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THE MEDIUM-SIZED CITY AND THE CHALLENGE OF REGIONAL AND SPATIAL DEVELOPMENT COMPETITIVENESS THE CASE OF CITIES IN TÉBESSA PROVINCE

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ABSTRACT

Over the past three decades, Algeria's urban network has undergone significant transformations driven by the economic and social changes that followed independence. These shifts have exacerbated disparities between major urban centers and smaller towns, which have faced marginalization and limited development. This study focuses on the developmental dynamics in medium-sized cities in Tébessa province, specifically the cities of Bir El-Ater (88,083 residents), El Ouenza (58,904 residents), and Cheria (82,369 residents), accounting for a combined population of 229,356 (34.02% of the urban system and 28.40% of the province's total population according to PAW 20). The study highlights these cities' potential for developing the industrial and agricultural sectors. Findings indicate that enhancing economic and social development in these cities could improve living conditions, curb migration to larger urban centers, and achieve balanced development. Achieving these goals requires strategic investment in local resources and infrastructure, focusing on water resources, agriculture, and manufacturing industries.

KEYWORDS

Medium-Sized Cities, Developmental Competitiveness, Tébessa Province, Urban System

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I- Introduction

Medium-sized cities play a crucial role in the spatial organization and balanced development of regions. In Tébessa province, these cities act as intermediaries that support the decentralization of services and economic activities, reducing the pressure on the provincial capital. By enhancing their developmental capacities, medium-sized cities can help alleviate spatial disparities, providing a more equitable distribution of resources and opportunities.

These cities contribute to reducing the demographic and functional burden on the provincial capital by fostering local growth and attracting investments that create employment opportunities. Strengthening their competitiveness and integration into the regional hierarchy not only promotes balanced development but also enhances their ability to address the challenges of urban-rural disparities. This study emphasizes the importance of leveraging the potential of these cities to achieve a more harmonious spatial structure and sustainable regional development (Kabouche,2009).

Research Problem:

Medium-sized cities in Tébessa province, represented by Bir El-Ater, El Ouenza, and Cheria, suffer from marginalization and weak economic and social development, leading to growing disparities between these cities and larger urban areas. The central research question posed is: How can economic and social development be strengthened in the medium-sized cities of Tébessa province to achieve balanced development and curb migration to larger cities?

Methodology and Tools Used:

The analytical and comparative approach was adopted, utilizing statistical and graphical methods to highlight the role and significance of medium-sized cities within the hierarchical development scale of Tébessa province. The methodology also examined their competitiveness with neighboring areas and the efforts of each city to expand and develop its sphere of influence.

Study Area Location of TEBESSA province: "A Strategic Geographical Position in the Eastern Highlands"

Tébessa province occupies a strategic geographical location in the eastern highlands of Algeria, stretching between latitudes 34°15' N and 35°32' S and longitudes 4°52' E and 6°07' W. It is bordered by Souk Ahras province to the north, Tunisia to the east, El Oued province to the south, Khenchela province to the southwest, and Oum El Bouaghi province to the northwest.

The province is characterized by diverse topography and an expansive geographical area, extending from the northern peak of Mount Ghrighar to the southern Shott plains, spanning approximately 180 kilometers in length and an average width of 64 kilometers from east to west. The desert portion of the province stretches approximately 90 kilometers from Qentis in the west to the Tunisian border in the east. Covering a total area of 13,788 square kilometers—6% of Algeria's total land area and 24% of the eastern highlands' area—Tébessa is home to a population of 694,289.

With a 300-kilometer-long border encompassing 10 border municipalities and a population of nearly 694,289, Tébessa is a strategic border hub. Administratively divided into 12 districts and 28 municipalities, it serves as a vital intersection between the north and south, positioning it as a key economic and social development center in Algeria's eastern region.

