

The Challenges of Urban Growth in a Steppe city- the Case Of Khenchela City, Algeria.

Abdelhak Gherbi^{1*}, Riad Toumi².

¹ University of 20August1955Skikda, Research and social studies laboratory LRES, , (Algeria)
ab.gherbi@univ-skikda.dz

² University of 20August1955Skikda, Research and social studies laboratory LRES, , (Algeria)
ri.toumi@univ-skikda.dz

Receipt date : 2024-01-11 ; Acceptance Date: 2024-03-27

Abstract: This paper delves into the critical issue of urban growth and its profound impact on the urban landscape of Khenchela city, Algeria, examining its multifaceted consequences. The study employs an integrated methodology, combining inductive and deductive approaches within the descriptive framework, with a specific focus on the case study method. By adopting a multidisciplinary perspective that encompasses fields such as geography and urban planning, this research seeks to provide valuable insights into the complex urban phenomenon. To achieve a comprehensive analysis, the study utilizes a purposive sample consisting of three individuals and employs various research tools, including observation, interviews, records, and documents, to meticulously investigate the city's urban reality

Through this meticulous methodology, the study uncovers several significant findings. It highlights the period from 1966 to 2022, characterized by high rates of natural population increase and internal migration, which have resulted in housing occupancy rates exceeding normal values. This unprecedented growth in urban real estate consumption has led to the emergence of a severe housing crisis within the city. Consequently, Khenchela city's urban growth has taken the form of outward expansion since 2008, with a focus on neighboring cities such as N'sighato to the south and El Hamma to the northeast.

Keywords: The Challenges; Urban growth; urban issue; Steppe cities; Khenchela city.

* Abdelhak Gherbi.

1 - Introduction

Urbanization and economic growth have historically stimulated numerous positive developments, encompassing economic progress, social advancement, cultural enrichment, infrastructural growth, increased productivity, and improved quality of life for all (United Nations Habitat, 2016). However, rapid urban growth in the Global South poses challenges to achieving peaceful and sustainable development. In many fast-growing cities, unregulated migration occurs due to poor planning and weak institutions, resulting in migrants settling in informal or slum settlements, or on the urban outskirts where state control and authority may be lacking (Glass et al, 2022). Uncontrolled urban growth can lead to rapid and unsustainable urbanization with negative repercussions, whereas planned growth ensures more sustainable resource utilization (Dadashpoor et al, 2019).

A global mismatch between population growth and available urban land often leads to the rapid expansion of urban areas (Sumari et al., 2020).

The world's population is projected to increase by 2.6 billion over the next 50 years from the current 6.5 billion. Notably, a significant portion of this growth is expected to occur in developing regions, where approximately 5.3 billion people reside today. By 2050, developing nations are estimated to reach a population of 7.8 billion, while industrialized nations' population is expected to remain relatively stable at around 1.2 billion (Bongaarts et Al, 1990).

The Maghreb region in North Africa, comprising Algeria, Morocco, and Tunisia, features urbanization as a defining characteristic. While the region has a long history of urban living, modern urbanization gained momentum in the latter half of the 20th century. In Algeria, urbanization has rapidly accelerated, resulting in deep disparities in spatial arrangement. Since gaining independence in 1962, Algeria's urban population has undergone significant changes, with the urban population growing at a remarkable rate. In 1962, the urban population represented about 33.21% of the total, which surged to 53.66% by 1992. By 2021, urban dwellers accounted for 74.26% of the total population (Bounoua et Al, 2023).

The distribution of population between the North and the South in Algeria is imbalanced, with more than 63% of inhabitants living in the North (occupying only 4% of the area) and only 9% in the South (accounting for 83% of the area). This disparity gives rise to manifold consequences (Saidi et al., 2023).

Interest in the phenomenon of urbanization has surged in recent times due to evolving social, economic, political, and cultural conditions. Urbanization has its roots in the industrial revolution in Europe and the transformative effects of the Second World War, which drove industrialization and political stability in various parts of the world, particularly in the so-called First World countries. Over time, the number of cities globally has significantly increased, with more than 460 cities recorded in 2010 compared to merely 83 cities in 1950 (Mulligan and Crampton, 2005).

After gaining independence, Algeria experienced rapid urban growth, attributed to accelerated demographic growth. The population surged from 12.09 million inhabitants in 1966 to 45.4 million in 2022 (NOS, 2020). This growth resulted in the emergence of new urban centers and both planned and unplanned urban expansions. By 2008, over 70% of the Algerian population resided in urban areas, mainly concentrated in the coastal region and upper plateaus, which comprise only 13% of the country's total area. In contrast, the remaining 9% of the population inhabited 87% of Algeria's land area, leading to significant socio-urban repercussions. Factors like birth rates and migration to cities contributed to this urban growth, with varying growth rates observed over time. The complexity of these urban issues calls for thoughtful consideration and proactive urban policies.

