

A generic approach to evaluating territorial attractiveness in a bipolar cities system: the case of north-eastern Algeria

Roufeida Aibeche^{1, CDFP}, Ahmed Bousmaha^{2, MR}, Rosa Maria Arce Ruiz^{3, MR}

^{1,2}University Larbi Ben M'hidi oum El Bouaghi, Urban Techniques Management Institute, Algeria; ¹e-mail: aibecheroufeida@outlook.fr (corresponding author); ²e-mail: bousmaha06@yahoo.fr; ³Polytechnic of Madrid University, Laboratory: Centro de Investigación "Transyt", Spain.

How to cite:

Aibeche, R., Bousmaha, A. & Arce Ruiz, R.M. (2023). A generic approach to evaluating territorial attractiveness in a bipolar cities system: the case of north-eastern Algeria. *Bulletin of Geography. Socio-economic Series*, 60(60): 19-32. DOI: <http://doi.org/10.12775/bgss-2023-0013>

Abstract. Evaluating territorial attractiveness can result in several interpretations due to the multidimensional nature of the concept, starting from economy and expanding into many fields such as geography and social studies, in this paper, we attempt to analyze the existing economic-urban dilemma in the north-east region of Algeria by evaluating the attractiveness of its two national metropolises as separate territorial units.

The main objective of the study was to explore the possibility of evaluating the three facets of attractiveness simultaneously in a bipolar cities system. Our method is not in itself new; it has been used as a model for assessment in many other regions of the developing world suffering from lack of data and economic-urban issues, but this is the first time it has been used to assess attractiveness.

This multi-factorial model with synthetic indicators will help us to have a general view of the issue and to define strengths and weaknesses of both territorial units. However, the limits of this methodology will be the percentage uncertainty that lies in the subjectivity of the weighting step performed by experts.

Article details:

Received: 11 January 2023
Revised: 28 February 2023
Accepted: 12 April 2023

Key words:

geography, planning & development, territorial attractiveness, bipolar system, synthetic indicators, endogenous development, Algeria

Contents:

1. Introduction	20
2. Literature review	21
3. Methods	22
4. Conceptualizing territorial attractiveness	22
4.1. Territorial attractiveness	22
4.2. Governance of territorial attractiveness	23
5. A comparative analysis through synthetic indicators between the two metropolises in north-eastern Algeria	24
5.1. The construction of a synthetic indicator	24
5.2. The chosen case of the study	26
5.2.1. Overview of the issue on a national level	26
5.2.2. Overview of the issue on a regional level	26
5.2.3. Bipolar metropolization	28
6. Results and discussion	28
7. Conclusion	30
Notes	30
References	31

1. Introduction

In the past few years, the evaluation of attractiveness has become an important issue in territorial planning for its pertinence to the modern globalization phenomenon and for its multidimensionality, where a general evaluation of any given territory can be approached from multiple aspects and angles, such as: a destination's perceived image (Ezmaïe, 2012), the factors that influence tourism development (Guzman-Sala, 2016), and the assessment of urban attractiveness by students (Antonova et al., 2020).

The multidimensionality of the notion has been established in a wide world literature generating many methods of evaluating attractiveness such as surveys (Schäfer & Just, 2018) or ranking cities by indicators (Annoni & Dijkstra, 2019), to measure not only economic attractiveness but also territorial attractiveness and on different scales: cities, regions, clusters and countries, etc. This has been done in the hope of boosting economic growth and enhancing regional and urban strategies, such as the attractiveness of the Moroccan regions (Khalfaoui & Lamari, 2015) and the Attractiveness of European Tourist Cities (Valls et al., 2014).

Nowadays, territorial attractiveness is considered in science to be a multidimensional concept with several approaches depending on the actors responsible for creating or managing the attractiveness, and on the attractor elements of the territory. Therefore, measuring attractiveness has become a subjective matter for every author based on his dimension of study and his chosen method of analysis.

On the other hand, we notice the interesting programmed (*Note 1*) region (SNAT, 2001) of north-eastern Algeria, which possesses a strategic location, economic assets as the country's second-highest region in terms of industrial jobs and first-placed region in population density with 209 inhabitants per km² (SRAT, 2002).

However, the disposition of agglomerations is concentrated in the two national metropolises, creating a unique bipolar cities system; more than one third of the region's population is living in the two metropolises with a combined surface of only one tenth of the region (see Fig. 1).

Despite the existing human capitals and potential development assets, the region as a whole has experienced stagnation or relative economic decline over the past decade (SDAAM Constantine, 2014) (*Note 2*), the reason for that stagnation was the inability of previous development planning strategies to communicate the region's dominant position that has created an economic-urban dilemma: the region no longer has its driving role in

the national economy – an economy that the state seeks to diversify into a multipolar economy less dependent on hydrocarbon revenues (OGB, 2018) (*Note 3*).

This current situation, along with the fast and continuous urban growth of both metropolises, drives us to question the reasons for the economic stagnation in the region and to wonder about an approach that would emphasize in a non-exclusive way the important role of integrating attractiveness evaluation in future territorial planning strategies.

We started by asking the crucial question: How do we govern territorial attractiveness in a bipolar cities system? To answer this question, we present a generic vision of territorial attractiveness based on an overview of empirical approaches.

In this paper, while we refer to the earlier work of Musolino and Volget (2020), our focus is different; we propose an adaptation or an improvement for evaluating general territorial attractiveness in developing countries with difficulties in providing sufficient data. Our paper presents a comparative study between the two regional metropolises in the north-eastern region of Algeria.

It is not a "pure" new method but more of a new model in the assessment of the economic-urban dilemma observed in the north-eastern region of Algeria (and in many other regions of the developing world). This model is unique in certain aspects (e.g., the weighting by experts) and adaptable to different territories (with indicators that are suitable for every territory and the experts familiar with that territory).