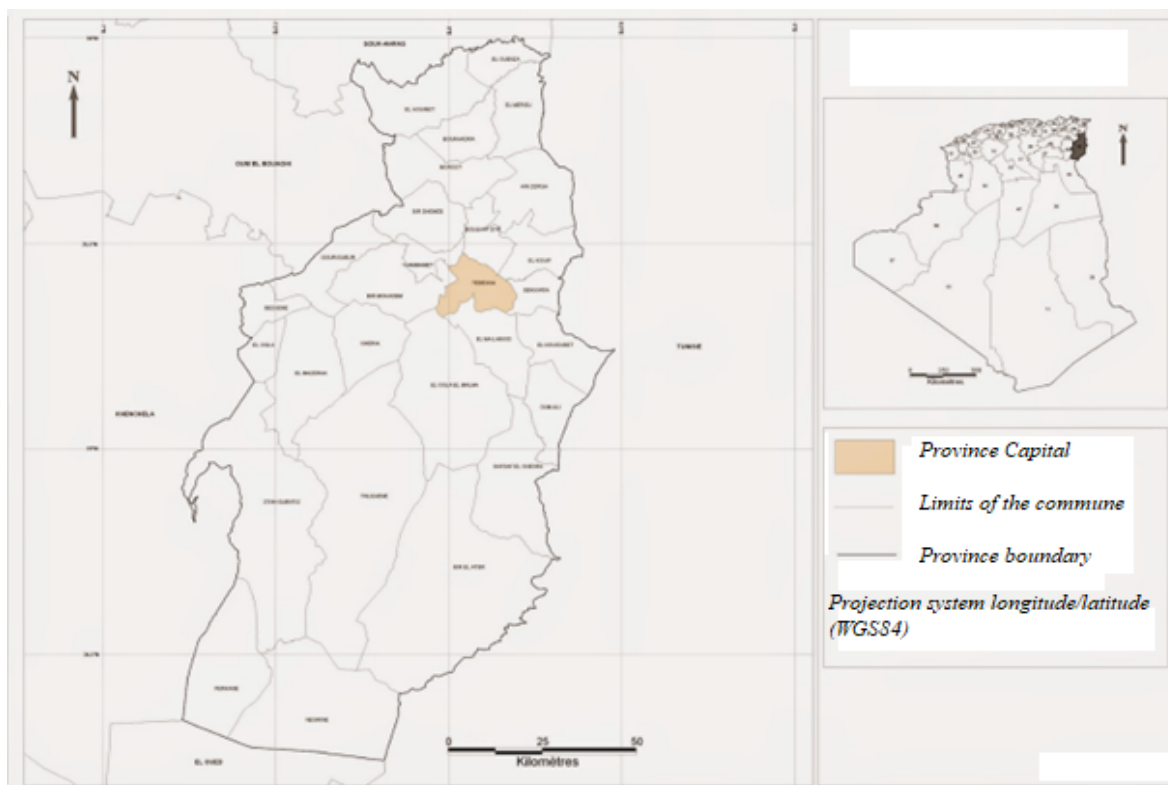


Fig. 1. Study Area Location of TEBESSA province

II- Tébessa Province: A Model of Administrative Diversity and Balanced Development

Since its establishment in 1974, Tébessa Province has undergone several adjustments and restructurings of its territorial and administrative boundaries, contributing to the formation of a more integrated and efficient administrative system. The province currently consists of 12 districts and 28 municipalities, as per the 1984 administrative division and the 1991 adjustment, classified according to the urban hierarchy as follows:

1- **Urban Municipalities (4 municipalities):** Tébessa, Bir El-Ater, Cheria, and El Ouenza. These are primary urban centers that act as major administrative and economic hubs, hosting the majority of urban activities and functions.

2- **Semi-Urban Municipalities (7 municipalities):** Al Aouinat, Hammamet, Kouif, Boukhadra, Morsott, El Ogla, and El Ma Labiodh. These municipalities exhibit a blend of rural character and urban expansion, with notable development in infrastructure and services.

3- **Semi-Rural Municipalities (5 municipalities):** Bekkaria, Negrine, Bir Mokadem, El Meridj, and Oum Ali. These municipalities strike a balance between rural and urban dynamics, combining moderate agricultural activities with limited urban expansion.

