type.

As for the dwellings that used other roofing materials represented by nets, tin and other primitive materials, they came in third place, as their number reached (51) of the total number. The city of Al-Hashemiah ranked first with (26) housing units, at a rate of (51%), while the second rank was for Al-Midhiyah city, with its number (24) housing units, at a rate of (47%), while the city of Shomali ranked third with (1) housing units and with a percentage of (2%). The use of these materials decreased in the study area as a result of the weakness of these materials and their inability to withstand all climatic conditions, and it is considered one of the weak and poorly protected primitive materials, so its use decreased, except for what is rare in some irregular areas such as slums.

While the houses that used the ginkgo in building ceilings came in the last place, reaching 13 housing units out of the total number. The city of Al-Hashemiah ranked first with (7) and with a percentage (54%), and Al-Medhiyah city came in the second place with (6) and with a percentage percentage (46%), while no use of these materials appeared in the city of Shomali. We note the low rate of use of these materials in the cities of the study area due to the weakness of these materials and their lack of resistance to climatic conditions, as well as their ability to isolate the heat that reaches homes.

Schedule (8) The materials used in building roofs in the cities of the Hashemite District for the year 2022

Administrative units	shillman and bricks		reinforced concrete		ginko		other		the total
	the number	%	the number	%	the number	%	the number	%	
Medhatia	234	40	139	49	6	46	24	47	403
Hashemite	215	36	30	11	7	54	26	51	278
Shomali	142	24	112	40	0	0	1	2	255
the total	591	100	281	100	13	100	51	100	936

Source: Researcher's work based onfield study.

The condition of the building of the dwelling

The housing construction situation represents the external appearance in terms of its suitability for housing, as well as the quality of materials used in construction, as it varies from one region to another and from one period to another, in addition to that it reflects the economic condition of the population and their ability to improve their condition from one period to another, and the table shows (9) The housing that is characterized by being of good constructional condition for the study cities had the largest share, as its number reached (468) housing units out of the total sample, as the city of Medhtiya came in the first place with (257) housing units at a rate of (55%), while it was ranked second. The city of Shomali with a number of (108) housing units at a rate of (23%), then the Hashemite city with a number of (103) housing units at a rate of (22%) came in third place. The reason for the high rate of good housing in the cities of the study area is that most of the housing in the region is constructed of good construction materials that are resistant to weather conditions and aging such as bricks and cement, as well as the economic level of the population and their ability to renovate and rehabilitate housing.

As for the houses in which the construction situation was moderate, they ranked second, with their number (416) housing units out of the total sample. The city of Al-Hashemiah ranked first with (153) and at a rate of (37%), while the city of Shomali came in the second place with (139) units Residential units at a rate of (33%), then Al-Madhatia city ranked third with (124) housing units, at a rate of (30%).

As for the houses in which the construction condition was deteriorating, they came in the last rank with (52) housing units out of the total sample. The cities of Al-Madhatiyah and Al-Hashimiya ranked the same with (22) housing units, at a rate of (42%), followed by the city of Shomali, which came in third place with (8). A housing unit at a rate of (16%). These degraded housing were the least part of the study area, because their owners do not have the ability to renew and rebuild due to the material and living weakness, and these houses have poor building materials, so they weakened in front of the climatic conditions and thus became uninhabitable and therefore must be rehabilitated and renewedHa.

Schedule (9) The status of housing construction in the cities of the Hashemite District for the year 2022

Administrative units	good		medium		degraded		the total
	the number	%	the number	%	the number	%	
Medhatia	257	55	124	30	22	42	403
Hashemite	103	22	153	37	22	42	278
Shomali	108	23	139	33	8	16	255
the total	468	100	416	100	52	100	936

Source: Researcher's work based onfield study.

The number of rooms in the dwelling

The number of rooms varies from one dwelling to another depending on the difference in the space of the dwelling and the number of family members who live in the same dwelling, in addition to the fact that the living situation of the family constitutes a determining factor for the number of rooms in the dwelling, and the criterion of the number of rooms is one of the important criteria for knowing the size of each units and their adequacy to achieve stability. And comfort for family members in the dwelling.