The concept of the urban issue in the 21st century has evolved, reflecting the developmental and transformative effects on economic, social, and ecological aspects of societies. The urban issue encompasses problems such as random and unplanned urban growth, inequitable distribution of urban services, irrational consumption of real estate resources, and high rates of housing crises, among others, faced by cities, including those in Algeria.

In this context, the housing occupancy rate serves as one of the key indicators, and it has shown fluctuations over the years. Algeria has undertaken significant efforts to address the demand for housing, constructing millions of housing units between 2010 and 2020 (MHUPC, 2021). However, this urban expansion has also contributed to real estate erosion and complex urban challenges due to various socio-economic factors and treatment.

Khenchela, as a city located between two distinct regions (the upper plateaus and the semi-desert), exemplifies the complexities of urban growth and the urban issue in Algeria. With a population exceeding 150,000 inhabitants and an area covering 32 km² (3.95% of the total state area), the city faces challenges such as unplanned

urban development, non-compliance with building laws, real estate resource consumption, and the housing crisis. These issues are influenced by factors like high migration rates, rapid natural population growth, and overlapping urban policies (NATPA, 2022).

This study aims to explore and analyze the dynamics of urban growth and the urban issue in Khenchela city. By comprehensively understanding these phenomena, we aim to contribute valuable insights to sustainable urban planning and development in the region. Drawing on a multidisciplinary approach, including geography, urban planning, and sociology, our research seeks to shed light on the challenges and opportunities presented by urbanization and provide broader insights into urbanization trends in Khenchela city.

1.1- Previous studies

Previous studies on the topic of "urban growth and the urban issue, the case of Khenchela city" have addressed various dimensions related to housing, urban planning, and social issues in Algeria. Some of the notable studies include:

Report of the Special Rapporteur on adequate housing "Rolnik Rakel" 2011: This study conducted by the United Nations envoy to Algeria aimed to understand the reasons behind continued social protests related to housing delivery. The study highlighted issues such as the lack of transparency in housing policy, limited involvement of civil society in determining housing policy, and a focus on constructing housing units without integrating comprehensive urban planning (Raquel, 2011).

Researcher Akoun Abdelwahab's Study "Demographic Growth and the Housing Problem in Algeria_Skikda Model_2020": This study explored the relationship between natural growth, internal migration, and housing needs. It found a statistically significant relationship between natural growth rates and housing demands but denied a significant relationship with population migration (Akon, 2020).

Researcher Ouanassi Siham's Study "Urban Growth and the Problem of Lodging and Housing: A Field Study in the City of Batna 1020 Dwellings": This study focused on the consequences of rapid urban growth on housing problems. It attributed the housing crisis to increased rural migration, rapid natural growth, and the use of housing designs incompatible with societal requirements (Aoufi, 2014).

Despite these valuable contributions, a research gap still exists in understanding the specific relationship between urban growth and the urban issue in the context of

the housing crisis and property consumption in Khenchela city. The current study aims to address this gap and provide insights into the phenomenon of urban growth and its connection to housing issues and property consumption in the spatial context of Khenchela.

1.2- Methodology

Given the interdisciplinary nature of the research topic and the need to understand complex human and social phenomena, our study adopts a descriptive approach combined with a case study method. This approach allows for a detailed exploration of the study area and enables us to draw accurate conclusions. We employ non-probability sampling to precisely target the intended sample and gather data through interviews, forms, observations, and the examination of documents and records.

By examining the specific dynamics of urban growth and the urban issue in Khenchela city, our study seeks to predict future trends and offer valuable insights into sustainable urban planning, housing policies, and social development in the region.

1.3- Main Questions:

Based on the research context presented, the study aims to answer the following main questions:

- What are the implications of urban growth and its relationship to the urban issue in the city of Khenchela?
- How does natural growth and internal migration contribute to the housing crisis and the depletion of real estate reserves in the city of Khenchela?

2- Method and Tools:

2-1- Study Tools:

In the research, the following study tools were utilized to gather data and investigate the urban growth and urban issue in Khenchela city:

Interviews: Direct interviews were conducted with various stakeholders involved in urban planning, housing, migration, and local governance in Khenchela city. The interviews were structured around the research questions, employing open-ended questions to allow participants to provide detailed insights. This qualitative method provided in-depth information about the challenges and opportunities associated with urban growth and its impact on the urban issue.