4- **Rural Municipalities (12 municipalities):** Sefah Gentis, Mazraah, Bejen, Telidjen, Ghrighar, Ferkane, Oglat Malha, Safsaf El Ouesra, Boulhaf Dir, Houijbat, Bir Dheheb, and Ain Zerga. These areas are predominantly rural, relying mainly on agricultural and pastoral activities, with future potential for rural development.

Significance of this Organization:

This administrative division serves as a vital tool for promoting balanced development across the province's various regions, taking into account the economic and social characteristics of each municipality. It also improves the delivery of public services and strengthens administrative decentralization, enabling optimal utilization of available local resources.

III- Characteristics of the Study Cities: Diverse Origins and Impacts

Tébessa Province, upgraded to the status of a provincial capital in 1974, is currently experiencing dynamic growth. It includes three population centers, each with over 50,000 residents, classifying them as medium-sized cities (ONS, 2008). These cities, notably dynamic in their urban functions, form key organizational hubs:

El Ouenza in the north Bir El-Ater in the south Cheria in the west

These hubs must be further strengthened and their integration better organized to manage the region effectively and contribute to the overall balance of the province.

Bir El-Ater: Today, Bir El-Ater serves as a vital hub for trade and mobility between northern and southern Algeria. Its rich history as an old colonial city, combined with its current infrastructure and economic potential geared toward trade and heavy industry (notably its significant mining resources), make it a key player in local and national economic integration. The expertise of its residents, exemplified by traditional carpet weaving ("Nememcha"), further strengthens its position as an economic force.

El Ouenza: A historic colonial center located in the northeastern part of the province along National Road 82. In recent years, El Ouenza has experienced significant growth, driven primarily by its thriving mining activities.

Cheria: One of the oldest cities in Tébessa province, Cheria emerged as a small settlement thanks to its strategic location between plains and mountains. It has played an essential role throughout history, from the Roman era to Islamic periods, serving as a center for trade and agriculture. Today, the city's economy relies heavily on agriculture, particularly grain cultivation and livestock farming. Its proximity to mining areas like Bir El-Ater has bolstered its economic activity. Additionally, Cheria is known for its artisanal industries, such as weaving and handicrafts.

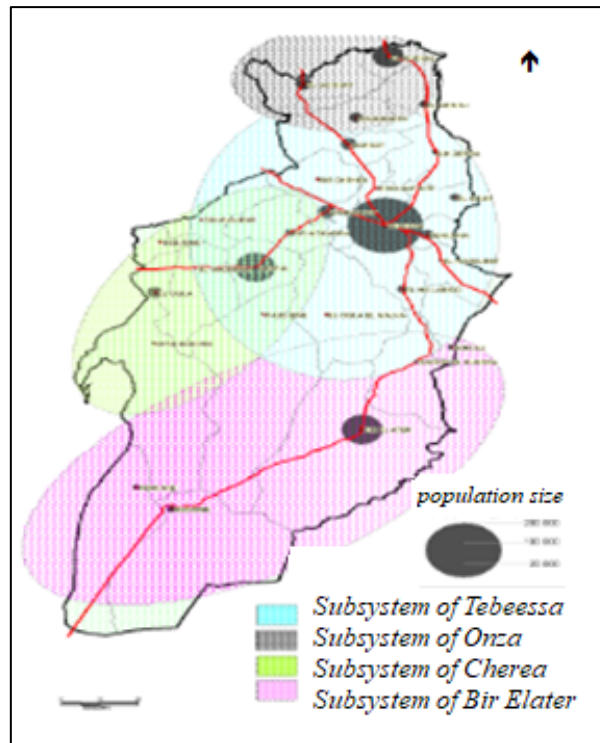


Fig 2. *The Urban System of Tébessa Province and Its Subsystems*

Figure (2) illustrates that the urban dynamics of Tébessa province are structured around four main organizational hubs: Tébessa as a major city, and three medium-sized cities—El Ouenza in the north, Bir El-Ater in the south, and Cheria in the west.