By noting a table (10) It is clear that the three-room housing ranked first with a number of (293) housing units out of the total sample, so the city of Shomali came in the first place with (145) housing units and a percentage of (49%), while the city of Al-Madhatiyah came in the second place with the number (92) with a percentage of (32%), then the Hashemite city ranked third with a number (56) and a percentage of (19%). We can conclude that the increase in the number of housing units with three bedrooms is a positive indicator, as the greater the number of rooms in one dwelling, the more privacy and comfort are provided for the family members living in the same housing unit. The dwelling that provides the opportunity for the most number of rooms.

As for the two-room housing units, it came in the second place, with a number of (282) housing units, where the city of Al-Madhatiyah came in the first place with (146) housing units, at a rate of (52%), while the Hashemite city came in the second place with (79) units. Residential units with a rate of (28%), while the city of Shomali ranked third with (57) housing units and (20%). Thus, it can be inferred that the rate of housing units that contain two rooms is okay and is also a positive indicator of the good economic situation and the sufficient space for the repatriation of the residents.

While the dwellings that consist of more than three rooms came in third place with (296) housing units out of the total sample. The city of Al Madhiyah came in the first place with (108) housing units and a percentage of (44%), while Al-Hashemiah city came in second place with (105)) housing units with a percentage of (43%), while the city of Shomali ranked third with (33) housing units and a percentage (13%). The existence of these dwellings with such a large number is due to reasons related to the general area of the dwelling, which allows for multiple rooms in one dwelling, as well as the economic situation and the increase in the number of families. The multiplicity of floors is one of the things that lead to the multiplicity of custom in the dwelling.

The one-room housing in the cities of the Hashemite District ranked last with (112) housing units.) housing units at a rate of 34%, then in the third place is the city of Shomali with (20) housing units and at a rate of (18%). The reason for the low rate of housing that contains one room is attributed to the fact that most of the housing units in the study area are characterized by their large area, in addition to the good economic level of individuals.

Schedule (10) The number of rooms in the dwelling in the cities of the Hashemite District for the year 2022

Administrative units	one room		two rooms		three rooms		more than three		the total
	the number	%	the number	%	the number	%	the number	%	
Medhatia	54	48	146	52	92	32	108	44	403
Hashemite	38	34	79	28	56	19	105	43	278
Shomali	20	18	57	20	145	49	33	13	255
the total	112	100	282	100	293	100	246	100	936

Source: Researcher's work based onfield study.

Dorm design style

The shapes and designs of the housing units vary from one region to another and between the dwellings of one region and from one period of time to another, and this variation is a result of the difference in the private space for housing, building materials or luxury items used such as lighting or air conditioning, in addition to the variation in the economic, social and cultural level of the individual and making the housing appropriate to his situation To adapt to the environment in which he lives as well as to what suits his personal desire.

through a table (12) It is clear to us that the dwelling has three western, hybrid and eastern traditional, as it came as the western style design was more common in the cities of the study area, as it amounted to (693) housing units, as the city of Medhtiya came in the first place with (343) housing units and a percentage of (49%) The city of Al-Hashemiah ranked second with (188) housing units, with a percentage of (28%), then Shomali city in third place with (162) housing units and with a percentage of (23%). The reason for the high rate of housing units for this category is the expansion of the housing units, which encourages such designs as well as the development of building materials and cultural friction with communities, which led to the emergence of these designs

And housing with a hybrid design ranked second with a number of (180) housing units out of the total sample size, as Al-Hashemiah city came in the first place with (80) and a percentage of (45%), while the city of Shomali came in second place with (55) housing units and a percentage of (30%), while the third place was for the city of Al-Madhatia with (45) housing units and a percentage of (25%).