Observation: Simple observation techniques were used to assess the visible consequences of urban growth and the urban issue in Khenchela. Researchers

observed and documented aspects such as chaotic construction, violations of building and reconstruction laws, conversion of agricultural land, and the scarcity of green spaces. Visual evidence through photographs supported the research findings, contributing to a comprehensive understanding of the urban situation in the city.

Data Analysis: The study employed statistical and spatial data analysis to process and interpret demographic indicators, population growth rates, and housing data from relevant sources such as national statistics agencies, municipal records, and previous research. This quantitative analysis helped identify trends, patterns, and correlations related to the housing crisis and real estate consumption.

Literature Review: A thorough literature review was conducted to gather existing scholarly works, reports, and studies on urban growth, urban issues, and housing challenges in Algeria and other relevant regions. The review helped contextualize the research, identify research gaps, and build on existing knowledge. The integration of these study tools enabled researchers to approach the complex issue of urban growth and the urban problem in Khenchela from multiple perspectives, providing a comprehensive understanding of the challenges and potential solutions. The combination of qualitative and quantitative methods, along with visual evidence and spatial analysis, ensured the research was robust and informative.

Table 1 Observations of urban development issues in various neighborhoods

Day	Date	Place of observation	Start time	Finish time	The nature of the data observed
1	15-02-2023	Bujalbana neighbourhood	09:00	10:00	Acquisition of urban real estate as a result of migration after 1984, according to the statements of residents
2	18-02-2023	Bayda Road neighbourhood	09:00	10:00	Expansion at the expense of peasant lands
3	03-03-2023	Garden neighbourhood (Maritou)	09:00	10:00	Failure to respect the rules of reconstruction
4	10-03-	Ain Al-Karma	09:00	10:00	Chaotic construction

2023 neighbourhood

Source: the author

Documents and records:

The use of documents and records adds valuable data and official information to the research, enhancing the study's reliability and accuracy. We incorporated the following documents and records into our study:

National and Regional Planning Documents: We referred to the National Plan for the Preparation of the Territory (SNAT) estimates for 2030 and the Regional Plan for the Preparation of the Territory (SRAT) for horizons 2025. These official planning documents provided insights into the general directives set by higher authorities concerning housing, reconstruction, and urban planning. Analyzing these plans allowed to identify how these directives intersected with the subject of the study within an official context.

Guideline for Development and Reconstruction (PDAU): We examined the development and reconstruction guidelines between the municipalities of Khenchela, Al-Hamma, and N'sigha (PDAU). This document provided crucial information on demographic assumptions, population development forecasts between 2004 and 2024, and housing needs in the region. The PDAU also shed light on interventions related to urban real estate, which helped the researchers understand the implications of urban policies and urban expansion trends in the medium and long term, as well as identifying potential challenges resulting from these trends.

Annual Statistical Report of Directorate of Programming and Budget Follow-up for Khenchela: We accessed the annual statistical report for the year 2021, which was compiled by the Directorate of Programming and Budget Follow-up for the state of Khenchela. This report likely contained relevant data on population demographics, urban development, and housing trends for the specified year. Incorporating this official data into the study further strengthened the research findings

2-2-Methodology and research tools used

The aim of our study is to explore the nature of the relationship between urban growth and the urban issue in Khenchela city and understand the reasons for the emergence and growth of this phenomenon within its spatial context. To achieve

this, we adopted a descriptive approach, which allowed us to comprehensively describe the phenomenon, combined with a case study method.

The first step involved identifying the research problem, which focuses on understanding the relationship between urban growth and the housing crisis. After that, we proceeded from the research question. We collected data using various research tools, such as documents, records, observations, and interviews. These tools enabled us to obtain both quantitative and qualitative data, which we analyzed to reveal the nature of the relationship between the study variables.

During data collection in the field, we utilized both quantitative and qualitative analysis methods to understand the factors and causes contributing to the urban growth in the spatial context under study. By integrating these two analysis methods, we were able to gain a deeper understanding of the phenomenon and link the data to the research questions, as well as the findings of previous studies.

The quantitative method played a vital role in our study as it involved the analysis of various statistical and numerical data, which were then presented and interpreted. The quantitative analysis provided valuable insights into the extent and patterns of urban growth in the region. Subsequently, the qualitative method complemented the quantitative analysis by explaining and interpreting the underlying causes and drivers behind the observed urban growth phenomenon.