The urban system in Tébessa is distinguished by a unique duality in its geographical nature, characterized by its steppe landscape (covering more than 90% of its area) and its border location with Tunisia. The primary hub of this system is the city of Tébessa, situated only 40 kilometers from the Algerian-Tunisian border.

IV- Hierarchical Population Analysis: Dominance of Major Cities and Disparities Among Smaller Settlements

The population distribution curves for Tébessa province between 2008 and 2018 adhere to Zipf's Law, reflecting a gradual decrease in population numbers from the largest to the smallest centers. Despite the similarity between the curves, there is a slight variation in the coefficients, with a high coefficient of determination ($R^2 = 0.97$) in both cases, indicating the high accuracy of the applied model.

Examining the clear population changes in the table, it is evident that most population centers experienced growth between 2008 and 2018. Major cities like Tébessa, Cheria, and Bir El-Ater saw significant increases in population compared to smaller areas. Meanwhile, regions with lower population densities exhibited relatively smaller growth rates, highlighting disparities in population growth patterns.

These observations underscore the uneven distribution of population growth, with a clear concentration in major cities. This trend emphasizes the need for an in-depth study to understand the economic and social factors influencing this distribution, alongside the development of policies aimed at narrowing the gap between large and small areas. Such measures would help achieve a more balanced distribution of population and services across the province.

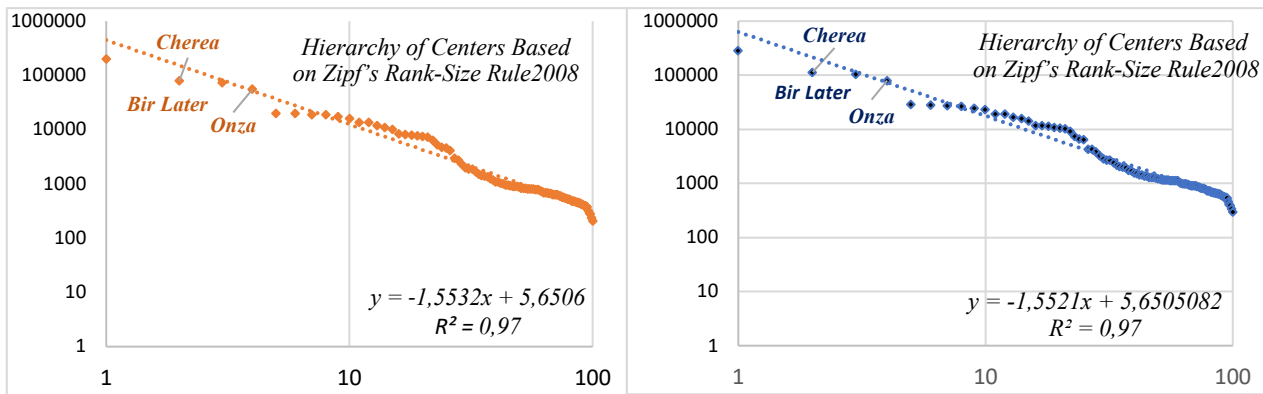


Fig. 3. The distribution of urban agglomeration according to Zipf's rank-size rule 2008/2018.

Source: Compiled by the researcher based on monographic data of Tébessa Province(2021)

According to Figure 03, and based on the temporal variation of the Pareto coefficient (Zhaor 2020), two periods were identified: 2008 and 2018, the Pareto coefficient remained relatively high (1.55), indicating the irregularity of Tébessa's urban system and, at the same time, the lack of structural change in the urban system of Tébessa province during this period, with some slight changes in the ranks of smaller urban agglomerations due to their benefit from significant housing projects.

Matrix Analysis of Rankings: Hierarchical Structure of Tébessa Province Centers Based on Economic Functions

The analysis of the ranking matrix is a fundamental tool for understanding the spatial hierarchy (Chen, Y., & Wang, J. 2012) of Tébessa province's centers. This matrix reflects disparities in the economic dominance of each center based on the distribution of economic functions and activities. These functions are pivotal in determining the position of centers within the urban system, as they are directly linked to population growth, urban expansion, and the range of available services.