As for the oriental-style (traditional) housing, it came in the last place with a number of (63) housing units, as the city of Shomali came in the first place with (38) and a percentage of (60%), while the city of Al-Madhatiya came in the second place with (15) and with a percentage of (24). %), while the third place was for the Hashemite city with a number (10) and a percentage (16%). The reason for the low rate of housing units with traditional oriental design is the fact that most

of these houses were demolished due to urban collapse as a result of aging and the end of their lifespan, in addition to the poor quality of their building materials, which are characterized by weakness. Modern Western, which led to the end of these designs, except what is rare in some areas, such as city centers.

Schedule (12) The pattern of housing design in the cities of the Hashemite District for the year 2022

Administrative units	western		hybrid		traditional oriental		the total
	the number	%	the number	%	the number	%	
Medhatia	343	49	45	25	15th	24	403
Hashemite	188	28	80	45	10	16	278
Shomali	162	23	55	30	38	60	255
the total	693	100	180	100	63	100	936

Source: Researcher's work based onfield study.

The third topic\problems related to the urbanization and planning of the residential sector in the cities of the study area

Most cities suffer from various urban problems such as urban decay, random housing and other problems, and because the residential reality is one of the basics, so attention must be paid to developing solutions, treatments and proposals to solve these problems.

The problem of urban weariness

Urban wear and tear is a common problem in most cities, and it occurs as a result of many factors, including the age of the building and the materials used for walls and ceilings, as well as the impact of natural factors such as heat, humidity, rain and other factors on the dwelling, and given the seriousness of this problem on housing and its residents, so it must be urgently restored And fix what is worn out. And that the cities of the study area, like the rest of the cities, suffer from the problem of wear and tear in their homes for various reasons, such as the obsolescence of time or poor building materials and the presence of slums and other reasons that lead to the emergence of this problem.

It is clear from the table (13) The size of the housing units in the cities of the study area amounted to (428) housing units out of the total number of the study sample, as the city of Al-Hashemiah ranked first with a number of (175) housing units and a percentage of (37%). The aging time and the poor materials used in construction and their weak ability to resist climatic conditions, as well as the lack of maintenance and restoration or removal and rebuilding, as we notice many houses that have not been restored and maintained, especially from the old residents of the area. It reached (32%) and the reason for the emergence of this problem in the city of Shomali lies in the old housing and the poor materials used

in them, and consequently the impact of climatic factors on them and the lack of restoration and maintenance due to the low economic level and the frequent use of blocks and thermostones, which is known for their weak resistance to climatic conditions and thus reflected on the housing and the emergence of the problem of wear and tear significantly. As for the city of Medhatiya, it came in third place, with (146) housing units, and (31%), We note its decline in relation to the rest of the cities of the study area as it is a region for religious tourism because of the presence of the shrine of Imam Hamzah, which was reflected in the commercial activity and the high economic level, which in turn is reflected in the high level of family income and the use of good materials for construction as well as maintenance, maintenance and restoration to avoid the phenomenon of wear and tear. Thus, we note the high rate of the erosion problem in the cities of the study area, which is (468) housing units out of the total sample, and this is a bad indicator and represents an obstacle to the process of housing development, as these houses must be removed and rehabilitated.

Schedule (13) The problem of urban erosion in the cities of the Hashemite District for the year 2022

Administrative units	Sample volume	The number of dilapidated dwellings	%
Medhatia	403	146	31
Hashemite	278	175	37
Shomali	255	147	32
the total	936	468	100

Source: Researcher's work based on field study.

2- The problem of aging housing units

The purpose of studying the age of the building is to determine and know the life span and the remaining validity of the housing units, and to determine the city's residential regions. It also indicates whether the housing unit needs renovation, restoration or removal.