Evaluating territorial attractiveness with a multidimensional vision will allow us to propose recommendations for future regional and urban

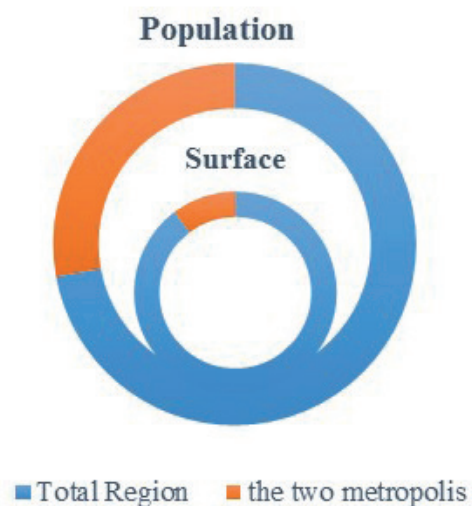


Fig. 1. Region population compared to surface
Source: Author's Elaboration of RGPH 2008

planning strategies of both territorial units. The main goal of the study is to explore the possibility of evaluating the three facets of attractiveness (Musolino & Volget, 2020) (*Note 4*) simultaneously in a bipolar cities system. To achieve this goal, we put forward the following research objectives:

- Decide on a prospective planning vision for promoting either the complementarity or the competitiveness of the metropolises in the region.
- Define potential attraction assets of both metropolises as territorial units in the region.
- Propose recommendations for a future planning tool based on endogenous attraction assets.

The remainder of the paper is organized into six sections: section 2 illustrates the literature review behind the article's main issue; section 3 explains the method used in the study; section 4 outlines the theoretical frame of the study and we explain comprehensively the concept of territorial attractiveness; section 5 is devoted to the fieldwork and the construction of the synthetic indicators; and sections 6 and 7 summarize the results of the fieldwork and conclude with recommendations.

2. Literature review

In addressing the notion of attractiveness, the main question is very simple: "Who wants to attract what?" (Hatem, 2005). Attractiveness appears as a relative issue in which the attraction changes based on the groups at the focus of attraction strategies, because "attractiveness" has a complex and diverse combination of criteria (Battaglia et al., 2015).

Territorial attractiveness appeared as a theory in the early 1900s. One of the first examples was presented by Sombart (1916), who argued that territorial economic development generated territorial attractiveness based on the fact that the territory receives development from exports of goods and services, and from then on it was widely discussed in economic studies.

However, in the 1990s, a new wave of interest in the concept of attractiveness started moving away from the economic empirical studies to the depth of long-term multidimensional objectives by including other aspects such as historical and geographical factors. Musolino and Volget (2020) and Storper (1997) concluded that territories are considered winners when they produce high profits for their businesses and high-standard conditions for their residents; where Malecki (2004) developed a new

paradigm, his study showed that localization is the main element in the growth of any territory.

The measurement of territorial and urban attractiveness began in the 20th century as a way to enhance cities' potential development, but it was mostly driven from an economic background; many researchers proposed various methods as tools to enhance regional planning, such as surveys, statistical analysis and ranking by indicators (Malecki, 2004).

Cusin and Damon (2010) proposed the most relevant approach to the concept of territorial attractiveness from an urban perspective. They demonstrated the difference between residential and territorial attractiveness on the scale of cities and showed the two different categories of attractiveness: potential attractiveness (the city's propensity to generate new flows in the future) and effective attractiveness (a city with a high migratory figure).

Also, in that study, more urban factors such as geographical location, living environment and urban offer were introduced to measure attractiveness, because those factors are becoming increasingly decisive elements in the choice of residential attractiveness. Lately, considerable attention has been paid to the multidimensional aspect of the theory; several multidimensional studies were conducted to measure attractiveness using objective and subjective indicators (Ezmaie, 2012; Annoni & Dijkstra, 2019).

In recent times, many researches have addressed the concept of territorial attractiveness from several dimensions and for various objectives. Fino, Ceppi and Fatiguso (2020) attempt to enhance territorial attractiveness by proposing virtual tours of the international architectural heritage, Comi, Grasseni and Resmini (2021) tackled the political dimension of the issue by studying the ability of judicial efficiency to improve territorial attractiveness for FDI (Foreign Direct Investments), (*Note 6*) while Barois et al. (2021) concentrated on the land and locational potential and tried to understand the existing dynamics by developing a typology of zones *détendues* through the prism of territorial attractiveness by using a hierarchical ascending classification.

Among those studies, we refer to the interesting paper by Musolino and Volget (2020) that elaborated the three facets of attractiveness – the difference between real, revealed and perceived attractiveness – established on a theoretical background:

- Revealed attractiveness as the actual inflows coming to a territory.

- Perceived attractiveness as the perception of that territory in the consciousness of residents and visitors.
- Real attractiveness in reference to the tangible and intangible factors that make a territory attractive.

In addition to that, they used a multidimensional approach to measure attractiveness through both dashboards and synthetic indicators; they introduce a clear classification on the methods of investigating attractiveness based on the dimension of interest to the researcher.

3. Methods

This paper is basic research – a modest contribution to the ongoing discussions about the role of territorial attractiveness in urban planning, using a mixed method with an explanatory sequential based on the work of Musolino and Volget (2020), with a macro (*Note 5*) approach.

We conducted a comparative study between the two metropolises in the north-eastern region of Algeria, where we started by investigating the suitable indicators. Those indicators were chosen from different ranking experiences by the authors based on the data availability and the particularity of the region.

The objective was to create a list of multifactorial indicators divided into nine categories from available data at a national level and to create a ranking model applicable to other developing regions. We collected the primary data from 21 different official administrations in both metropolises and normalized them through a standardization formula, and thereafter we opted for a weighting method.

We questioned six experts with mainly, but not exclusively, territorial planning backgrounds using a simple survey in which we asked them to rank by percentages three urban factors for both metropolises based on the impact of those factors in the future urban growth of each metropolis (*Note 6*). As a final stage, we compared the synthetic indicators of both metropolises and projected the results on the actual territorial planning strategy.

The originality of our approach lies in the fact that we offer an improved model of territorial assessment, a global (*Note 7*) and urban-orientated method for measuring the three facets of attractiveness that is adaptable to various territories of the developing world; we conducted an empirical multidimensional study taking into consideration

previous academic theories (*Note 8*) that could be used as a tool for decision-making in future regional and urban planning strategies.

4. Conceptualizing territorial attractiveness

4.1. Territorial attractiveness

Before elaborating on the concept of territorial attractiveness, we need to clarify the notion of “territoriality”: a “territory” can be defined as twofold in nature, being both symbolic, as the systems of representation that guide societies in their apprehension of their “environment” and material in reference to geographical space (Moine, 2005).

A territory is defined by its limits (physical, political, etc.), although those limits could appear as the results of the relationship between a certain territory and its inhabitants (social, cultural, etc.) (Chapel, 2010).

In the definition of territorial attractiveness, we refer to Hatem (2004): “the capacity of territories to provide, through their resources, more attractive siting conditions than those of competing territories for mobile projects”.

An attractive territory has not just a large net migration, but also a balanced combination of economic and non-economic prospects with the quality of living (Cusin & Damon, 2010). Accordingly, an unbalanced territory produces repulsiveness, as observed in population losses and relocation of enterprises.

