

# Supermarkets in Mexico and the Mexico City Metropolitan Area: Logics of Territorial Insertion and Socio-Spatial Inequalities

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## Abstract

The paper analyzes the logics of expansion and spatial distribution of supermarkets at three scales: global, national (Mexico), and especially metropolitan (Mexico City), from rich to poor spaces and social categories. It seeks to understand how supermarkets, in a country like Mexico where they initially target mainly the middle class, reproduce or mitigate socio-spatial disparities. We conclude that they are a factor both of mitigation (due to a relatively good distribution in the metropolitan space) and of reproduction of inequalities (due to the segmentation of the offer). In the case of Mexico City, the situation of oligopoly by the company Walmart constitutes a risk to urban food sovereignty and security.

## Keywords

food security, supermarkets, Mexico, socio-spatial disparities

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## Cover Photo

Supermarket in San Jerónimo neighbourhood, Mexico City (Global Press/Alamy)



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## Introduction

The history of supermarkets in Mexico is closely tied to the socio-demographic changes that began in the second half of the 20th century, with accelerated population growth and abrupt rural-urban transition, which led to an increased demand for food in the cities. This history is also connected with the opening of the national economy to foreign capital in the 1990s. We are especially interested in supermarkets insofar as we link their spread to the persistent challenge of social inequalities in relation to food purchase, its consumption and food insecurity. The types of supermarkets or *supermercados* that we refer to in this paper includes all self-service food shops, including hypermarkets that also sell non-food products. In Mexico, the National Association of Self-Service and Department Stores (ANTAD), which brings together various actors in the industry, distinguishes between megamarkets (over 10,000 square metres of sales area), hypermarkets (between 4,501 and 10,000 square metres), supermarkets (between 501 and 4,500 square metres), *bodegas* (hard-discount retailers with more than 2,500 square metres of sales area) and warehouse clubs with more than 4,500 square metres of sales area. However, everyday language in Spanish does not distinguish between supermarkets and hypermarkets, and the term *hipermercado* or hypermarkets is not commonly used.

This paper begins by analysing the expansion of supermarkets in Mexico by placing them in the context of the global retail revolution and innovations brought by self-service supermarkets. It then traces links between their economic development and territorial distribution (concentration, dispersion, etc.) in the Mexico City Metropolitan Area (MCMA) and social dynamics. It offers conclusions on the consequences of the distribution of these establishments on the food supply and nutrition of the population (which comprises Mexico City and 59 conurbation municipalities, mainly in the State of Mexico (58) and the State of Hidalgo (1)). The analysis in this paper is located at the intersections of urban geography, economic geography (distribution and economic and spatial logics of stores), food geography (on issues of food security) and the social geography of inequalities. How have supermarkets spread at the national scale, and according to what economic and social logics? How are supermarkets distributed in MCMA? What impact does this distribution have on the population's diet? How do they meet or fail to meet the food needs of the population of MCMA? These are the key questions that we attempt to address in the paper.

Mexico, which is close to the US, and in particular the capital and its metropolitan area, is an important example of the profound changes that have taken place in middle-income countries in the South in terms of commercial food distribution, particularly in urban areas. Nevertheless, this transformation has its own specific characteristics. Moreover, the development of supermarkets raises the issue of household affordability and their adaptation to the consumption patterns of the poor, who make up the bulk of the population of a metropolis like MCMA, whereas supermarkets are primarily aimed at the middle class. We will therefore examine the

role of these intermediary actors through the prism of food distribution in producing, maintaining, or reducing socio-spatial inequalities.

The paper is divided into four sections that correspond to the three spatial scales (global/regional, national and local) showing how the logics of territorial expansion of supermarkets are aligned with socio-spatial inequalities: the global scale, and Latin America in particular, in the context of economic globalization; Mexico, where the history of supermarkets illustrates the evolution of the logics of territorial insertion targeting the middle class and then the working classes; the expansion strategies of supermarkets in the Mexico City Metropolitan Area; and the impact of the expansion and spread of self-service superstores on consumption patterns and socio-spatial inequalities.