The housing units whose age is between (10-20 years) was the largest, with a total of (284) housing units out of the total total of the three cities. Families, as each family seeks to obtain an independent home due to the economic and livelihood development of families, which in turn is reflected in the rebuilding of the home or the construction of a new home.

from table (14) It is clear that the indicator of the construction age of the housing units, which ranges between (10-20 years), can be considered as relatively modern housing, as it is possible to live in them for several years until their life span expires with the difference in the type of materials used and the quality of construction. As there are modern houses that show signs of wear and tear due to the materials used are poor and have little environmental resistance, and it appears

that this category emerged in the Hashemite city in the first place with (137) housing units out of the total sample of the study and a percentage of (49%), which indicates the modernity of housing units in City. As for the city of Medhatia, it ranked second with (112) housing units out of the total sample of the study, with a rate of (39%)..

The city of Shomali came in third place with (35) housing units out of the total sample of the study, at a rate of (12%).

As for the construction age indicator for housing units whose age ranges between (21-30 years), as it is considered middle-aged and was relatively less than the first category, as its number reached (163) housing units out of the total sample of the study and the reason for this is attributed to the housing policy in this period in the distribution of Plots of land for employees and families of martyrs and prisoners, so we note the presence of middle-aged housing that can be suitable for several years to come. The city of Medhatia ranked first with (74) housing units out of the total sample size, at a rate of (45%).

Schedule (14) The problem of the obsolescence of housing units in the cities of the Hashemite District for the year 2022

Administrative units	(10 - 20) years		(21-30) years		(31-40) years		the total
	the number	%	the number	%	the number	%	
Medhatia	112	39	74	45	76	17	262
Hashemite	137	49	52	32	42	29	231
Shomali	35	12	37	23	25	17	97
the total	284	100	163	100	143	100	590

Source: The researcher's work based on the field study.

The city of Al-Hashemiah ranked second with (52) housing units, with a rate of (32%).

While the city of Shomali came in third place with (37) housing units and a percentage of (23%) either as an indicator of the construction age category for housing units, which ranges between (31-40 years), as this period is considered the end of the life span of the dwelling and varies according to the type of materials. There are dwellings that have expired, but can remain habitable due to the quality of the materials as well as their suitability to resist climatic conditions. The number of housing units for this category reached (143) out of the total housing units in the study area, and the reason is due to the increase in urban renewal processes and the exposure of many old houses to demolition and construction due to the expiry of their default period, as well as the high standard of living of individuals, which was reflected in the renovations in housing. In addition to the banking facilities in the abundance of government loans, advances and grants for construction, which greatly helped in the emergence of modern housing in the study cities, however, the cities of the study area are not devoid of old and dilapidated

housing, especially in the city of Medhatiya, as it came for the most part for economic and social reasons, especially for the individuals themselves, as well as for The nature of the narrow and twisting streets and alleys, with which it is difficult to access materials, wheels carrying materials, demolition tools, and many old buildings have become special commercial stores, and it is an economically active city and a touristic area for the presence of the shrine of Imam Hamzah, so we notice an increase in commercial activity in the city. In this category, the city of Medhatia occupied the first place with (76) housing units and a rate of (54%).

The second place was for the Hashemite city, with (42) housing units, with a rate of (29%)..The city of Shomali came in third place with (25) housing units, at a rate of (17%). Through the table data, we find a high rate of modern housing units, and this is a good indicator and an excellent housing balance of housing units and does not constitute an obstacle to housing development. Nevertheless, the cities of the study area recorded dilapidated housing that needs to be renovated or removed to end its life span.

The problem of squatter housing

The slums are one of the problems arising from the urbanization process and the resulting negative effects, as most of the slums are the result of urbanization and the bad results it reflects in the life of the city.¹⁰.

These slums are scattered and abound in the outskirts of the cities of the study area, and these dwellings have become a reality in the master plan of the cities, and there are slums spread in the city center and in areas planned to become government departments, as well as the slums that are located near high pressure areas. These will be removed and not owned by their owners. .

from table (15th) It turns out that the number of random housing in the cities of the study area amounted to (1057) housing units, at a rate of (5.6%) of the total number of housing, as the city of Al-Medhiyah came in the first place with a number of (520) housing units, at a rate of (5.3%). The city of Shomali came in second place with a number of (314) and a rate of (11%), while the number of random housing in the city of Al-Hashmiya reached (223) houses, at a rate of (3.6%).