A certain balance should also be maintained between people flows: a territory is attractive when it can retain its residents while also attracting visitors (Servillo et al., 2011). In addition, a territory can be attractive depending on “soft” or less tangible factors, such as territorial identity (Kunzmann, 2006). Those factors put cities at different starting points (Friboulet, 2010), which indicates the necessity of integrating them with economic factors when evaluating attractiveness.

Cusin and Damon (2010) explain a re-composition of territories occurring in actual time as a result of actors choosing different locations to create and spend wealth; nowadays, attractiveness is more dependent on urban factors such as quality of life and services. This change indicates that productivity is losing its position as a good factor of attractiveness against endogenous attraction factors, especially if bordering territories have better value for money (*Note 9*) (Hatem, 2005).

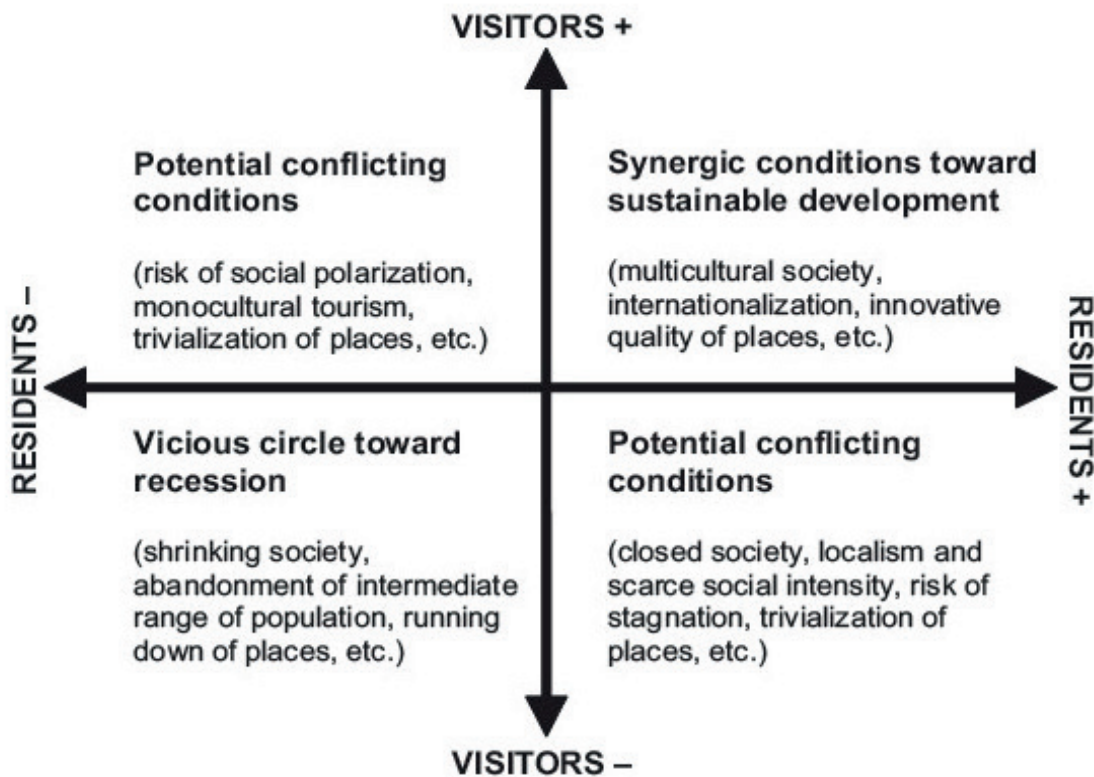


Fig. 2. Visitor/resident externalities balance
Source: Servillo, Atkinson & Russo, 2011

The difference between competitiveness and attractiveness needs to be noted, being similar in common meaning; promoting attractiveness is considered only an element in the process of making a territory competitive: We quote Hatem (2005): “attractiveness is one of the stages of the dynamics of constructing territorial competitiveness”. This definition explains the reason why competitiveness is considered a long-term notion while attractiveness is a short- or medium-term notion with an anticipatory vision (Friboulet, 2010).

4.2. Governance of territorial attractiveness

The concept of attractiveness from a governance point of view has two aspects; attractiveness can shape the process of governance and, in parallel, be a factor in it. (Servillo et al., 2011). In planning a development strategy, a clearer differentiation based on assets would allow for a more detailed examination of governance issues (Camagni & Capello, 2009).

Friboulet (2010) argues that the focus of attractiveness strategies has lately shifted to initiatives that promote a place-based approach

creating a new cultural-economic paradigm; strategies to boost economic growth are becoming tailored to the territorial characteristics for the objective of supporting endogenous development factors (Servillo et al., 2011).

The governance of attractiveness is also multidimensional (*Note 10*) local authorities have the obligation to revise all aspects of potential growth before declaring a strategy of promoting attractiveness. As mentioned earlier, there will always be the question of who or what we want to attract.

By answering this question based on the territory's assets, we could delineate how to achieve the objectives of growth (Servillo et al., 2011). Therefore, identifying the potential attraction assets of a territory can be a crucial factor in boosting territorial growth by enhancing its attractiveness (Cusin & Damon, 2010).