2-3- Study area:

Spatial context

By understanding the spatial context of Khenchela city, the study aims to explore how these geographical and urban characteristics interact with factors like urban growth, migration, and housing demand, ultimately influencing the urban issue faced by the city

The focus of our study is the city of Khenchela, situated in the northeastern region of Algeria (figure 1). Covering an area of 32 km², Khenchela constitutes a mere 0.015% of the total area of Algeria and represents 3.95% of the entire province's territory, it is bordered to the northeast by agricultural lands belonging to the city of Baghay, to the northwest by vacant lands belonging to the municipality of Hamma and to the south by the city of Ansigha, to the east by agricultural lands belonging to the municipalities of Baghay and Ansigha, and to the west it is bounded by the city of Hamma (Ababsa, 2022). The area of the current city of Khenchela is 1854 hectares, which represents 57.95% of the municipality's area (technical service of the municipality of khenchela, 2020)

As of the year 2019, the estimated population density of Khenchela reached 146,950 inhabitants. Within this spatial domain, we seek to investigate the intricate relationship between urban growth and the urban issue, focusing on the housing crisis and real estate consumption dynamics

Figure (1) Administrative location of city of Khenchela



Source: (Annual Statistical Report of Directorate of Programming and Budget Follow-up for Khenchela, 2021)

Temporal Context:

The current study was conducted between December 2022 and the end of April 2023. During this period, the researchers investigated the topic of urban growth and the urban issue in the city of Khenchela.

Human Field of Study:

Given the specific information required by the problem formulation and study objectives, the researchers opted for a non-probability intentional sample due to several justifications:

1. Quality of Information: The researchers sought accurate and targeted information, and intentional sampling allowed them to select individuals who possess the desired knowledge and expertise.
2. Nature of Data: The data needed for the study required a certain level of expertise and familiarity with the research subject, making intentional sampling more appropriate.

The intentional sample consisted of three individuals:

1. Head of the Technical Department of Khenchela Municipality.
2. Official in charge of Statistics at the Directorate of Programming and Budget Follow-up for the city of Khenchela.
3. Official in the Directorate of Housing and Development in Khenchela.

3– Results and Discussion

Question 01: Do your interests have rates related to population growth in the territory of the city of Khenchela? The researchers' answer was that they have information related to the population increase, which is shown in the following table:

Table (2) Represents the development of the natural growth of the population of the city of Khenchela in the period (1966-2022)

Years	1954	1966	1977	1987	1998	2008	2022
Population	10981	27800	49800	71185	87196	108580	146950
Normal growth rate %	-	8,04	4,52	4,72	3,67	1,97	1,7

Source: From the results of the interview with an official in charge of Statistics at the level of the Directorate of programming and budget follow-up Khenchela

It is clear from Table 2 that the population of the city of Khenchela is increasing by large proportions in the time periods described above, but the natural growth rate is decreasing, as in 1966 it reached a rather high level, estimated at 8.04%, to fall to 4.52% in 1977 and slightly increased in 1987 by 4.72% and continued to decline thereafter to 3.67% and 1.97% and 1,7% in both 1998 and 2008 and 2022 , however, it should be recalled that the natural growth rates in the city of Khenchela increased by this makes it have repercussions and implications on the level of housing, whether planned and organized by official authorities or unplanned housing and the emergence of slums and unplanned neighbourhoods.

Question 02: Do Your authorities have any data related to population mobility and migration that will help to find out the reality of migration in the municipality of Khenchela?

yes there are figures and statistics provided by the NBS, based on the data that we send to it, related to net migration rates, which are represented in the following table:

Table (3) represents the net migration rates % of the population of the city of Khenchela for the period (1966-2022)

Years	1954– 1966	1966– 1977	1977– 1987	1987– 1998	1998– 2008	2008– 2022
Net migration	13.5	32.1	45.3	66.4	25.4	20.1

rate %

Source: results of the interview with an official of the technical department of khanshala municipality

It is clear from Table 3 that the net migration rates of the city of Khenchela reached high levels until the time period 1987–1998 and then returned to decline, where 13.5% was recorded in the period 1954–1966 to then drop to 32.1% in the period 1966–1977 and in 1977–1987 recorded an increase of 45.3% to record a decrease of 66.4% and 25.4% and 20.1% in each of the period 1987–1998 and 1998–2008 and 2008–2022.

This shows that there are factors that contributed to attracting and attracting all these human numbers and that they had repercussions and repercussions on the urban area.

Question 03:Has migration towards Khenchela city posed challenges for the housing sector?