Despite the low percentage of random housing amounting to (5.6%) of the total sample for the cities of the study area, it has negative repercussions on the city, including distorting the shape of the city as it is irregular in its construction in its dimensions and distorting the general shape of the city, in addition to the abuses that occur on the Governmental spaces and services such as the water, sewage and electricity network, which increases the burden on these services, especially as they are irregular and illegal, in addition to the problems that spread in these slums such as theft and crimes(*).

(¹⁰)Intisar Jaber Kazem, Slums and their Impact on Services in the City of Baghdad - (The Course), Master's Thesis (unpublished), University of Baghdad, College of Education - Ibn Rushd, 2011, p. 28.

Schedule (15th) Number of slums in the cities of the Hashemite District for the year 2022

Administrative units	dwelling	slums	Ratio of slums out of total dwellings (%)
	the number	the number	
Medhatia	9711	520	5,3
Hashemite	6181	223	3,6
Shomali	2839	314	11
the total	18731	1057	5,6

Source: The researcher's work based on the data of the Directorate of Municipalities of Babylon, Planning Division, 2022.

The problem of urban encroachment

By urban encroachment, we mean the behaviors carried out by individuals and groups that distort the structure of the city, such as fencing, breaking sidewalks and corridors, closing exits and entrances, and so on.¹¹⁾

The cities of the study area suffer from the problem of urban encroachment, so we notice this phenomenon clearly in the commercial streets, as most of the shop owners are trespassing on the public sidewalks by placing goods on the sidewalk, as well as the owners of private generators who take advantage of public spaces and parks to place generators in them, and this phenomenon can also be observed In front of doctors' clinics, placing signs and breaking sidewalks, all of these distort the shape of the city and cause visual pollution and an inappropriate view of the urban city's shape.

and from a table (16) It is clear that the total number of cases of infringement in the cities of the study area amounted to (404) cases of infringement, as the city of Al-Madhatiyah came in the first place, with a number of (203) cases of infringement, and at a rate of (50%).

As for the city of Al-Hashemiah, it came in second place with a number of (103) cases of violation and a rate of (26%). The city of Shomali ranked third with a number of (98) and a percentage of (24%). See picture (5) and (6).

Schedule (16) the problem of urban encroachment in the cities of the Hashemite District for the year 2022

Administrative units	population	cases of infringement	%
Medhatia	9711	203	50
Hashemite	6181	103	26
Shomali	2829	98	24
the total	18731	404	100

Source: Researcher's work based on field study.

¹¹⁾Walid Abdullah Abdul Aziz Al-Munais, Manifestations of Urban Encroachment in Kuwait City, Journal of Gulf and Arabian Peninsula Studies, Kuwait University, No. 120, 2006, p. 11.

The cities of the study area suffer from this phenomenon, especially in the city centers, where shops abound, as in the city of Medhatia, specifically in the areas surrounding the shrine of Imam al-Hamzah, being a commercial area, where shops abound, and due to the absence of control and law, we notice shop owners breaking sidewalks and encroaching on them, as well as abounding in residential neighborhoods. The generator owners infringe, as they place the generators in places belonging to the state, for not allocating special spaces to put the generators, so they infringe on the green spaces or entertainment yards, as the existence of these cases came from the absence of planning, weak law and lack of accountability for such cases.

As well as cases of housing encroachment on the sidewalks or the exploitation of the space in front of it to make a garage for the car or make an outdoor garden, in addition to trespassing on green spaces, sports clubs or youth centers and turning them into garages, commercial and industrial stores. There are cases of infringement on the central islands, especially by the street vendor. In addition, the central islands have become a station for placing banners, advertisements and pictures, all of which distorts the shape of the urban city and an unpleasant view of the typical city shape.