The data for this paper was obtained through a review of existing literature and specialized media coverage combined with 10 interviews conducted in 2018 with assistant managers and managers of supermarkets of different formats and customer profiles, all located in the central-southern part of Mexico City. Additionally, one interview was conducted with a manager of the La Comer group who was the only one to agree to answer our questions. The questions asked concerned their commercial strategies and another subject not covered here, that of unsold food and food waste. It was difficult to obtain interviews with the managers of the various supermarket companies because of their confidentiality policy. We also used the statistical directory of economic units (*Directorio Estadístico Nacional de Unidades Económicas*, DENUE) of the *Instituto Nacional de Estadística y Geografía* (INEGI), information obtained from ANTAD directories, and websites of retail groups to create maps of supermarkets for MCMA and moreover to analyze the linkages between their distribution and social inequalities.

## The Global Supermarket Revolution: from the North to the South

The section attempts to situate the supermarket commercial revolution in Mexico in the context of global change, and to show that the process of spread of supermarkets from the North to the South reproduces social inequalities across countries. Supermarkets and hypermarkets are a Western innovation and especially embedded in the history of the United States (US). Because of the geographical proximity between the US and Mexico and the importance of the economic links between the two countries, the North American model, particularly through the Walmart group, is an important reference point in Mexico. Although mass retailing began in Europe and North America at the end of the 19th century, it was in the US in the 1930s, at the time of the Great Depression, that supermarkets were created, followed by self-service discount department stores (Grimmeau 2013) as places to distribute food products (and non-food products in the case of hypermarkets). Discounting is a sales technique that involves selling at low prices and in very large quantities. After numerous trips to the US to work with Bernardo Trujillo of the National Cash Register Company in

Dayton (NCR), the American guru of mass retailing in the 1950s, the Belgian company GB was inspired by American supermarkets in 1961 when it created the first European hypermarket. Then, in 1963, Carrefour used the supermarket formula by combining food and non-food products in its hypermarket in Sainte Geneviève-des-Bois, in the Parisian suburbs, later spreading the model around the world (Grimmeau 2013). Walmart did not adopt this formula until 1985 (Grimmeau 2013). In both the United States and Western Europe, it was the suburban areas that saw the birth of the supermarket revolution.

The rapid spread of the supermarket is due to the combination of operational methods such as self-service, low prices, logistical innovations (for example, distribution platforms), elimination of intermediaries and different relationships with suppliers (with extended payment deadlines), new sales methods (thanks to cash registers and subsequently barcodes) and stock management (just-in-time production). In the European and North American contexts, it is primarily a response to the consumer demand of car-owning households who have chosen to live in rapidly expanding suburbs, which are largely under-equipped in terms of shops, at least in large cities such as Paris and the surrounding area (Metton 1982). Before their establishment in city centres, supermarkets were first and foremost a suburban phenomenon. This is not the case in Latin America, where the supermarket is mainly an urban phenomenon, linked above all as we shall see, to the middle class in central cities. Hard discounting is a sales technique that involves selling at prices well below those prevailing on the market, especially by saving on the marketing and presentation of food products. This phenomenon is widely prevalent in Germany, spread across Europe and the world from the 2000s onwards in response to the crisis in very large supermarkets, marking a return to a trade more focused on proximity (Hocquelet et al. 2016). It later became widespread in Mexico, when large retailers began to target the working classes.

The saturation of the European and North American markets, stagnation of demand in the home countries of the major Western distribution groups (Carrefour, Walmart, etc.) and, at the same time, the liberalization of the world economy, have prompted these major groups to invest outside their own borders, particularly in the countries of Eastern Europe and the more developed countries of the South, including Mexico. Although these figures are not very recent, in 2011 the Carrefour (France) and Metro (Germany) chains were present in 33 countries, Carrefour having withdrawn from Mexico in 2004 and gradually from other countries, while its major competitor in Mexico, Walmart (United States), the market leader, was present in 27 countries (Gasca and Torres 2014). The supermarket commercial revolution (Reardon et al. 2003; Weatherspoon and Reardon 2003) outside the frontiers of the pioneering supermarket countries is thus linked to the globalization of economies and markets and to the development of the agri-food industry in these countries, given that only large and medium-sized producers can be suppliers to supermarkets (Coe 2004).

