GLL
Geomatics, Landmanagement and Landscape No. 2 • 2024, 177–194

ISSN 2300-1496 http://dx.doi.org/10.15576/GLL/2024.2.13

Research paper

Received: 26.03.2024
Accepted: 14.05.2024
Published: 21.07.2024

The geography of retail trade and services in Annaba's city, Algeria

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Summary

Annaba, a metropolitan city, has experienced the evolution and mutation of its commercial establishments over the last few decades. A phenomenon has upset the old center-periphery balance where the commercial offer is dominated by the phenomenon of centrality. This offer is very strong in the center and decreasing towards the periphery. From this perspective, the city of Annaba has experienced a massive migration of certain retail businesses, especially the food trade, from the center to the periphery, which has led to an important specialization, which differentiates its spaces.

This paper proposes a methodological approach for analyzing commercial centralities in a compact town center. This paper is an attempt to analyze, in the form of a map, the results of a field survey carried out in 2021–2022 among retail traders, and the rationale behind the spatial reorganization of commercial units in this town. To this end, a number of indicators have been selected as relevant, in particular: residential location, consumer mobility conditions, and certain consumer practices and choices. Using Annaba's case as a starting point, the aim is to assess the relevance of classic models of retail geography and to understand the new changes in the commercial fabric of Annaba's inner city after several years of reconfiguration between the center and the periphery.

Keywords

retail trade • mutation • center-periphery • city of Annaba • Algeria

1. Introduction

The choice of location for commercial activities was traditionally based on theories of firm location in a geographical economy [Ponsard 1988]. These theories make it possible to study geographical location in a monocentric model where all resources are located in a single center. This high concentration of activities and attractiveness has given rise to the concept of 'Centrality' [Gaschet et al. 2002]. However, this concept has developed over several decades of spatial redevelopment on different scales depending on the operating mode or planning method. The evolution of theoretical thinking has led to the development of commercial geography as a sub-discipline of geography, an entire discipline dealing with tertiary activities including the retail sector. Given its position in the city, this sector is particularly interesting for a sustainable city [Fareniaux et al. 2017, Dugot 2019], as it develops from a socio-spatial point of view through new political, economic, and social issues [Desse 2019, Gasnier 2019].

Fleury et al. [2012] mention that many studies have applied the concept of centrality to the study of the retail commercial structure in urban areas, following the same principles as the body of work on central location introduced by Christaller [1933] and Lösch [1941] on the relationship between the size and spacing of commercial centers in intra-urban space. Carol [1960] identified a hierarchy of centers with strongly differentiated functions and influence. Berry's work formalized this type of approach by identifying a combination of hierarchy, land rent, and specialization [Berry 1971]. Mérenne-Schoumaker [2008] adds that Garner and Scott developed a more concrete model of retail distribution incorporating land rent. Scott [1970] studied the relationship between the type of retailing and the ability to pay rent at a given level and proposed a concentric zoning scheme for different types of retailing, while Garner [1966] proposed a similar model by adding the effect of shopping centers.

In recent years, commercial geography has evolved considerably in terms of definitions [Mérenne-Schoumaker 2020] and levels of action [Lemarchand et al. 2021], with town center retailing undergoing a major metamorphosis worldwide, with the growing deployment of large out-of-town retail chains to the detriment of small-town center retailers [Metton 1980]. How these new forms of retail have been established has transformed the commercial fabric of towns, leading to the emergence of new commercial centers on the outskirts of towns [Metton 1979, Desse 2001, Ballantyne et al. 2023]. In Algeria, this is not entirely the case, as large-scale retailing is struggling to establish itself in the country's largest towns due to the lack of authorization and appropriate planning [Djellal et al. 2021]. Since French colonization, the distribution of shops in the main Algerian towns has been dominated by the phenomenon of centrality, which has led to a gradual increase in the range of shops on offer. There is a very high level of retailing in the center, but less on the outskirts. The structural reform of the 1980s led to the emergence of a dynamic commercial sector and profound changes in the logic of the commercial offer. Our consideration refers to the town of Annaba, which witnessed a phenomenon that is upsetting the old center-periphery balance that has been apparent for two decades, with the town experiencing a major migration of certain retail outlets from the center to the outskirts.

Since then, the question of the impact of commercial change on town center trade has continued to be at the center of academic debate [Chaze 2022]. Retail outlets such as food shops have declined in the town center, while clothing and service outlets have expanded, creating a shortage of supplies in the Annaba town center. However, what is the reality of the commercial fabric in Annaba town center today? Given the increasingly polycentric nature of Algerian towns and cities, can we say that the commercial hierarchy still exists within the central areas? Finally, what logic has guided this transformation of the Algerian city?

The city of Annaba, for its part, has undergone a very active urbanization process in recent years, particularly in terms of urban sprawl [Djakjak et al. 2021], which makes it a very complex and problematic city [Laouar et al. 2019], in terms of urban and landscape design. We are interested in the impact of these urban dynamics on commercial functioning by addressing residential location and consumer mobility, but also by integrating socio-cultural factors associated with consumer behavior. Our approach enables us to understand the overall structure of retail trade and services in the city under study and aims to analyze and understand the logic of commercial distribution between the center and the periphery, in order to provide a better account not only of the economic and spatial functioning of the city, but also of its socio-spatial structure.

2. Materials and methods

Our primary objective in the research presented was to find coherent answers to specific research questions related to the logic of locating commercial units in the city of Annaba. To this end, the approach to the work was mainly empirical, favoring fieldwork. The empirical material was collected in two ways in order to gather the necessary quantitative and qualitative data.