The results of the interview with an official of the housing Directorate and the head of the technical department of Khenchela municipality, where the researcher answered, as he put it, that rural displacement has always reflected significant changes in the urban area, and rural displacement coincides with time stages that were for economic and service reasons, as the field of study witnessed successive migrations that led to a change in the pattern of city growth and contributed to the emergence of randomness and unplanned housing. As the head of the technical department of Khenchela municipality answered the same question that there were economic repercussions that led to a change of a large number of residents to their places of residence, for example during the economic recovery program 2010–2014 and what also contributed to the high rates of demand for housing in the city of Khenchela after 05 years, in 2015, 7047 cases were registered that applied for a residence certificate for housing in the territory of the municipality of Khenchela, including indigenous residents, as well as residents who came to the city of Khenchela through immigration, in 2017, 4747 were registered, and in 2020, 3459 applications were registered.

Question 04: What are the housing occupancy rates recorded by the city of Khenchela that are available to your benefit ?

The answer of the researcher was shown in the following table:

Table (4) Represents the housing occupancy rates of the population of the city of Khenchela for the period (1966-2022)

Years	1966	1977	1987	1998	2008	2022
Housing occupancy rate (individual)	7.7	8.3	7.2	6.4	6.0	5.0

source: results of the interview with an official in the housing Directorate Khenchela

It is clear from Table 4 that the housing occupancy rates for the city of Khenchela reached high levels, and this is if we compare it with the accepted national housing occupancy rate, which is within 5 individuals, where it reached 7.7 in 1966 to rise later to 8.3 in 1977 and recorded a decrease of 7.2, 6.4 and 6.0 and 5.0 in each of the years 1987, 1998 and 2008 and 2022, and this shows the existence of a problem at the quantitative level of housing and housing over time periods in Algeria (1966–2022) in general and in the city of Khenchela in particular, and it should also be recalled that housing occupancy rates at the national level have reached high levels, as shown in the introduction to the study above.

Question 05: Is it possible to rely on housing occupancy rates to read the reality of housing in the city of Khenchela?

The researcher answered that the current housing occupancy rates are deficient and do not reflect the current reality, because these rates are calculated by population density on the number of dwellings in the region, where the research showed that there are many old dwellings that have exceeded their supposed age, making them prone to collapse and not amenable to human safety, and if we neutralize and exclude them from the statistics, housing occupancy rates will rise more than they are, and here it is necessary to resort to more accurate criteria to give more accurate results regarding the housing field.

Question 06: Do your interests have any figures and statistics on the reserves of buildable real estate vessels for the municipality of Khenchela

The researcher answered that the urban expansion and growth in the city of Khenchela has taken advanced dimensions, which makes it impossible to provide real estate vessels for reconstruction, and there are data related to the consumption

of the area for the state of Khenchela as a whole, and we do not currently have data for the city of Khenchela only, which are shown in the following table:

Table (5) Represents the consumption of urban real estate (ha) for the population of Khenchela State for the period (1966-2022)

Years	Consumption of urban real estate (ha)	Average increase in consumption of urban real estate %
Before 1954	141	Data not available
1954-1966	272	10.91
1966-1977	501	20.81
1977-1987	837	33.60
1987-1998	1277	31.42
1998-2008	1813	44.66
2008-2022	11721	70.7

Note: during this period, the expansion of the cities of N'sigha to the south and Al-Hamma from The North-east was carried out and the urban property in the both the city of Al-Hamma and N'sigha was consumed and included within the scope of the city of Khenchela and the area as a whole was named the exclusive center (Khenchela, Al-Hamma, N'sigha).

Source: Based on the results of the interview with an official at the housing Directorate Khenchela

According to the data of table 5, We will review a set of maps showing the erosion of the real estate reserves of the city of Khenchela in the period (1984-2022) in addition to the expansion of the city over agricultural lands, especially since 1984 and the trends of urban growth of the city.

Pre-1984 period

Since independence, the city of Khenchela inherited a colonial urban fabric centered in the center of the city of Khenchela, later called the colonial nucleus, around which the city of Khenchela grew as a set of economic projects such as the industrial zone towards the city of Al Hamma in the North-east and the establishment of the activity zone in the North, which created economic mobility in the city, which had negative consequences on the morphology of the city, which later left unplanned neighborhoods that acquired the urban property-will be explained below-