There were often budding supermarkets in several Latin American countries. But they did not bring about a real commercial revolution, because this transformation was not accompanied by real changes in logistics, stock management, relations with suppliers, etc., as in Europe and North America. Self-service outlets became a trend only with the opening up of economies to foreign capital and investment in the 1980s and 1990s. This expansion took place first in the Southern Cone, Brazil, and Asia (Taiwan, Philippines, Thailand), then in the 1990s in other Latin American countries such as Mexico, Ecuador, and Colombia, and in many countries in South-East Asia and Central Europe, as well as in the late 1990s in the rest of Central and South America, South-East Asia, some African countries, China, India, and Russia (Reardon and Berdegué 2008). However, penetration rates, which indicate the market share represented by supermarkets, vary greatly across countries. In Mexico and Thailand, it was between 50 and 60 percent in 2005, while in Peru and the Philippines it was around 15 percent at the same date, and between 15 and 20 percent in Côte d'Ivoire in 2015 (Brenoum 2020). By contrast, in Japan, US and Canada, the food market penetration rate was close to 90 percent (Gasca and Torres 2014). Africa, which is poorer, is undoubtedly the continent where the retail revolution, that is, the transition from a system characterized by traditional shops to one dominated by supermarkets, has been the latest trend, even though in southern Africa, particularly South Africa, the development of supermarkets has seen a marked jump since the 1990s with the expansion of Shoprite (Crush and Frayne 2011). However, Walmart's 2011 acquisition of a stake in Massmart, one of the South African market leaders, has not yielded the same effect in terms of market concentration (Nickanor et al. 2017) as in Mexico, as we shall see. It is South African supermarket chains that have expanded across the continent. Mexico, which is close to the United States, unlike Argentina, which is more inclined to European influences, and to which we will sometimes refer as a counterpoint, shows another model with social and spatial logics that nevertheless reproduce inequalities in distribution that we observe on a global scale.

## Stages in the Supermarket Revolution in Mexico: A Mainly Urban Phenomenon Driven by the Development of the Middle Class

Schwentenius and Gómez (2006) identify three phases in the history of supermarkets in Mexico. The development of supermarkets, initially small, then larger, with a gradual increase in the complexity of the product, shows a spatial implementation logic that is not very different from that which has occurred on a global scale, from the richest countries to poorer ones, albeit with an early diversification of formats.

### **The first phase of supermarket expansion in Mexico City and its surrounding areas**

The first phase of expansion extended from the 1940s to the early 1970s, when the first national chains, Aurrerá, Comercial Mexicana and Gigante, were established, with

their areas of activity extending to related sectors such as restaurants, department stores and banks (Gasca and Torres 2014, p. 145). The supermarket phenomenon is inseparable from the 'Mexican miracle' that took place between 1954 and 1970 owing to major economic and industrial development based on state capitalism and a policy favouring large infrastructure projects. This development led to the emergence of a considerably heterogeneous national middle class (civil servants, small traders and entrepreneurs, technicians, university professors, etc.) whose consumption habits and lifestyles, particularly through the motorization of households, were undergoing major transformation. The supermarket is part of these marked lifestyle changes. These modern distribution establishments also met the food demand of a rapidly expanding urban population. The city's average annual growth rate was 5.66 percent in the 1960s (Negrete 2000). Against this backdrop, the number of stores grew steadily, while their size rapidly increased (2,000 square metres for the Aurrerá supermarket in Colonia Obrera, 6,800 square metres over four floors for the Comercial Mexicana hypermarket in the city centre, 10,000 square metres for the Gigante store in the Mixcoac district). Until the early 1970s, the rate of store openings was around one to two a year.