The problem of fragmentation of housing units

It means the re-division of the housing unit or private land for housing into smaller pieces or into two parts due to the need of the divided family.¹²⁾ The phenomenon of housing fragmentation is prevalent in most cities due to the high demand for housing in relation to the supply of it, which has forced many families to divide or divide the housing, such as building including residential housing or demolishing the house and re-dividing it into parts to meet the urgent need for it, and the division of the housing is for the purpose of building shops Commercial and benefit from the economic return or to build a small house for rent and benefit from it. Also, the high real estate prices and the low income of individuals, as most families cannot obtain housing through construction, purchase or rent due to low income, which resorts to dividing the house into more than one part and becomes The dwelling accommodates more than two families, or for social reasons represented by the increase in population numbers, high growth rates and family fragmentation, such as the marriage of children and their desire for independence in a dwelling.

through a table (17) We find that the number of retail housing units amounted to (271) housing units in all cities of the study area, as we find that the city of Al-Madhatiyah ranked first with (148) housing units and a percentage of (55%). The percentage of housing fragmentation in the city of Medhatiya is high compared to the rest of the cities in the study area for reasons including economic,

¹²⁾Sally Adnan Al-Moneim, Re-sorting and dividing housing units and its social and urban impact on the residential neighborhood, Journal of Planning and Development, Urban and Regional Planning Center, University of Baghdad, No. (37), 2018, p. 55.

that the prices of plots of land and housing being a city for religious tourism with the presence of the shrine of Imam al-Hamzah, as housing rises near the shrine, i.e. the city center and decreases as we move away from the city center towards the outskirts, either for social reasons It played a role in the housing division, as the parents' desire for the children not to stay away from them, so they resort to the housing division machine for more than one part to achieve independence and privacy.

The Hashemite city came in second place with (82) housing units, at a rate of (30%). The reason for the decrease in the proportion of fragmented housing in the city of Hashemite is due to the decrease in population numbers compared to the existing housing units, as well as the decrease in land prices in most of the neighborhoods of the city of Hashemite.

As for the city of Shomali, it came in third place with (41) housing units and a percentage of (15%), and we note a decrease in the proportion of fragmented housing in relation to the rest of the study cities due to the low prices of land in the city of Shomali that most of the lands are agricultural lands and not exchangeable land, in addition to the high standard of living for individuals.

Schedule (17) The problem of housing fragmentation in the cities of the Hashemite District for the year 2022

Administrative units	housing sample	Fragmented housing	%
Medhatia	403	148	55
Hashemite	278	82	30
Shomali	255	41	15th
the total	936	271	100

Source: the researcher's work based onfield study.

Conclusions

- 1- The population factor is one of the factors affecting the housing sector, as the population, according to the 1977 census, amounted to 23,808 until it rose in 2020 to 120,994, despite the population increase between the two censuses, but the cities have a low population density.
- 2- Through the field study, the high rate of houses whose construction date does not exceed 20 years, and this indicates that most of the houses in the study area are of a good urban condition.
- 3- It was found that most of the houses used cement and bricks in construction, as it amounted to 454 of the total sample size, and this is a good indicator that the houses are of materials that are resistant to weather conditions and have a good urban condition.
- 4- It was found through the field survey that the housing ratethatThe largest percentage was in the cities of the study area, and this indicates the good economic and living condition of the population.

- 5- The cities of the study area suffer from the emergence of slums at a rate of (5.6%) of the total sample size and the bad results it reflects in the life of the city.
- 6- There are cases of urban trespassing in the cities of the study area with an average of (404) cases of trespassing out of the total sample size as a result of weak law, lack of supervision and poor planning.

Recommendations

- 1- Paying attention to the reality of cities, their growth and expansion, in order to accommodate the increase in the future population.
- 2- Work to stop the incoming immigration to the city by providing services to reduce the population and housing density in the cities.
- 3- Administrative decision-makers in the state must legislate a law that would put an end to housing abuses, and work to eliminate these abuses.
- 4- Facilitating the work of investment companies operating in the residential sector and overcoming the difficulties they face in implementing housing projects.
- 5- The necessity of giving utmost importance by the state to process housing problems and finding solutions and proposals to reduce them.

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