Figure (6) Shows the urban expansion and growth of Khenchela city in 1984



Source: Google Earth, 2023

We note that the urban growth of the city of Khenchela in 1985 was centered in the center of the city and not far from the colonial core, while we note large tracts of agricultural land south towards the city of N'sigha and significant areas of urban real estate on the north side, also, one of the factors that should not be neglected is the borders of the city of Khenchela from the eastern side, the Oued Bouaggal, which is considered a natural obstacle that limits the expansion of the city from the eastern side so that the prospects for expansion and urban growth towards three directions only partially if we consider that a large part of the western side of the city of Khenchela is a term for forests that represent national reserves and non-reconstructible areas in accordance with law 90-29 on preparation and reconstruction

Figure (7) Shows the urban expansion and growth of Khenchela in 2008



Source: Google Earth, 2023

The urban growth of the city of Khenchela in 2008 reached rather high rates, as the city continued to expand northward until it achieved advanced stages of real estate saturation and consumption of available real estate vessels other than some empty real estate pockets, while the city consumed peasant real estate and expanded towards the city of Ensigna on the southern side at the expense of peasant lands and achieved the so-called docking (a stage of urban growth and means urban convergence between two or more cities) at this stage, the official authorities announced the real estate crisis in 2008 in the city of Khenchela and the need for external urban growth towards both the city of Ensigna South and Elhamma is from the north-eastern side, and the area has become represented by the official designation of the PDAU urban tripartite urban agglomeration Khenchela-Elhamma-Ensigna.

Figure (8) shows the urban expansion and growth of khenchela city in 2022



Source: Google Earth, 2023

Question 07: What are the main problems faced by urban growth in the city of Khenchela?

The answer of the researcher (an official at the Directorate of Housing and development) was multilateral, where the researcher answered that the biggest problem is the expansion to farming and agricultural areas, which are considered as not amenable to reconstruction due to the lack of urban real estate, where it expanded to these areas due to ease of mobility and proximity to economic, commercial, administrative, social and security services. Also, one of the most prominent problems is chaotic and random construction that did not respect the building and construction laws, and this was due to several factors, including real estate saturation in the areas that can be reconstructed in the city of Khenchela, as it witnessed significant processes of rural displacement, which took over many urban areas, especially in the west of the city of Khenchela after 1984.

Question 08: What are the planning directions for urban growth that your interests are working on to contain the demand for housing and various social needs in the Khenchela municipal territory?

The researcher replied that the territory of Khenchela municipality suffers from a state of real estate saturation and a shortage of real estate vessels since 2007–2008 and a shortage of real estate pockets, and this is due to urban policies and urban planning witnessed by the city of Khenchela since independence, especially the seventies of the last century 1970 and the real estate transformations defined by Algerian law from order 74/26 dated 16/02/1974, which explicitly represented the monopoly of the state through municipalities for real estate and the real estate directive law 90/25 dated 18/11/1990, which opened the door to real estate and methods of buying, selling and exchanging real estate between citizens, and this was reflected on most of the Algerian cities, including the city of Khenchela, which is considered a rather small city compared to the many stakes it faces, as it is considered a city that is the seat of a state and the headquarters of a department and where most of the economic, industrial and commercial activities of the state of Khenchela are concentrated.

As for the future expansions of the urban growth of the city of Khenchela, the city has developed a plan since June 2007 to expand south to the city of N'sigha and towards the city of Al Hamma in the North-east, meaning that the nature of the expansion and the form of urban growth that the city of Khenchela will take is external growth, especially as it does not have enough real estate pockets to meet

its urban needs and bets, and for its lack of real estate vessels and the real estate saturation that it has reached.

Study results:

1-The high rates of natural increase and net migration rates over many time periods have led to an increase in housing occupancy rates to values exceeding the normal values of housing occupancy.

2-The seventies and eighties reached the peak of the housing crisis, where the housing occupancy rate reached 8.3 individuals in 1977 and 7.2 individuals in 1987.

3-The housing sector in the city of Khenchela faces problems represented by:

a- Urban expansion and growth on the peasant areas

b- Chaotic construction

c- Lack of real estate vessels

d- Failure to respect the building and construction laws

e- Monitoring deficiencies at the urban planning level (lack of green spaces-lack of transport lines... Etc)

4-The criteria for classifying housing occupancy rates do not give a clear and realistic vision of the housing sector, as it omits buildings prone to collapse and chaotic constructions from the classification

5-Migration towards the city of Khenchela represents one of the urban bets leading to the consumption of the urban space, and the period 1977-1987 and 1987-1998 represent the largest periods in which the city of Khenchela experienced an influx towards it at a net migration rate of 45.3 and 66.4 percent in each of the previous two periods

6-Migration has posed challenges for the housing sector, represented by:

a- The emergence of slums

b- The emergence of unplanned neighborhoods

c- Depreciation of real estate reserves

7-The elevation of the city of Khenchela to the status of a state in 1984 caused high rates of net migration, which the city was not able to contain and absorb that amount of immigrants

8-The urban growth in the city of Khenchela has taken the form of external growth since 2008, as a result of the consumption of real estate vessels and real estate saturation that the city has known, and the urban growth trends were

towards the city of N'sigha in the south and the city of Al Hamma in the north-east..