Furthermore, this analysis highlights deficiencies in the functional and economic distribution across different centers. By doing so, it provides an informational foundation for guiding developmental policies, fostering integration between major and minor centers, and ensuring a balanced distribution of economic activities and public services throughout the province.

V- Results of Hierarchical Analysis of Urban Centers in Tébessa Province

The analysis of the social and economic significance, size, and transportation conditions of urban centers in Tébessa province reveals the unique characteristics of its urban network. These characteristics are reflected in the hierarchical structure and functional organization of the centers. Table 01 highlights the dominance of functions and the size of urban agglomerations, aligning with the current status quo.

The matrix indicates that the analytical studies conducted (ANAT, 2008) derived conclusions on the distribution of urban centers across varying levels of importance (hierarchical sequence). It also illustrates how these centers are organized based on their roles in social and economic functions, alongside their connection to transportation networks.

Table 1. Matrix of Centers by Functional and Population Importance

N°	Centers	Importance of Agglomerations	N°	Centers	Importance of Agglomerations	N°	Centers	Importance of Agglomerations
1	Tébessa	National city Level I	18	Saf Saf El Ouesra	Centers of local importance	36	El Ogla Malha	Centers of local importance
2	Bir El Ater	Regional cities Level I	19	Bir Mokadem		37	El Guentis	
3	Cheria		20	Oglat Cheham		38	Foum El Matrag	
4	Ouenza		21	Ferkane		39	Ouled Allaya	
5	El Aouinet		22	Ras El Aioun		40	El Mazraa	
6	Morsott	Regional cities Level II	23	Bouchebka		41	Ain Ghorab	
7	El Hammamet		24	Ain Zerga		42	Bedjen	
8	El Malabiod		25	El Houidjebet		43	M'Dila - Djerch	
9	El Kouif		26	Ouled El Bahloul		44	Kissa	
10	Boukhadra		27	A.S. Salah		45	Stah Guentis	
11	El Ogla		28	Castel		46	Bir El Goursa	
12	Ain Chénia Gare		29	Mesloula		47	Ferzguet	
13	Négrine		30	Thelidjène		48	Ouled Nacer	
14	Oum Ali		31	Ain Fodda		49	Djorf	
15	El Meridj		32	Ferkane Nouveau		50	Betita	
16	Boulhef Dyr		33	Ain Z'guieg		51	Kouriz	
17	Bekkaria		34	Gourigueur		52	Youkous	
N°(2-7-8-9-10-11-13-14-15-7)		Centers to be promoted	35	Bir Dheb				

Source: Compiled by the researcher based on the 2008 Tébessa Province Development Plan, Phase I

V-1- Hierarchical Analysis of Results

Tébessa Province exhibits a hierarchical urban structure comprising four main levels:

First Level (Top of the Pyramid):

Represented by the provincial capital, Tébessa, which, thanks to its economic level, services, facilities, and strategic geographic location, is the only city of national importance in this urban system. It plays a first-tier role in managing this border region of the eastern highlands.

Second Level:

Comprises three urban centers of regional importance at the first level: Bir El-Ater, Cheria, and Ouenza (population between 50,000 and 55,000). This intermediary level, absent in previous classifications (PAW, 2008), includes cities with potential for greater roles. However, these medium-sized cities face diverse challenges:

Cheria: Faces constraints that hinder urban expansion.

Ouenza: Risks economic decline.

Bir El-Ater: Endures harsh climatic conditions.

Although Aouinet does not fall into the medium-sized cities category (population between 10,000 and 15,000), it appears capable of playing a significant regional role.

Third Level:

Includes 12 centers classified as second-tier regional cities. These centers, such as Morsott, Hammamet, Meridj, Kouif, Boukhadra, and El Ogla, are proposed for development and appear well-positioned to take on significant roles in the province's urban network.

Fourth Level:

Represents centers of local importance with populations typically under 5,000. These are either local service hubs scattered across key areas or small clusters playing crucial roles in local administration, such as municipal headquarters.