2.1. Quantitative analysis

The first method consisted of carrying out a census of commercial units, where the quantitative data mainly concerned quantifiable elements: the number of retail outlets and commercial services distributed in the commune of Annaba. We carried out the census and classification of commercial activities using the digital platform 'SIDJILCOM', an electronic portal of the National Centre of the Trade Register that enables statistical searches to be carried out in the national database of companies (Tables 1 and 2).

2.2. Qualitative analysis

The second part of the data consists of empirical studies based on the collection of qualitative data, which will enable us to understand how these commercial offers are distributed in space and made available to end users. In order to address the lack of access to the cartographic tool at the Directorate of Commerce or the National Centre of the Trade Register in Annaba municipality, we have conducted a field survey from November 2021 to February 2022 to create our own database of commercial entities in the city. This survey was conducted in two stages.

Table 1. The retail trade in the city of Annaba

Retail trade in the city of Annaba	N° of establishment
1 – Retail sale of food	5444
2 – Retail sale of jewelry, leather goods, and beauty products	3254
3 – Retail sale of domestic supplies, equipment, and furnishings	1716
4 – Retail sale of equipment, building materials, and supplies for buildings and public works	924
5 – Retail sale of industrial and professional equipment and supplies	249
6 – Retail sale of supplies, spare parts, and accessories for maintenance and mechanical repairs	474
7 – Retail sale of goods and supplies for sports and leisure activities, office equipment, and artistic articles	3170
8 – Retail sale of materials and supplies for agriculture and related activities	57
9 – The recovery trade	103
10 – A multiple trade	224
Total	**15 615**

Source: realized by N. Touaibia, Sidjilcom database processing, March 2021

Table 2. Services in the city of Annaba

Services in the city of Annaba	N° of establishment
1 – Service activities related to accommodation and catering	3015
2 – Service activities related to human and animal health	287
3 – Activities involving the rental of equipment and equipment for professional or domestic use	1177
4 – Transport-related service activities and related services	4723
5 – Cultural and recreational services (including information and	626
advertising)	206
6 – Technical control and sanitation activities	954
7 – Research, consultancy, and support companies	38
8 – Packaging and packaging activities	90
9 – Administrative works	1082
10 – Mail, press, and telecommunications services	176
11 – Leasing and property management activities	130
12 – Financial and insurance activities	
13 – Installation and preparation of all industrial and domestic equipment	807
and materials	514
14 – Services related to personal hygiene	
15 – Commercial representation or agency of foreign states, communities and public institutions	106
Total	**13 868**

Source: realized by N. Touaibia, Sidjilcom Base Processing, March 2021.

The first stage consists of carrying out a spatial analysis using the geomarketing technique, which brings together all the marketing actions using cartographic or geographical data and modeled socio-behavioral and socio-demographic data. This technique begins with the collection and analysis of relevant geographical data by carrying out commercial location studies, which bring together all the considerations carried out to decide on the precise location of a sales outlet within a zone or locality that was already chosen in advance based on its commercial potential. It can take into account a number of factors indicated in the multi-criteria analytical maps that follow (Fig. 1):

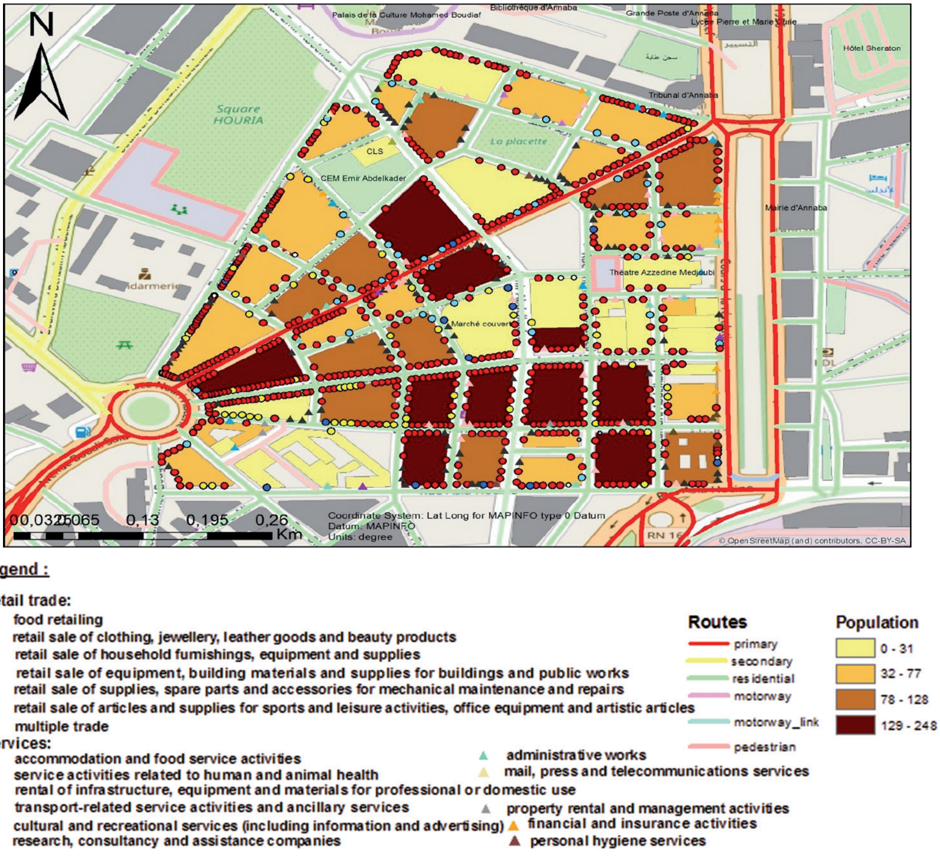
- analysis of the population and its characteristics (ages, income levels, type of housing, population density, socio-economic characteristics, and consumer habits),
- analysis of traffic flows (pedestrians and cars),
- parking possibilities,
- analysis of competition (neighboring businesses) and intensity of commercial activity,
- analysis of the immediate environment (potential image and flow factors) and points of attraction and facilities,
- strengths and weaknesses of the proposed premises (shop window, surface area, image, accessibility, visibility, etc.).