Discussion of results:

Discussion of the results in the light of questions:

The work on testing and verifying the truthfulness of the questions requires us to return to the results of the study to verify in part what are the stakes of urban growth and its relationship to the urban issue in the city of Khenchela And what is the relationship of both natural growth and internal migration to the housing crisis and the erosion of real estate reserves in the city of Khenchela, where the field results proved that the increase in natural growth rates from 8.04%, 4.52%, 4.72%, 3.67% and 1.97% and 1.7% in the period 1966–2022 and the increase in net migration rates from 13.5, 32.1, 45.3, 66.4 and 25.4 and 20.1 from the period (1954–1966) to the period(2008–2022)led to an increase in housing occupancy rates of 7.7, 8.3, 7.2, 6.4 and 6.0 and 5.0 in the period 1966–2022as it also led to an increase in the average increase in urban real estate consumption from 10.91% to 20.81% to 33.6% to 31.42% to 44.42% to 70.7% in the period from (1954–1966) to (2008–2022), which also led to the emergence of many problems of urban–architectural expansion– such as expansion on agricultural land, chaotic construction, non–respect for building and reconstruction laws, real estate saturation and resort to expansion and external urban growth towards each of the city of N'sigha to the south and the city of Al-Hamma to the north–east.

Therefore, the main question of the study has been answered and this is proved by the above results, as this is due to our reliance on an interdisciplinary approach between sociology, geography, management science of urban technologies and architecture as an input to address the urban growth and urban issue in the city of Khenchela.

Discussion of the results in the light of previous studies:

Through the results of these studies, and in order to clarify the aspects of benefiting from them, and for this reason, the presentation of the results of the study will be discussed in the light of previous studies:

The study found that the higher both the natural growth index and the net migration index, the higher the housing occupancy rates and the those of average increase in the consumption of the area, and the emergence of many bets of the urban issue such as expansion on agricultural land, non–compliance with building

and construction laws, the consumption of real estate reserves, and the trend towards external urban growth towards both the city of N'sigha in the south and the city of Al-Hamma in the north-east.

This is what the study agrees with the that of the researcher (Aggoune Abdelwahab) that there is a statistically significant relationship between natural growth and housing needs, while our study differs with what he found through immigration does not lead to an increase in demand for housing, as our study found that immigration increases the consumption of real estate vessels, and it is not a direct condition that migration increases the demand for housing, it is likely that the one who does the migration does not ask for housing, but takes over the urban property and the public space to create housing, and this is shown in the chaotic construction and expansion on agricultural land through our study.

Our study also agrees with the study of the researcher (Ouanassi Siham) through the researcher's findings that the increase in rural migration and accelerated natural growth was the cause of the housing crisis, and this is proved by our study through the high occupancy rates as a result of both natural growth and net migration rates.

Our study also agrees with the conclusion of researcher and UN envoy (Raquel Rolnik) in 2011 that the housing policies pursued are limited to integrated urban planning (utilities, public spaces, transport...etc) and it was necessary to analyze and link the findings of the researcher and what we have found that the orientation of Algeria in general and urban policies in the city of Khenchela, especially after 1990, which focused on the construction of housing units and neglect the rest of the facilities, stems from the overlap of urban policies applied by Algeria in two phases (1962-1989), which is the stage of adopting the socialist orientation and colonialism is sufficient to meet housing needs, but the post-1990 period in Algeria witnessed a new pattern in urban planning and policies, which is the capitalist style, and here Algeria has built lodging and housing units to fill the deficit in the balance of housing demand without knowing the rest of the social needs (utilities, public spaces, transport...) and that is what the UN envoy Raquel Rolnik came up with.

4- Conclusion

At the end of this study entitled Urban Growth and the urban issue, we come to an important point, which is that this study does not represent a final study in urban growth and the urban issue due to the nature of the topic, but only a research effort through which the study aroused interest and relied on a set of

indicators that are nothing more than part of the whole and represent a transit link for various researchers in the future in order to delve more into other aspects of the topic, which found that high natural growth rates and net migration rates are associated with high housing occupancy rates and those of average increase in urban real estate consumption and the emergence of many urban problems such as urban expansion and growth on the emergence of chaotic construction and non-observance of building and construction laws as a result of the urban chaos and widespread consumption of urban real estate, which led to the future expansion of urban growth in the city of Khenchela to take external growth at the expense of neighboring municipalities, represented by the municipality of N'sigha in the south and the municipality of Al-Hamma in the north-east.