V-2- Observations on Size and Hierarchical Rank

There is a clear correlation between the size of centers and their hierarchical levels, with some exceptions. For example:

El Malabiod: Despite its small size, it enjoys a higher hierarchical level due to its advantageous economic conditions (industry, national road, railway, proximity to the provincial capital).

Bekkaria: Although under-equipped, it benefits from its proximity to the provincial capital, Tébessa, and its facilities.

The structural pyramids of the urban system in Tébessa for 2008 and 2018 reflect broad bases, indicating weak infrastructure and significant urban sprawl resulting from the dominance of the provincial capital. Additionally, there is a strong alignment between the population hierarchy of agglomerations and the hierarchy of facilities, with some exceptions.

V-3- Discussion

The findings highlight that medium-sized cities in Tébessa Province require more comprehensive strategies for resource allocation. While agricultural and industrial projects provide some employment opportunities, they remain insufficient for achieving comprehensive and balanced development (Medaregnarou, 2015).

Given the availability of historical and tourism resources, the tourism sector can play a pivotal role in supporting the local economy if appropriate infrastructure is developed. Furthermore, improving essential services in these cities will help mitigate migration to larger urban centers (Roncayolo, 1997).

The matrix analysis confirms that Tébessa Province has an organized urban network displaying a hierarchical gradient of urban centers based on criteria such as social and economic functions, size, and transportation availability.

VI- Conclusions

In conclusion, medium-sized cities in Tébessa Province, such as Bir El-Ater, Ouenza, and Cheria, have significant potential for developing their competitiveness in terms of development and spatial integration. However, they require targeted governmental policies to enhance investments, develop productive sectors, and improve infrastructure.

Recommendations

To restructure the province's urban network and rehabilitate the urban functions of Tébessa, the following measures are necessary:

- **Control Urban Expansion:** Regulate the urban sprawl of cities facing significant risks of imbalance in their urban systems, such as Tébessa, Cheria, and Hammamet, which currently experience annual urban population growth rates exceeding 5.5%.

- **Upgrade Other Urban Centers:** Promote other centers to support major cities struggling with limited urban expansion capacities (e.g., Tébessa, Cheria, and Ouenza), while working toward a more balanced urban network.

Enhance Medium-Sized Cities: Strengthen the roles of the three medium-sized cities Bir El Ater, Ouenza, and Cheria—based on their functional and demographic classification (ONS, 2008). Organize their integration more effectively to manage their neighboring areas and contribute to achieving balance across the province as a whole.

REFERENCES

1. Chen, Y., & Wang, J. (2012). Recursive subdivision of urban space and Zipf's law. PLoS ONE, 7(9), e44688. <https://doi.org/10.1371/journal.pone.0044688>
2. Directorate of Programming and Budget Monitoring of Tébessa Province. (2021). Monographic Study of the Province.
3. Kabouche, A. L. (2005). Defining the concept of medium-sized cities in Algeria: The case of northeastern Algeria. Human Sciences Journal, Issue 23, pp. 209-221.
4. Medaregnarou, B. H. (2015). The dimensions of demo-functional changes in the urban system of Tébessa Province: The role of development strategies in its hierarchical organization (1966-2008) [Doctoral dissertation, Mohamed Khider University - Biskra].
5. National Agency for Land Use Planning (ANAT). (2008). Tébessa Province Land Use Plan (PATW), Phases 1, 2, and 3.
6. National Office of Statistics (ONS). (2008). Urban Structure of Algeria: Hierarchical Analysis of Urban Centers.
7. Othmani, A., & Gwasmiya, F. (2019). The national strategy for border areas development amid rising cross-border security threats: Case study of Algeria (2011–2019) [Master's thesis, Larbi Tebessi University - Tébessa].
8. Roncayolo, M. (1997). Urban systems: Dynamics and interactions. Urban Studies, 34(6), 827–841.
9. ZHAO Rui, JIAO Limin, XU Gang, XU Zhibang, DONG Ting (2020). The relationship between urban spatial growth and population density change [J]. ActaGeographicaSinica, 75(4): 695-707.