The first representative sector back to the urban sector n°1 (the town center)

Consisting of an urban fabric of the first European New Urban Housing Zones: collective housing complexes designed in the form of ground floor + 3-story buildings that were built during the colonial period around the 1950s. Due to the large surface area of this sector, we have chosen a portion that perfectly sums up the phenomenon under study; it corresponds to the colonial town center in a star-shaped grid. As can be seen in the map (Fig. 1), retail and commercial services are gradually becoming more distinctive in terms of the density and type of shops they contain, a commercial specialization consisting essentially of ground floor retailing of clothing, jewelers, leather goods and beauty products as well as service activities related to accommodation and catering. There are also shopping arcades, operations marked by their density of retail occupancy mainly for clothing, footwear, and cosmetics. The concentration of this type of activity can be seen on the first and second floors of buildings where services such as property rental management, financial insurance activities, and administrative contract work are very different from the density of services.

The second representative sector back to the urban sector n°3 (the West Plain)

Composed of the Plaine Ouest I and Plaine Ouest II networks, where the Plaine Ouest II network complements the first network to the south and west to ensure connectivity between the different neighborhoods in the two areas. This new peripheral extension creates a new point of accessible and attractive commercial density. We are going to choose the most representative section of our phenomenon, which corresponds to the section that crosses the Al-Abtal residence as far as the Sidi-Achour residence, with its linear grid. According to the map (Fig. 2), the outskirts are characterized above all by local food retailing rather than non-food retailing: a high density of ground floor retailing, including large general food shops and mini-markets. There is also a large volume of bulky goods retailing, including household supplies, equipment, and furnishings; retail sale of equipment, building materials, and supplies for buildings and public works; retail trade in articles and supplies for sports and leisure activities, office equipment, and artistic articles. In the same case as in the town center, there is a certain density of the same commercial services on the upper floors of the buildings, while on the ground floor, there are mainly restaurant-related service activities.



Source: realized by N. Touaibia, Field study, February 2022

Fig. 1. The distribution of commercial establishments in sector n°1

After analyzing the geographical data, it can be visualized to identify trends and correlations. This enables the market to be segmented according to geographical criteria using tools like Mapping Clusters, which perform cluster analysis to identify the location of groups of factors with similarly high or low values found together. For a commercial enterprise, this also enables more precise targeting, which could identify