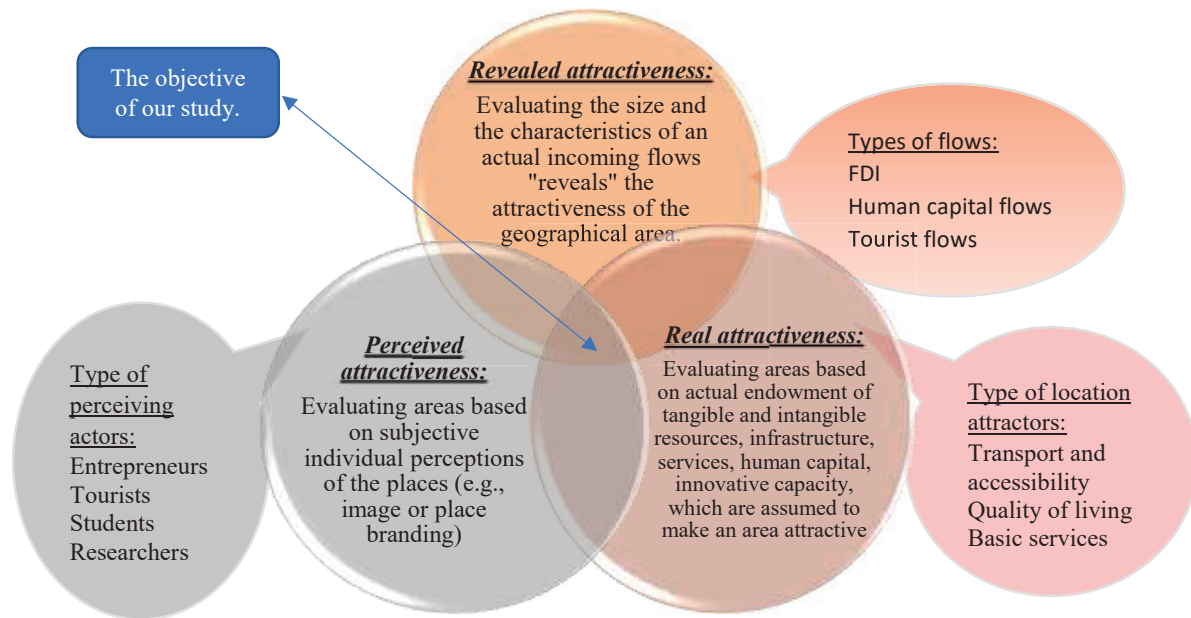


Fig. 3. The objective of our study
Source: Author's elaboration

5. A comparative analysis through synthetic indicators between the two metropolises in north-eastern Algeria

5.1. The construction of a synthetic indicator

In our approach to a global assessment of territorial attractiveness and based on the work of Musolino & Volget (2020), we propose a list of 36 indicators divided into nine categories and three urban factors. We have chosen the appropriate indicators to our multidimensional approach (Note 11) from a wide extended list gathered from previous ranking experiences such as those of Annoni and Dijkstra (2019).

The majority those indicators were selected to measure real attractiveness, with only external tourists as the flow to represent revealed attractiveness due to a lack of official data on other incoming flows. The evaluation of perceived attractiveness was carried out in the second level of construction of the synthetic indicators using the "weighting" method. The weighting given to the three urban growth factors is based on the experts' subjective analysis of the urban reality in the region.

Thereafter, we started by collecting the data from official administrations and we conducted an aggregation process to facilitate the comparative part. Given that we had only one datum for each indicator, we opted for a standardization method;

(Note 14) the equation that describes this method (Barba-Romero & Pomerol, 1997) (Note 14) is as follows:

$$x_i = \frac{a_i}{\sum a_i}$$

Where a_1 and a_2 are the data collected from the metropolises of, respectively, Constantine and Annaba. As is clear from the equation, all the results fall within a range from 0 to 1. Therefore, for each indicator and for each city, the equation can be written as:

$$x_1 = \frac{a_1}{\sum a_1 + a_2} \text{ for Constantine.}$$

$$x_2 = \frac{a_2}{\sum a_1 + a_2} \text{ for Annaba.}$$

As our own interpretation to the perceived attractiveness facet (Fig. 2), we conducted a weighting method on the previous aggregated indicators.

We selected six experts among academics and representatives of the Algerian institutions with mainly, but not exclusively, territorial and urban planning backgrounds, trying to maintain a certain balance between the metropolises in terms of the geographical origin of place of residence of experts.

The factors of urban growth were chosen according to the two territorial units' peculiarities, and previous indicators were divided according

Table 1. Indicators classified to categories and urban factors of growth

Factor	Weighting coefficient		Category	Indicator		
	Annaba	Constantine				
Speed of urbanization	0.31	0.34	Accessibility	1. Diversity of the transport offer (point for type)		
				2. Number of regional and national city road access (point per access)		
				3. Newly created road linear		
				4. Number of passengers by rail from/in metropolitan area		
				5. Traffic volume in international flights		
				6. Number of airport passengers		
	Demography			7. Birth rate (per 1000 inhabitants)		
				8. Population density of city		
				9. Population growth rate		
	Quality of life and urban development			10. Rate of consultant doctors (1/1000inhabitants)		
				11. Number of patients evacuated to the wilaya's hospitals		
				12. Number of subscribers to ADSL/internet lines services		
				13. Number of university research laboratories		
Structuring projects	0.4	0.29	Economy	14. Percentage of employment in the tertiary sector		
				15. Newly set up companies PME (national and foreign)		
				16. Surface of industrial zones		
				17. Percentage of employment in the industrial sector		
			Housing projects (Note 12) and land availability			18. Surface of activity and micro-activity zones
						19. Rate of agricultural lands coverage (agricultural/total)
						20. Number of houses distributed in promotional housing programs LSP/LPA/AADL/LPP
			Private investment			21. Number of houses distributed in social-residential housing LPL
	22. Number of private schools					
	23. Number of land requests for investments					
	24. Number of shopping malls (of >25 selling points and >5000 m ²)					
City's identity	0.28	0.36	Culture and heritage	25. Number of private clinics		
				26. Number of principal cultural infrastructures (cinemas, theatres, museums)		
				27. Number of recreational or cultural events		
			Tourism	28. Number of principal public libraries		
				29. Number of classified historical and naturel sites		
				30. Nights spent by foreign tourists		
	Insecurity index (Note 13)			31. Number of foreign tourists		
				32. Number of existing hotels (ranking from 1 to 5 stars)		
				33. Number of travel agencies		
				34. Number of attacks on persons		
				35. Number of attacks on properties		
				36. Car accidents rate (1/1000 inhabitants)		

Source: Author's elaboration

to their attached factor (causality/effects). Then a survey containing the explanation of the factors and the methodology was sent to the experts (Table 1). We asked them to evaluate the factors based on their potential impact in the future urban growth of each metropolis separately.

The following equation is obtained:

$$W_i^x = x_i \times W_i$$

Where x_i is the value of the indicator ($0 \leq x_i \leq 1$), and W_i is the weight given the indicator according to its attached factor. The weight given by the expert for the factors differs only slightly between cities; nonetheless, the results of the synthetic indicators are different.

The division of the indicators by the three factors is based on a correlation relationship obtained by the author's personal vision of the region and the two metropolises (see Table 1).

5.2. The chosen case of the study

Previous studies concerning territorial attractiveness were conducted in Algeria but with an economic vision mostly to measure certain flows of revealed attractiveness or to investigate a current situation in the economic spectrum (e.g., Ait-Yahia & Salaouatchi, 2019). We start our global approach by defining the spatial and geographic frame of the study from a “macro” to “micro” logic (SRAT, 2001) (*Note 14*).

5.2.1. Overview of the issue on a national level

Algeria is the tenth biggest country surface-wise in the world; it is located in the north-west of Africa, and is divided into 58 wilayas, three national metropolises (Oran, Constantine, Annaba) and a single international metropolis as the capital, Algiers.