References and Referrals

1. Abdelwahab Aqoun., 2020. Demographic Growth and the Housing Problem in Algeria. Doctoral dissertation, Faculty of Arts, Humanities, and Social Sciences, University of Annaba, Algeria.
2. Aoufi, Mostapha. Ouanassi, Siham. Urban Growth and the Housing Problem - A Field Study in Batna City. Journal of Social Sciences, vol 08 n°02, 2014, p 123-136. Consulted on 20 February 2023 on URL : <https://www.asjp.cerist.dz/en/article/29602>
3. Bongaarts, John. Mauldin, Parker. and Phillips, J.F, The demographic impact of family planning programs, Studies in family planning, vol 21 n° 6, 1990, p.299-310. Consulted on 07 March 2023 on URL : <https://pubmed.ncbi.nlm.nih.gov/2075620/>
4. Bounoua, Lahouari. Bachir, Nora. Souidi, Hanane. Bahi, Hicham. Lagmiri, Souad. Khebiza, Mohammed. Yakoub. Nigro, Joseph. and Thome, Kurt. 2023 Sustainable Development in Algeria's Urban Areas: Population Growth and Land Consumption, Urban Science, vol 7 n° 1, 2023, p.1-21. Consulted on 05 March 2023 on URL : <https://www.mdpi.com/2413-8851/7/1/29>
5. Dadashpoor, Hashem. Azizi, Paraviz. and Moghadasi, Mahadis. Land use change, urbanization, and change in landscape pattern in a metropolitan area, Science of the Total Environment, vol 655, 2019, p.707-719. Consulted on 23 April 2023 on URL : <https://www.sciencedirect.com/science/article/abs/pii/S0048969718346242?via%3Dihub>
6. Glass, M.R., Seybolt, T.B. and Williams, P. eds., 2022. Urban Violence, Resilience and Security: Governance Responses in the Global South. Edward Elgar Publishing.

7. Habitat, U.N., 2016. World cities report 2016: urbanization and development–emerging futures. Publisher: UN-Habitat.
8. Ministry of Housing, Urban Planning, and the City., 2021. Summary of the Implementation Report of Activities 2010-2020. Retrieved October 17, 2022, from <https://www.mhuv.gov.dz/>
9. National Agency for Territorial Planning and Attractiveness., 2022. The 2030 National Territorial Planning Scheme, Algiers, Algeria.
10. National Office of Statistics., 2020. Algerian Demography 2020. Statistical Bulletin, No. 890, Algiers, Algeria .
11. Rolnik, Raquel. 2010. Report of the Special Rapporteur on Adequate Housing as a Component of the Right to an Adequate Standard of Living, and on the Right to Non-discrimination in this Context, Raquel Rolnik: Addendum: Mission to the United States of America. UN. <https://digitallibrary.un.org/record/766906?ln=en>
12. Saidi, Fayrouz. Ahlam. Phinzi, Kwanele. and Molnár, Erno. Urbanization in Algeria: Toward a More Balanced and Sustainable Urban Network?, Social Sciences, vol 12 n° 3, 2023, p.1-19 Consulted on 25 April 2023 on URL : <https://www.mdpi.com/2076-0760/12/3/174>
13. Scheuer, Sebastian. Haase, Dagmar. and Volk, Martin. On the Nexus of the Spatial Dynamics of Global Urbanization and the Age of the City. PloS one, vol 11 n°8, 2016, p 1-20. Consulted on 29 April 2023 on URL : <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0160471&type=printable>
14. Sumari, Neema.Simon. Cobbinah, Patrick.Brandful. Ujoh, Fanan. and Xu, Gang. 2020. On the absurdity of rapid urbanization: Spatio-temporal analysis of land-use changes in Morogoro, Tanzania, Cities, vol 107, 2020, p.102876. Consulted on 02 Mai 2023 on URL : <https://www.sciencedirect.com/science/article/abs/pii/S0264275120312245?via%3Dihub>
15. Mulligan, Gardon. F. and Crampton, Jason. P. Population growth in the world's largest cities, Cities, vol 22(5), 2005, pp.365-380. Consulted on 04 Mai 2023 on URL : <https://www.sciencedirect.com/science/article/abs/pii/S0264275105000727?via%3Dihub>