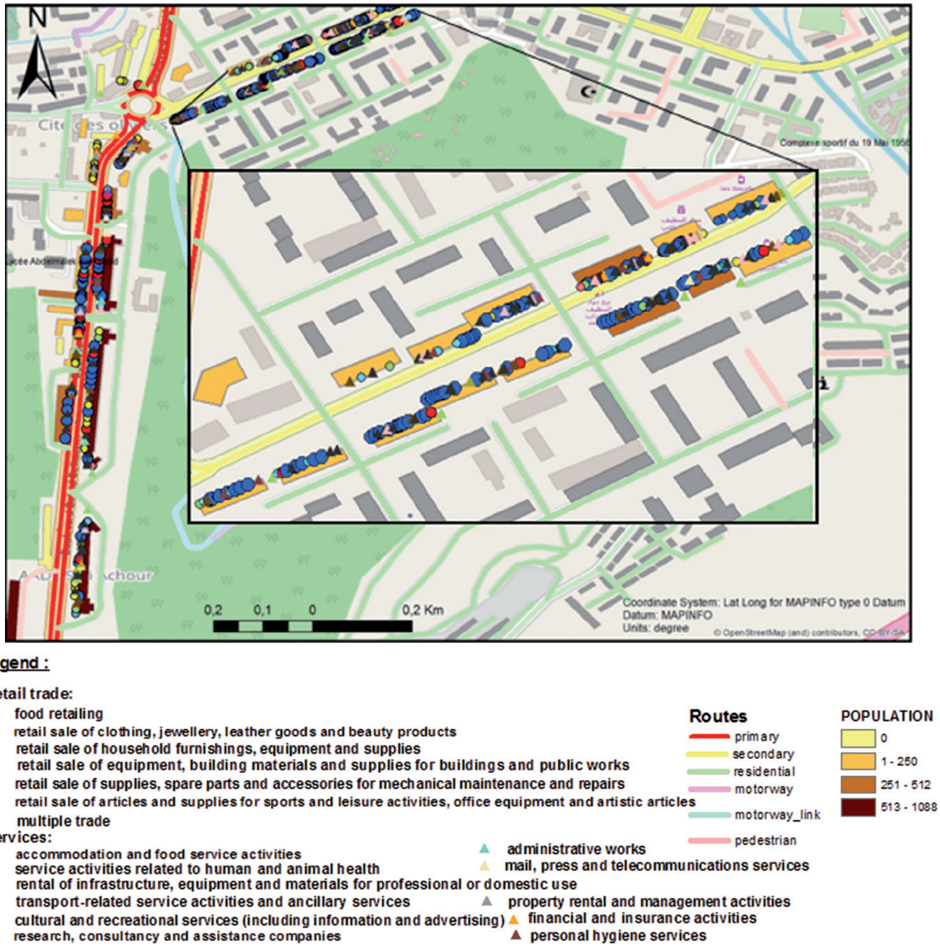


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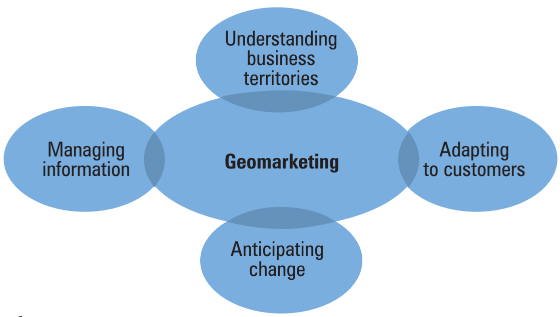
Fig. 2. The distribution of commercial establishments in sector n°3



Source: Authors' own study

Fig. 3. The value of geomarketing as a geomatics tool

the geographical catchment areas where its most profitable customers are located or areas with strong growth potential. This means that marketing strategies can be tailored to the specific characteristics of each geographical segment.

2.3. Commercial attractivity

The classification of shops according to their types: food (food shops, supermarkets) and non-food (clothing shops, leather goods, and beauty products) allows us to learn the commercial attractivity in each space of our study between the center and the periphery, which is calculated as follows:

Commercial attractivity index = Number of non-food shops/Number of food shops

Table 3. Commercial attractiveness

	City-center	Periphery
Non-food activities	605	27
Food activities	11	124
Attractivity	55	0.22
	Very strong	Very low

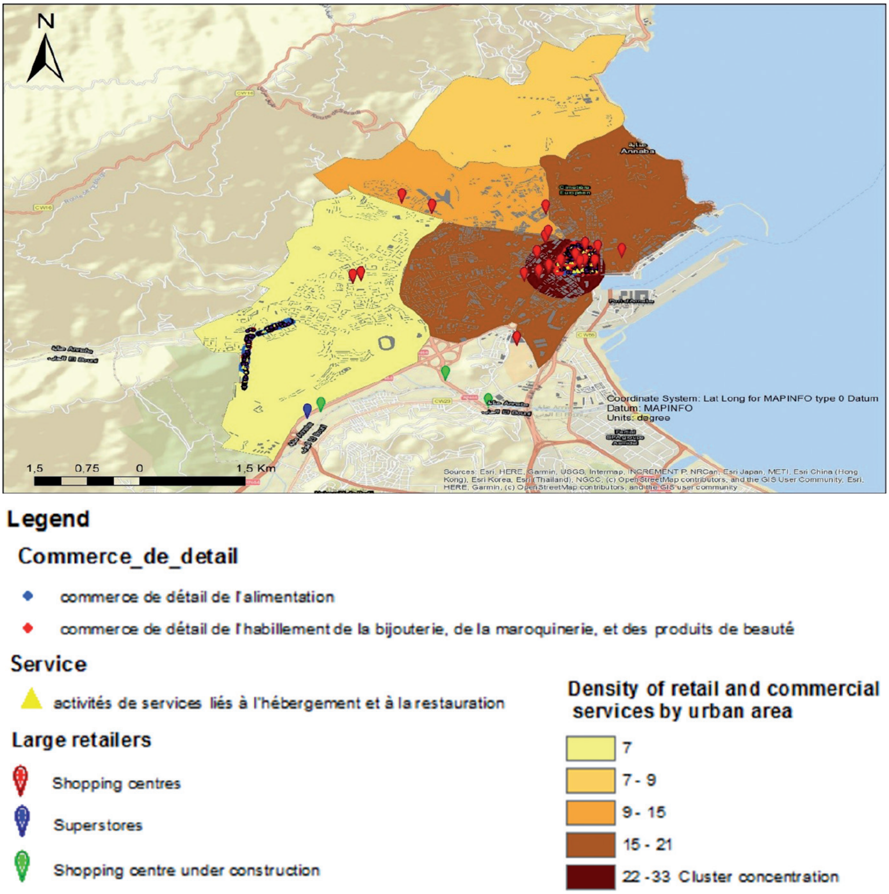
Source: N. Touaibia, December 2021

The attractivity of the town center is very strong, as the commercial offer of non-food activities such as clothing, leather goods, and beauty products is greater than that of food. As a result, this locality plays an active and attractive role in the region through its specialization in certain retail activities, serving a wide choice and creating a strong area of influence in this particular trade. On the other hand, in the outskirts, the commercial attractivity is very low, where the number of food businesses, including food shops and supermarkets, exceeds the number of non-food businesses. This indicates that this area is fairly diversified, specializing in the food trade and meeting only a limited proportion of the needs and expectations of residents and customers. To this end, we are more in the process of refining commercial spaces, we are still involved in ground floor retailing but with a type of specialized retailing, that makes the center more selective than the periphery in terms of retail occupancy.