The Algerian state undertook a major territorial planning project through the development of the National Plan and Regional Land Use Planning Schemes in the 2000s (SNAT), the objective was to open the country up economically, and to provide better management and governance of decisions and resources at a local level.

The SNAT was the first territorial planning document that illustrated the regionalism division; it includes nine regions in the country based on physical and historical limits; every region has a spatial planning document as a guide for long-term development strategy called *SRAT* (regional spatial planning scheme).

To this day, no updating of those documents or of its strategies has been conducted, so there is ambiguity and uncertainty in dealing with the actual situation of the region or planning a prospective development strategy.

However, some interesting, but autonomous, planning documents called *SDAAMs* (master plan of planning of metropolitan areas) for the four national metropolises (Algiers, Oran, Constantine, Annaba) were published in the last decade presenting more up-to-date information and statistics, which allowed us to present specific data and statistics in our study.

5.2.2. Overview of the issue on a regional level

North-eastern Algeria is a privileged region with a strategic geographical location at the crossroads of the axes connecting the Maghreb countries and Africa to the Mediterranean, which gives it a natural international vocation. This region is both coastal and inland, and it borders Tunisia and the eastern and central highlands regions, giving it a unique location that places it at the heart of transport networks.

The north-east region appears as a de-structured territory with the domination of the two national metropolises of Constantine and Annaba with a population above 500,000 each, and the presence of four cities of more than one hundred thousand inhabitants each (Skikda et al., 2008).

The distribution of towns in this region corresponds globally to that of natural resources, but the industrial investments made by the State from the 1970s were the main factor in de-structuring the regional space.

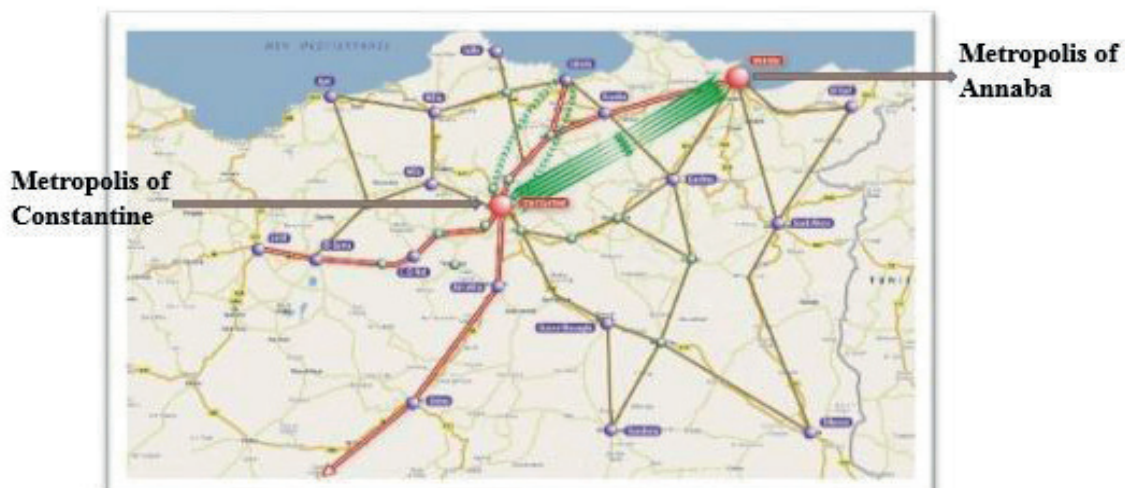


Fig. 4. The bipolar cities system in the North East Region of Algeria
Source: SDAAM, URBACO Constantine, 2008



Wanting to get closer to the populations and the workforce, industrial constructions were established in the middle of the best agricultural lands and created the bases for a continuous de-structuring of the rural world through the competition that industry maintains with agriculture on land, water and labor. Another factor, which has appeared in recent years, is the insecurity of the countryside, which prevailed during the decade 1990–2000 (Reham, 2001).

In economic terms, trade became a “refuge” activity in the region compensating for the lack of other employment possibilities, and informal trade developed, which also responds to a need to satisfy the basic needs of a low-income population. The

border position with Tunisia, favors the “trabendo” (Note 15).

In terms of tourism, a field that, if exploited correctly, could generate growth; the region suffers from a degraded environment (pollution of all kinds) and a lack of reception facilities. We also note that, in investments, there is a tendency to develop tertiary projects rather than secondary (industrial) projects, which shows a decline in productivity revenues in favor of services.

Table 2. Preliminary comparison between the two metropolitan cities

	Constantine	Annaba
Geographical shape and limits		
	Hinterland	Coastal
Surface	2,187 km ²	1,439 km ²
Population (Note 16)	851,456	519,072
Number of municipalities	12	12
Number of big cities (over 100,000 inhabitants)	1	1
Number of medium cities (20,000-50,000 inhabitants)	1	1
Number of small cities (20,000-50,000 inhabitants)	4	4
Major challenges mentioned in the SRAT	Losing commandment position in the region; major housing problem	Urban perimeter saturated with industrial fabric; uncontrolled urban sprawl; consuming agricultural lands
Role in regional structure	Three boarding wilayas as hinterland; metropolitan complementarity with Annaba	Three boarding wilayas as hinterland; metropolitan complementarity with Constantine
Potential economic sectors for development as cited in the SRAT	Agriculture Industry	Industry Upper tertiary

Source: Author's elaboration

5.2.3. Bipolar metropolization

Cities and regions in planning strategies have a variety of interdependency relationships, such as a united city-region, polycentric or monocentric regions, the bulk of those relationships are inharmonious, nevertheless cities may be the key to a region's overall prosperity (Servillo et al., 2011).

The north-eastern region of Algeria has a polycentric cities system. It is a unique and dynamic system with multiple planning possibilities; by examining this system separately from the rest of the region, we could have a better understanding of the reasons for the economic stagnation and facilitate the task of collecting official data.

In our study, while we refer to the previous regional division. We initiate a different one assuming the two metropolises as separate territorial units and evaluating their attractiveness in the regional space separately with the objective of a general comparative review; the hypothesis revolves around the necessity for new development planning strategy with new territorial limits.

In Algeria, the territorial division is presented in three consecutive levels: wilaya, daïra, municipals where the size of cities is based on its resident population (defined in the cities orientation law 06-06 of 20 February 2006), we noticed 3 main sizes:

- Big city: with over 100,000 inhabitants
- Medium city: 50,000–100,000 inhabitants.
- Small city: 20,000–50,000 inhabitants.