Finally, it was necessary to explore a questionnaire with retailers to understand the logic of this quantitative and qualitative distribution between the town center and the periphery. Mérenne-Schoumaker [1979] adds: 'While the preceding analyses (spatial organization of facilities and the dynamics of change) seek to clarify the characteristics of spatial distribution, they do not explain the reasons for location. In this area, surveys of retailers prove necessary to translate the factors of choice at the level of regions or towns, neighborhoods or locations'. That was the case; we selected a targeted random questionnaire where our case study includes 1025 retail outlets and 333 services, 1358 as a whole of commercial units. Our sample size was 868 specializing in retail and commercial services between the two sectors studied in the city, which was the number of respondents required with a margin of error of 2% and a confidence level of 95%. We were satisfied with the number of 180 samples in order to avoid repetitive responses given the proximity of the commercial units. Our questionnaire was directed at each individual in our selection of retailers, with the aim of understanding their motivation in choosing a location.

3. Results and discussion

Based on the spatial analysis of commercial distribution in the city of Annaba and the questionnaire carried out, we were able to reveal the causes, which led to the selection of these two areas; results that can be broken down into three major components.

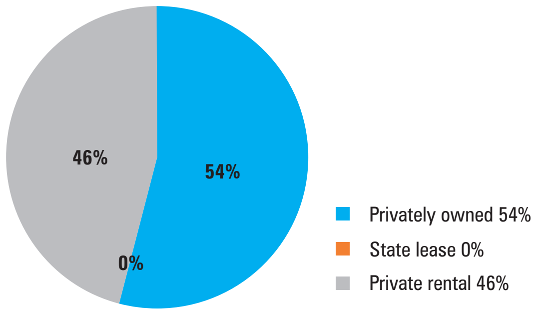


Source: realized by N. Touaibia, Field study, February 2022

Fig. 4. Density of retail and commercial services by urban area in the city of Annaba

3.1. Residential geography

The geography of retail trade and services in the city of Annaba owes much to the transformation of residential occupation. A city center that is losing its inhabitants, where half of the old dwellings have changed their purpose from habitable to commercial. Major changes in the commercial structure are redefining the status of the town center [Mihoubi et al. 2021], as it is a space that has been left behind due to the transfer of the majority of residents to the outskirts of the town to settle there, escaping the nuisances (air pollution, noise pollution, etc.). These became very expensive and were sold or rented out by their owners to boost their profits. We found that 54% of properties are owned privately (original owners or local buyers), while 46% are rented, with rents ranging from 100,000 to 600,000 DZD/month. State ownership is absent on the principle of encouraging private initiative in all areas.



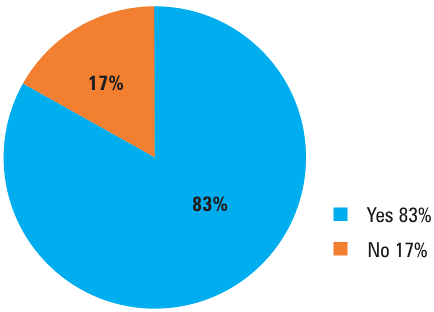
Source: N. Touaibia, December 2021

Fig. 5. Breakdown of the survey sample according to the legal nature of the premises

These dwellings subsequently became very expensive, which is why this area is shaped by a massive concentration and commercial specialization dedicated mainly to clothing and catering, businesses that have a high turnover and can bear the cost of rent. In addition, these shops exert strong externalities on each other, where the concentration of a similar type of shop already helps to start up a neighboring shop. This once again explains the phenomenon of specialization, which helps to make the area more attractive.

This situation has forced some low-income businesses to follow the migrating population from the center to the periphery. Peripheral areas are characterized by new residential centers, which Algerian public urban planning policies have set aside for mixed-use in the ground floors for basic necessities; these stores are intended for commercial and professional use and are put up for sale at public auction. The latter created a concentration of trade in these areas. Retailers specialize in food products and other similar businesses, depending on the requirements of the environment: customers and rents that vary between 20,000 and 150,000 DZD/month (depending on the location and surface area of the store), where retailers work much more with a resident clientele because of their proximity, and a transient clientele because of their accessibility. In addition to its primary function of supplying the local population by improving their well-being, this type of retailing also has a positive externality that is seen as a means of reactivating social ties, a social dimension of 'living together' at the local level.

Small shops are changing rather than declining [Allain et al. 2023], with 40% of those surveyed confirming that their type of shop is only suited to the outskirts. Testimony from more than 17% of merchants is that they changed location from the center to the outskirts in search of commercial integration, like the grocery shop that tried to occupy the best places in the town center [Pierre 2016]. Alternatively, the opposite occurs from the outskirts to the city center, e.g. a dentist, a fast-food restaurant, a clothing store. Because it is necessary to adapt to demand and the location of that demand in order to keep up with it [Delage et al. 2020], consumers are not just 'pushers of trolleys' [Navereau 2011], but also 'effective actors' who set the commercial process in motion.