In the Table 1, we summarize some basic data and objectives for the two metropolises as mentioned in the (SRAT, 2001):

It is to be noted that many actual important agglomerations and extensions (such as Ali Mendjeli in Constantine and Draa Rich in Annaba) do not appear in the past regional planning document SRAT because most were included in the planning stage or early execution during the drafting of the document. Since that time, those extensions have been being planned autonomously and on a local level.

The reality of the region as mentioned in the official documents could be summarized as an accelerated and anarchic growth marked by the proliferation of precarious housing, a high rate of unemployment, the absence of productive investments and an underuse of existing infrastructural capacities. This is a difficult reality in which the previous regional planning documents of up to 15 years ago or current autonomous local planning documents could not solve or even give a general diagnosis of the issue.

6. Results and discussion

As the first overall view of the results, the metropolis of Constantine appears as the most attractive in both primary and post-weighting results. That superiority is presented also in relatively similar weighting coefficients, which reflect the perceived image of the two territorial units by the experts. In the figures 5 and 6 and Table 3, we summarize the results of the study:

In categories of accessibility, demography and urban development and quality of life, a proportional similarity between the metropolises is presented in both primary and post weighting results with an attractiveness advantage to Constantine. However, for the accessibility category, Annaba's major asset – the port, which could have given it the lead due to its international importance – was not calculated in the data.

For the economy category, we notice a superiority of attractiveness advantage for the Constantine metropolis despite Annaba being the officially documented industrial pole of the region. This result suggests the appearance of noticeable industrial polarization in Constantine along with its existing tertiary economy.

In the housing and land availability category, we notice a change of attractiveness advantage from Constantine in the primary results to Annaba in the post-weighting results due to the perceived image of both territorial units by the experts. This image is contradictory with the reality of Annaba's topography (being surrounded by mountains, which make it difficult to expand as a metropolitan territory) but could indicate the existence of attraction elements in the real-estate sector in Annaba or a poor housing strategy in Constantine.

In the private investments category, there is a noticeable superiority for the Constantine metropolis, which could be explained in the creation of new industrial zones and micro zones (e.g., Ain Abid industrial zone) dedicated to private investment, contrary to the Annaba metropolis, where state-dominated investments in heavy industry still have the biggest impact.

For the culture and heritage category, the post-weighting results for Annaba are extremely low, which indicates the need for a territorial marketing strategy emphasizing the unique cultural identity away from Constantine's and adding its coastal advantage in promoting its attractiveness. For the Constantine metropolis, the marketing strategy should extend to an international audience.

The tourism category shows a very narrow similarity in the primary results, with a superiority for Annaba. Then, it changes in the post-weighting results

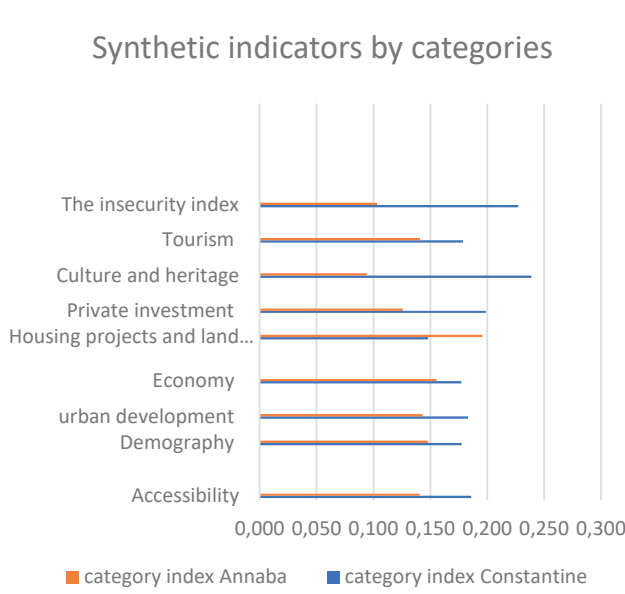


Fig.5. Results of the study: Synthetic indicators by categories
Source: SAutor's Elaboration

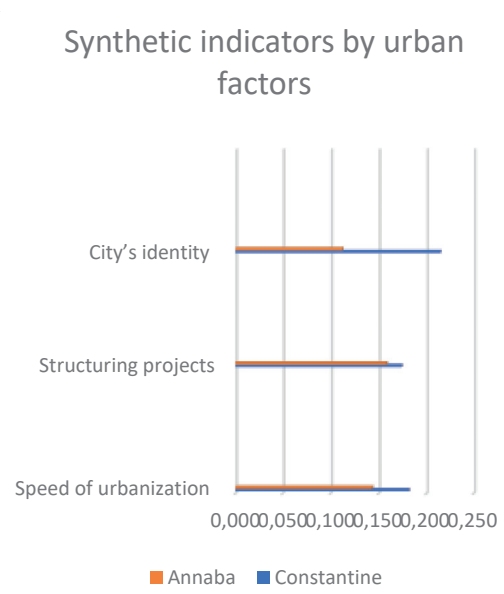


Fig.6. Results of the study: Synthetic indicators by urban factors
Source: SAutor's Elaboration

Table 3. Results of the Study

Categories	Primary results		Post weighting results		Attractiveness advantage		
	Constantine	Annaba	Constantine	Annaba	Primary	WC ¹⁹	Post weighting
Accessibility	3.28	2.72	0.186	0.141	Constantine		Constantine
Demography	1.57	1.43	0.178	0.148	Constantine	Constantine	Constantine
Quality of life and urban development	2.15	1.85	0.183	0.143	Constantine		Constantine
Economy	3.06	1.94	0.177	0.155	Constantine		Constantine
Housing projects and land availability	1.53	1.47	0.148	0.196	Constantine	Annaba	Annaba
Private investment	2.74	1.26	0.199	0.126	Constantine		Constantine
Culture and heritage	2.65	1.35	0.239	0.099	Constantine		Constantine
Tourism	1.99	2.01	0.179	0.141	Annaba	Constantine	Constantine
Insecurity	1.89	1.11	0.227	0.103	Constantine		Annaba

Source: Author's elaboration

to an attractiveness advantage for Constantine. That change is due to the perceived image of Constantine's powerful city identity and its exploited capacity to generate cultural tourism. Nonetheless, coastal and environmental tourism should be considered as a very strong asset for future economic growth in Annaba.

The insecurity index category shows that Annaba has the attractiveness advantage in terms of safety, contrary to its infamous reputation (Gaidi, 2012). The insecurity index is higher in both primary and post-weighting results for Constantine, with the increase in attacks on people and properties and a much higher figure for car accidents raising red flags as a potential repulsiveness element.