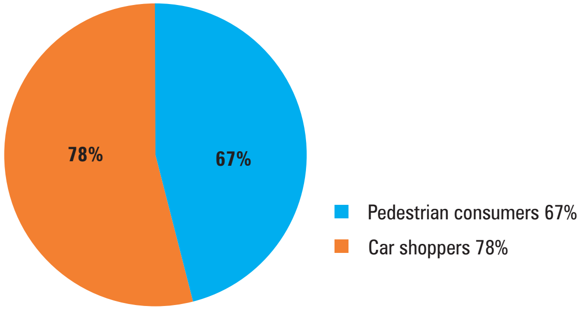
Source: N. Touaibia, December 2021

Fig. 6. Distribution of the survey sample compared to whether it was the initial location of the exercise of this trade/service

3.2. The conditions of mobility

The retailers surveyed agree that shop accessibility is a key issue, accounting for 50% of sales. It is considered a major indicator of the selection of these two areas, by type of store, and influences consumer practices, including:

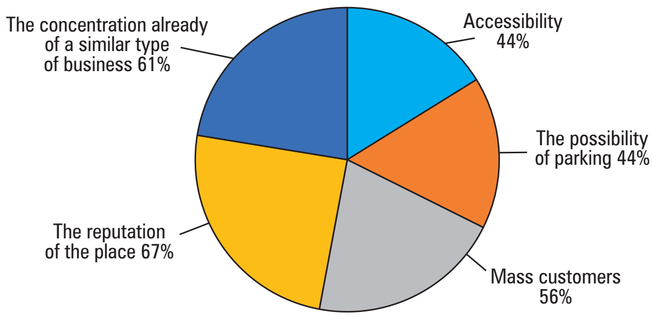
- The town center, with its star-shaped layout, is mainly accessible to pedestrians. Classically, this is linked to the concentration of its spaces marked by commercial urban planning operations in a context of sustainable development, including the courting of pedestrian-only sectors [De Crignis et al. 2022] and the creation of shopping arcades in the city center, with its striking architectural styles Soumagne 2008] carried out by developers but supported by the public authorities [Fleury 2010]. Finally, the results are not negligible, since there is a specialization in a particular trade, with huge shopping streets occupied by personal goods (clothes, shoes, fabrics, etc.), home furnishings (interior decoration), and restaurants. A strong reason for the fact that these types of shops impose pedestrian consumers with 67% by the shopping effect, rather than car shoppers who suffer from accessibility problems and a lack of parking spaces.



Source: N. Touaibia, December 2021.

Fig. 7. Distribution of the survey sample in relation to consumers' mode of attendance

- The periphery, with its linear layout designed for motorists, is occupied by trade oriented towards food and bulky and household goods, which requires the use of cars with 78%, due to the fact that in the outskirts shopping is heavier and more cumbersome, given that the mobility linked to shopping and urban trade is part of a circular relationship. At the same time, 44% of respondents from the suburbs strongly confirmed that accessibility and availability of parking areas motivated their choice of location and much more so it was the reason why they chose their type of retail.



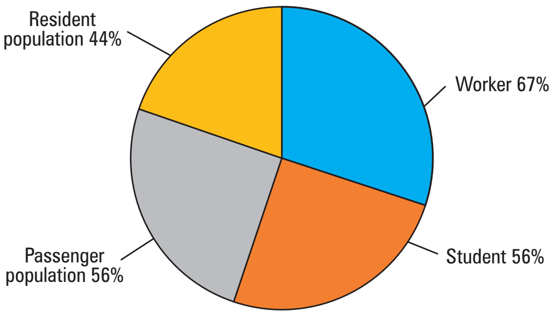
Source: N. Touaibia, December 2021

Fig. 8. Distribution of the survey sample according to the advantages, which motivated the choice of location

3.3. Consumer practices

The importance of a place's centrality is influenced not only by the concentrations observed but also by the types of activity that the place brings together, which means the functions that are carried out there. The aim is to assess the functional centrality of a location by considering the relationship between commercial and functional centralities, which complement each other significantly.

Regardless, the city center brings together shops for an average clientele with densities, which are close to the poor profile of each activity; they are marked by a broad diversification of the commercial offer. This is why, consumers go to the town center because they are sure of getting their products in general, and in the cases of workers and students with 67% 56%, respectively, where they benefit from the reduced time and transport costs associated with the proximity of these outlets to their functional locations. In other words, they prefer shopping, eating, strolling etc. in the city center rather than commuting to and from work.



Source: N. Touaibia, December 2021

Fig. 9. Distribution of the survey sample according to customer group

Source: N. Touaibia, February 2022

Fig. 10. Cours de la Révolution street, a relaxation area

On the other hand, another segment of consumers sees the town center as a meeting place for family and friends where they share common habits and behaviors according to the desire of residents who are mobile on a daily basis, while maintaining their social and economic links with the area they live in. They consider it mostly as a community space, perfect for relaxing, especially if these were open-air spaces, as in the case of the coffee shops located in a large public space like the square at the Cours de la Révolution street (Fig. 9). This is why centrality is also a symbol, a reflection of the centrality value and the symbolic reference felt by the inhabitants of this city [Monnet 2000].

During the day, the flow of shoppers is divided between the center and the periphery, but in the evening, the opposite happens. The first destination for the majority of shoppers (especially for the resident population with 44%, and passengers with 56%) is the outskirts where they find what they want until midnight (mini-markets, tobacco shops, fast food restaurants, outlets, etc.). The center 'closes' around 7 p.m. (Fig. 11A) as most customers go to the outskirts rather than the city center (Fig. 11B and C).

Source: N. Touaibia, February 2022

Fig. 11. Downtown (A) vs. Periphery (B, C) at night

Refining retail spaces

The approach, which uses spatial analysis methods, based on the relationship between the type of retailing and the ability to pay rent at a given level, leads to concentric zoning according to different types of retailing between the center and the periphery, confirming the observations made by Garner and Scott in the 1970s on the retail distribution model incorporating land rents. The land values responsible for the city's current retail structure are higher in the center and lower on the outskirts. This has favored a logic of commercial specialization that follows a hierarchical logic in the organization of commercial space. This hypothesis was supported again by the observations of Berry [1970]. This approach was inspired by methods such as the creation of specialized centrality zones shown by geographic information systems and their geomatics techniques, which free themselves from the constraints of the original grid and provide a framework for commercial centrality on a town-wide scale, where the retail dynamism of the town center is based on distribution that complements the periphery. As for commercial services, they are more in competition for occupancy between the center and the outskirts, with certain activities seeking to be as close to the center as possible in order to benefit from its social and functional advantages.