For the results of territorial attractiveness by urban factors: the historical and cultural identity

of the Constantine metropolis could implicate a superior influence in its future urban growth than the Annaba metropolis. However, and interestingly in the structuring projects factor, despite Constantine metropolis having benefited from a higher number of structuring projects than the metropolis of Annaba, the results indicate a similarity in the influence of those projects on attractiveness of flows or generation of revenues. In the speed of urbanization factor, we notice a medium difference in favor of the Constantine metropolis, mostly due to the capacity for growth in terms of land availability.

7. Conclusion

In our approach to the notion of territorial attractiveness, we tried to solve an existing economic-urban dilemma in the north-eastern region of Algeria by a multidimensional study. As a result, we noticed the absence of “planning based on prospective” in the previous regional planning documents (SRAT, 2005): new objectives were presented without coordination with the effects of structuring projects (in construction at that time), thereby creating a certain chaos in urban and regional planning strategies.

The city of Constantine has a privilege by its historical roots, being, since its creation in the 19th century and early 20th, in the position of commander of the region (SRAT, 2005). That region included Annaba. But Constantine’s position was put to the test by the appearance of other economically competitive poles such as Batna and Setif, while Annaba has been an important pole that allowed the emergence of heavy mining industry to the international distribution. Today, with the decline of the industry, Annaba is trying to compensate those losses by tourism, except that the investment dynamic is quite slow (restrictive investment policy and difficult conversion of industrial fabrics).

The suitable regional planning strategy should manage the actual attractiveness of the Constantine metropolis separately as a territorial unit and at the same time provide opportunities for enhancing Annaba’s attractiveness based on its existing assets. According to the points mentioned earlier and previous problems and considerations addressed in the SRAT and SDAAM documents, we recommend the following changes in the regional planning strategy:

- Elaboration of land-availability documents in both metropolises that collate all precedent documents with the objective of evaluating potential growth strategies
- Elaboration of an assessment study for existing and potential attractor assets (natural, economic and demographic) able to generate development in both metropolises (e.g., statistics on qualified persons and their area of specialty, ranking startups based on income and field, survey for private investors to identify the obstacles they face to enhance their financial situation, etc.)
- General evaluation based on the official data in the housing sector of Constantine with a critical study of the housing forms at regional scale
- Promoting private investment in Annaba and moving away from heavy industry to tertiary investments for the state’s investments
- Elaboration of an urban marketing plan in Constantine, highlighting the city’s historical image to attract international tourists and moderation of tourism service prices to attract national tourists
- That prospective projects in both metropolises should be based on generating revenues or work opportunities for the state’s projects and should be controlled extensively in the construction and management phase for the private investors.
- A separate evaluation study of the regional limits based on the dominating attractiveness of Constantine instead of the complementarity of the two metropolises

Notes

1. Programmed regions: in reference to the nine regions created by the Algerian state in 2000 as a part of major long-term planning strategy at the national level elaborated in official documents, the regional division was based on physical and historical limits mainly for the objective of creating harmonious and functional regions. Source: SNAT, 2001.
2. This economic stagnation in the region was mentioned in the third economic diagnostic report of the SDAAM Constantine (director schema of management of metropolitan area), elaborated in 2014 by URBACO.
3. As cited in the report of the consulting and economic intelligence, firm Oxford Business Group (OGB) on Algeria, 2018.
4. The three facets of territorial attractiveness as defined by Musolino and Volget (2020) are mentioned in the literature review section.
5. Hatem (2005) proposed five approaches to evaluating territorial attractiveness based on scale of interest: “macro”, “meso”, “micro”, “decision process”, “image”; he emphasized the importance of choosing the appropriate approach depending on the objective of the evaluation.
6. The number of experts was decided by the authors as sufficient for a subjective evaluation of the factors; future weights in other regions will require factors of growth suitable for the region’s reality and experts from the concerned region to evaluate it. (Please check annex 1 for the weighting details and the experts’ profiles.)
7. Musson (2010) indicate that the best way to study attractiveness is by a global vision.
8. Attractiveness as a phenomenon was approached by two categories of work – theoretical and

applied – from two groups of actors with weak interactions in a climate of relative mutual ignorance: academic approaches without applications and, on the opposite side, empirical studies without certain methodological foundations (Hatem, 2005).

9. In reference to the relationship between the quality of life in a territory compared to the cost of living in it, as translated to the French language *rapport qualité/prix*. Oxford languages
10. Harroussi & Chakor (2019) suggests the existence of several visions in governing territorial attractiveness: economic attractiveness, cultural attractiveness, touristic and ecological attractiveness, residential attractiveness, technological attractiveness, scientific attractiveness.
11. Identifying attraction assets beside economic ones plays a vital role in boosting attractiveness (Cusin & Damon, 2010).
12. Housing projects in Algeria can be divided to two types: social programs and promotional programs; both have multiple forms and conditions where the main differences are salary and social conditions.
13. The insecurity category was included in the city's identity factor as a way to evaluate the perceived image of Annaba as an insecure city, as mentioned by (Gaidi, 2012).
14. Source: *Regional Territorial Development Plan*, tomes 1, 2 & 3, the National Planning Agency ANAT, 2001.
15. Trabendo: a term born in Algeria and taken from the Spanish “contrabando” referring to smuggling; a term relating to the informal economy, in which all economic activities escape the regulation and control of the State; there is a derivative, “trabendist”.
16. For political and sanitary reasons, the population census of 2018 has not been published to this current day, so actual population was calculated by growth rates mentioned in previous population census, RGPH 2008.