Between the center and periphery occurs complementarity or competition [Metton 1989]. Nevertheless, we can point out that each retain specific advantages linked to purchases determined by the businesses themselves which meet the requirements of each area that has built up its own reputation (in terms of the type of retail outlet, availability and above all access). This, in turn, has helped to reorganize consumer purchasing practices [Lemarchand 2009]. In result, the downtown retail commercial structure has become more refined with shopping effects, while consumer behavior on the periphery is oriented towards grocery or bulky equipment.

All these factors reflect the way of life linked to the current evolution of urban society, a cultural shift in the geography of consumption [Lemarchand 2011]. The concept of consumption is currently undergoing a process of renewal, especially with the rise of a new form of retailing that we cannot ignore, which is the e-commerce, a concrete shift from physical to digital commerce. With the Internet, this trend is undergoing major development with new approaches and new uses to meet huge commercial demand, especially during the COVID-19 health crisis that hit the world [Xuan et al. 2022] leading consumers to make greater use of online shopping.

4. Conclusion

Based on our observations and field surveys, these analyses consolidate our initial observations, since in Annaba we found a hierarchical logic in the distribution of the commercial offer, combined with a logic of specialization. Annaba's commercial space is distributed around a hyper-center made up of very dense, more or less diversified centers (mainly clothing and catering); around it, there are less dense ring roads, dominated by personal and household goods. Finally, all of these ring roads form a part of a composition in which the commercial offer is almost continuous, overhung by local food retailing.

In this sense, what guided the selectivity and the refinement of the commercial apparatus in the city are, on the one hand, socio-residential changes, consequently leading to a characteristic distribution of decreasing property values from the center to the periphery, the latter affecting the type of activity and the choice of location for retail and services, and on the other hand, above all, the road network that has favored the organization of the commercial space according to two essential parameters: speed and time according to which the consumers orientate their consumption practices. Evidence shows that we need to go a step further and look at the future of the city in terms of commercial occupation.

This does not always enable the right actions to be taken as the global view of the area can be affected by planning based primarily on a vision shared by elected representatives and various economic actors. Especially the links between trade and consumer behavior must be taken into account because of its power to reorganize the location of retail outlets. Before moving on to the 'operational' stage, it is imperative to include the key actor – the retailer, the majority of whom expressed dissatisfaction with elected representatives who do not respond adequately to their concerns. These concerns mainly revolved around the need to develop outdoor spaces and ensure urban safety for the smooth running of their activities, insisting on the development of commercial activity at the municipal level, which requires new attractive commercial zones to relieve some of the pressure on the Annaba town center. These recommendations could therefore be the key to success, providing a useful tool for assessing and improving the regulations and policies put in place to better plan the city for and with commerce, in order to ensure coherence between commercial development and the restructuring of the urban fabric.

References

Allain M.-L., Epaulard A. 2023. Petits commerces: déclin ou mutation ?. Les notes du conseil d'analyse économique, 77.

Ballantyne P., Singleton A., Dolega L., Macdonald J. 2023. Integrating the Who, What, and Where of U.S. Retail Center Geographies. Annals of the American Association of Geographers, 113, 2, 488–510. https://doi.org/10.1080/24694452.2022.2098087

Berry B.-J.-L. 1971. Géographie des marchés et du commerce de détail. Paris, Armand Colin.

Bodin F., Salinas P.-P.-A. 2006. SIG et géomarketing: perspectives géographiques. In: Géographes associés n°30. Savoir, penser et partager l'information géographique: les SIG. Géoforum Lille, 10–11 juin 2005, 85–97.

Carol H. 1960. The Hierarchy of Central Functions within the City. Annals of the Association of American Geographers, 50, 4, 419–438. https://doi.org/10.1111/j.1467-8306.1960.tb00359.x

Chaze M. 2022. Commerce et consommation dans les villes petites et moyennes: un regard épistémologique sur la littérature géographique francophone. Congrès International de l'UGI, Paris, France.

Desse R.P. 2001. Le nouveau commerce urbain: Dynamiques spatiales et stratégies des acteurs. Rennes, Presses Universitaires de Rennes.

Desse R.P. 2019. Commerce et grands ensembles. La naissance de l'urbanisme commercial en France 1958–1973. Université Gustave Eiffel, Flux n°115. https://www.cairn.info/revue-flux-2019-1-page-2.htm

Dugot P. 2019. Commerce et urbanisme commercial dans la fabrique de la ville durable. Collection 'Villes et Territoires'.

De Crignis J., Evanno T., Le Martelot C. 2022. Refaire place au piéton: ça marche! La piétonisation dans les centralités de l'Ouest Breton. Yves Cléach.

Delage M., Fleury A. 2020. Les commerçants des quartiers populaires: Des adaptations fragiles au changement urbain. Fleury A., Delage M., Endelstein L., Dubucs H., Weber S. (eds.). Le petit commerce dans la ville-monde, Paris, L'Oeil d'Or, 127–143.

Djakjak A., Guerfia S., Zennir R., Derradji S.D. 2021. Analyse diachronique de la consommation spatiale liée à l'urbanisation par une classification supervisée: Cas de la ville d'Annaba (Nord-Est Algérien). International Journal of Innovation and Applied Studies.

Djellal F., Gallouj C. 2021. Investissement et désinvestissement international de la grande distribution européenne dans les pays en développement: Le cas de Carrefour en Algérie. European Review of Service Economics and Management, 11, 159–176.

El Azizi El Alaoui A., Fateh A. 2024. The geomarketing and the competitiveness of the spaces urban Morocco. Emirati Journal of Business, Economics and Social Studies, 3, 1, 66–78.

Fareniaux B., Kbaier R., Narring P., Stevens D. 2017. Inscrire les dynamiques du commerce dans la ville durable: les fondements d'une nouvelle politique des périphéries urbaines et commerciales. Rapport n° 010468-1. Conseil général de l'environnement et du développement durable.

Fleury A. 2010. Du quartier à la ville durable? Les commerces de proximité dans l'action de la Mairie de Paris. Arnaud Gasnier. Commerce et ville ou commerce sans la ville? Production urbaine, stratégies entrepreneuriales et politiques territoriales de développement durable. Presses universitaires de Rennes, 171–183. Espace et territoires.

Fleury A., Mathian H., Saint-Julien T. 2012. Définir les centralités commerciales au cœur d'une grande métropole: le cas de Paris intra-muros. Cybergeo. European Journal of Geography [En ligne], Espace, Société, Territoire, document 588, mis en ligne le 04 février. Consulté le 21 juillet 2023. http://journals.openedition.org/cybergeo/25107. https://doi.org/10.4000/cybergeo.25107

Gaschet F., Lacour C. 2002. Métropolisation, centre et centralité. In Revue d'Economie Régionale & Urbaine, 49–72.

Gasnier A. 2019. La planification commerciale en Europe, hier et aujourd'hui: approche comparative. Bulletin de la Société Géographique de Liège, 73, 15–34. ff10.25518/0770-7576.5861ff. f

Laouar D., Mazouz S., Teller J. 2019. L'accessibilité spatiale comme indice de fragmentation urbaine dans les villes coloniales. Le cas de la ville d'Annaba. Cybergeo. European Journal of Geography Aménagement, Urbanisme.

Lemarchand N. 2009. De la géographie du commerce à la géographie du commerce et de la consommation. Bulletin de la Société géographique de Liège, 52, 139–141.

Lemarchand N. 2011. Nouvelles approches, nouveaux sujets en géographie du commerce. Géographie et cultures [En ligne], 77, mis en ligne le 12 février 2013, consulté le 30 avril 2019. http://journals.openedition.org/gc/703. https://doi.org/10.4000/gc.703

Lemarchand N., Dupont L. 2021. The Geography of Retailing in France: More than 40 Years of Researches. In: Lois-González R.C. (eds.). Geographies of Mediterranean Europe. Springer Geography. Springer, Cham. https://doi.org/10.1007/978-3-030-49464-3_11

Metton A. 1979. Centres commerciaux périphériques: regards sur l'expérience parisienne. Revue géographique des Pyrénées et du Sud-Ouest, 50, fascicule 1 .Commerce, 107–113.

Metton A. 1980. Les mutations de l'équipement commercial: un aspect de l'évolution urbaine. Norois, 108, 601–608.

Metton A. 1989. Centre-ville et périphéries. Complémentarité ou concurrence commerciale? (City center and suburban centers. Retail complementary or competition?). Bulletin de l'Association de géographes français, 265–276. https://doi.org/10.3406/bagf.1989.1490

Mérenne-Schoumaker B. 2008. Géographie des services et des commerces. Rennes, Presses universitaires de Rennes.

Mérenne-Schoumaker B. 2020. 100 ans de géographie du commerce. Bulletin de l'association de géographes français. [En ligne], 97–1/2. Mis en ligne le 15 juin 2021, consulté le 18 octobre 2022. http://journals.openedition.org/bagf/6526. https://doi.org/10.4000/bagf.6526

Monnet J. 2000. Les dimensions symboliques de la centralité. Cahiers de géographie du Québec, 44 (123), 399–418. https://doi.org/10.7202/022927ar

Mérenne-Schoumaker B. 1979. Les facteurs de localisation du commerce de détail. Rennes, 331–349.

Mihoubi M., Boukhemis K. 2021. The Impact of Commercial Mutations on Historical Buildings in Algeria: Case of Colonial Quarters in the City of Annaba. 4th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2021), 20–21.

Navereau B. 2011. Le commerce alimentaire de proximité dans le centre-ville des grandes agglomérations: l'exemple de Toulouse et de Saragosse. Géographie. Université Toulouse le Mirail – Toulouse II.

Pierre A. 2016. L'épicerie de quartier dans un contexte de mutation profonde de l'offre commerciale: quel avenir de ce commerce de proximité à Istanbul ? In: R. Desse, S. Lestrade (eds.). Mutations commerciales et devenir de l'espace marchand, 379–394. Rennes, Presses Universitaires de Rennes- Collection Espace et territoires.

Ponsard C. (ed.). 1988. Analyse économique spatiale. PUF, 452 p.

Soumagne J. 2008. Architecture et commerce. Paysage commercial. In: R. Desse, A. Fournié, A. Gasnier, N. Lemarchand, A. Metton, S. Doumagne (eds.). Dictionnaire du commerce et de l'aménagement, 29–33. Rennes, Presses Universitaire de Rennes.