References

- Ait-Yahia, K. & Salaouatchi, H. (2019). Territorial Promotion's influence On Territorial Attractiveness Development in Algeria: Institutional Actors Discourse Analysis. *Strategy and Development Review*, (9)16: 128-147.
- Annoni, P. & Dijkstra, L. (2019). The EU Regional Competitiveness Index (Publications Office of the European Union). European Union.
- Antonova, N., Abramova, S. & Polyakova, V. (2020). 'Cities are Good for Us': Assessment of Urban Attractiveness by Students. *IOP Conference Series: Earth and Environmental Science*, 459: 032090.
- Pomerol, J-C. & Barba-Romero, S. (2000). *Multicriterion decision in management. Principles and practices*. Springer.
- Barois, B., Peres, R., Vignau, M. & Laussucq, F. (2021). Les zones détendues: territoires oubliés porteurs d'attractivité territoriale. (Les zones détendues: forgotten territories with territorial attractiveness - in French). *Politiques et Management public*, 38(1-2): 55-75.
- Battaglia, M., Certomà, C. & Frey, M. (2015). Rethinking Attractiveness. The Transformation of Tangible and Intangible Factors in Post-Rural Areas. *UNISCAPE En-Route*, 2. Available at: https://www.researchgate.net/profile/ChiaraCertoma/publication/305901428_Rethinking_Attractiveness_The_transformation_of_tangible_and_intangible_factors_in_post_rural_areas/links/584a81c308ae4a7a6917c404/Rethinking-Attractiveness-The-transformation-of-tangible-and-intangible-factors-in-post-rural-areas.pdf.
- Camagni, R. & Capello, R. (2009). Territorial capital and regional competitiveness: Theory and evidence. *Studies in Regional Science*, 39(1): 19–40.
- Chapel, E. (2010). L'œil raisonné. L'invention de l'urbanisme par la carte (The reasoned eye. The invention of urbanism by the map -n French). *Métis Presses*, 256.
- Comi, S., Grasseni, M. & Resmini, L. (2021). Can judicial efficiency improve territorial attractiveness to FDI? The Italian experience. *European Journal of Political Economy*, 70: 102043.
- Cusin, F. & Damon, J. (2010). Les villes face aux défis de l'attractivité classements, enjeux et stratégies urbaines. (Cities face the challenges of attractiveness rankings, challenges and urban strategies - in French) *La fabrique de la cite*. Available at: <https://www.lafabriquedelacite.com/> (Accessed: 10 July 2019).
- De Fino, M., Ceppi, C. & Fatiguso, F. (2020). Virtual Tours and Informational Models for Improving Territorial Attractiveness and the Smart Management of Architectural Heritage: the 3D-IMP-ACT Project. *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences*, 1034: 473-480.
- Ezmaie, S. (2012). Strategies for enhancing attractiveness of the cities in Latgale region. *European Integration Studies*, 6: 121-127.
- Friboulet, J.-J. (2010). La construction de l'attractivité: Une analyse en termes de capacité (The construction of attractiveness: An analysis in terms of capacity - in French). *Mondes en développement*, 149, 11–26.
- Gaidi, M.F. (2012). Annaba: La population revendique son droit à la sécurité (Annaba: The population claims its right to security - in

- French). Available at: http://www.annabacity.net/news/breve_7173_annaba+population+revendique+son+droit+securite.html.
- Guzman-Sala, A.** (2018). Innovations dans le secteur touristique au Mexique. Le Tabasco: Analyse opérationnelle et perspectives (Innovations in the tourism sector in Mexico. Tabasco: Operational analysis and perspectives - in French). *Cahiers de géographie du Québec*, 62(176): 229–366.
- Harroussi, B.E. & Chakor, A.** (2019). The Attractive Territory: Contribution of the Territorial Positioning and the Innovative Theoretical and Historical Models. *European Scientific Journal*, 15(10): 43-61.
- Hatem, F.** (2004). Investissement international et politiques d'attractivité (International Investment and Attractiveness Policies - in French). *Economica*.
- Hatem, F.** (2005). Attractivité des territoires théories et pratiques aller-retour (Attractiveness of theoretical and practical territories, round-trip - in French). Le Havre: École de Management de Normandie.
- Khalfaoui, A. & Lamari, S.** (2015). L'attractivité des régions marocaines : Atouts et faiblesses dans le cadre du plan de régionalisation avancée (The attractiveness of Moroccan regions: Strengths and weaknesses in the context of the advanced regionalization plan - in French). *Revue Organisation & Territory*.
- Kunzmann, K.** (2006). The Europeanization of Spatial Planning. In: Adams, N. & Alden, J (eds.) *Regional Development and Spatial Planning in an Enlarged European Union*, 43-63. Routledge.
- Malecki, E.** (2004). Jockeying for position: What it means and why it matters to regional development policy when places compete. *Regional Studies*, 38(9): 1101–1120.
- Moine, A.** (2005). Le territoire comme un système complexe: Des outils pour l'aménagement et la géographie (The territory as a complex system: Tools for planning and geography - in French). Septièmes Rencontres de Théo Quan. Available at: <http://thema.univ-fcomte.fr/theoq/pdf/2005/TQ2005%20ARTICLE%2017>.
- Musolino, D. & Volget, S.** (2020). Towards a multidimensional approach to the study of territorial attractiveness. Hal-02501582. Available at: <https://hal.science/hal-02501582/document>.
- Musson, A.** (2010). Les indicateurs d'attractivité et de développement durable: Vers un indicateur d'attractivité durable. (Indicators of attractiveness and sustainable development: Towards an indicator of sustainable attractiveness - in French). *Géographie, économie, société*, 12: 181–223.
- Raham, D.** (2001). Les Structures Spatiales de l'Est Algérien. Les maillages territoriaux, urbains et routiers (Spatial Structures of Eastern Algeria. Territorial, urban and road networks - in French) Geography University of Constantine.
- Report of the Consulting and Economic Intelligence, (2018). firm Oxford Business Group (OGB) on Algeria.
- Schäfer, P. & Just, T.** (2018). Does urban tourism attractiveness affect young adult migration in Germany? *Journal of Property Investment & Finance*, 36(1): 68–90.
- SDAAM Constantine: Schéma Directeur d'Aménagement des Aires Métropolitaines "director schema of management of metropolitan area", (2014). URBACO: direction of urban planning of Constantine.
- Servillo, L., Atkinson, R. & Russo, A.P.** (2011). Territorial attractiveness in EU urban and spatial policy: A critical review and future research agenda. *European Urban and Regional Studies*, 19(4): 349–365. DOI: <https://doi.org/10.1177/0969776411430289>.
- SNAT: Schéma National d'Aménagement du Territoire « National Territorial Development Plan», (2001). the National Planning Agency ANAT, Algeria.
- Sombart, W.** (1928). *Der moderne Kapitalismus* (The modern capitalism- in German). Leipzig: Duncker & Humblot.
- SRAT: Schéma National d'Aménagement Du Territoire "Regional Territorial Development Plan" (2001). Tomes 1, 2 & 3, the National Planning Agency ANAT, Algeria.
- Storper, M.** (1997). *The regional world: Territorial development in a global economy*. Guilford Press.
- Valls, J.-F., Valls-Tuñon, G. & Sureda, J.** (2012). Attractiveness Analysis of European Tourist Cities. *Journal of Travel & Tourism Marketing*, 31(2): 178-194. DOI: <https://doi.org/10.1080/10548408.2014.873310>.