The first supermarkets were set up mainly in the middle-class neighbourhoods, first in Mexico City (colonia Obrera, Universidad, Insurgentes, colonia Mixcoac, etc.), then in its suburbs (Ciudad Satélite, Lomas Verdes, Santa Mónica and others, suburban middle-class housing estates that were expanding rapidly in the north of the city in the 1960s). The municipalities of Naucalpan and Tlalnepantla, to the north-west of the city, where the supermarkets were being established, were populated by both the car-owning managerial middle class and workers employed in the industrial estates that emerged there at that time. The expansion of supermarkets is therefore closely linked to the process of metropolization that began in the 1950s.

During the 1960s, innovations such as self-service, cash registers, trolleys, escalators, car parks, etc. were introduced, revolutionising both sales techniques and the shopping habits of the middle class. During this period, the Arango brothers of the Aurrerá Group, pioneers in this field, set up a partnership with the American company Jewel Co in 1971, with the aim of benefiting from this company's experience in managing American supermarkets. Among the contributions this company made to Aurrerá were improvements in logistics, modernization of product presentation and use of inventories (ANTAD 2003).

Despite this initial development, supermarkets at this stage did not cover the food demand of the population, even after witnessing largescale rural and urban migration from the rest of the country. In fact, during this period (1953-1967, especially 1957), 150 covered markets were also built, partially replacing street markets or *tianguis* (of indigenous origin dating back to pre-Hispanic times), which were covering the city streets (Stamm 2008). Nevertheless, unlike the markets that were well distributed throughout the city, supermarkets remained highly concentrated in areas where purchasing

power was sufficiently high. This period coincides with Ernesto P. Uruchurtu's tenure as appointed Regent of the Federal District of Mexico (from 1952 to 1966) when the city experienced rapid modernization tied to rapid economic growth.

Although the first supermarkets were mainly driven by private initiative, there was significant state involvement in the 1960s, with the creation of the parastatal company Compañía Nacional de Subsistencias Populares (CONASUPO) in 1961. This parastatal company is rooted in the political system of the Institutional Revolutionary Party (PRI), the political party that emerged from the Mexican Revolution and remained in power at the national level between 1929 and 2000, with a government based on clientelism and corporatism. CONASUPO was set up to provide food for workers affiliated to the main social organizations and unions, by regulating the prices of the foods included in the basic food basket. The involvement of this parastatal company in the creation of state and union self-service stores (CONASUPER, IMSS, ISSSTE, UNAM) in a variety of formats (warehouse or supermarket) and with a wide range of low-price or subsidized products, has played a major role in the expansion of this type of trade (Bassols 1994), even though today it has a marginal role in food distribution.

In any case, in the 1960s, supermarkets did not entirely compete with the traditional supply centres, covered markets, *tianguis* (open air market or bazaar) and grocery shops, which remained hegemonic (Stamm 2008, Torres 2011). The same type of development can be seen in middle-income Latin American countries such as Argentina, where most shops are small, local specialized shops and grocery shops to which customers remain loyal, as shown by Manolo's father's grocery shop in the Mafalda comic strip (Capron 1999). As in Buenos Aires, the development of supermarkets, at least initially, before the arrival of international actors, was encouraged by changes in form (use of trolleys, checkouts, self-service) rather than changes in operation (logistics and supply chains, which were later overturned by the arrival of international traders).

### **The second expansion phase, 1970-1990: large and medium-sized cities**

It was not until the late 1960s and early 1970s that the three pioneering supermarket chains, Aurrerá, Comercial Mexicana and Gigante, made their first foray outside their home base of Mexico City into the country's large and medium-sized cities, starting with Querétaro and Puebla in 1967, then Guadalajara, Cuernavaca, Toluca, and in the 1980s, Monterrey. The chains began their expansion essentially to cities located in Mexico City's orbit, in the centre of the country, then gradually cities in the north, with Monterrey representing the third largest city in the country and one of the wealthiest urban areas. Within the metropolises, it was mainly middle-class neighbourhoods that were targeted, using criteria such as the existence of infrastructure, particularly roads, accessibility, household equipment (cars, refrigerators, etc.), combined with the population's average and high purchasing power. Urban areas which did not have

these characteristics were excluded from this stage in the development of supermarkets until the end of the 1980s (Torres 2003). Supermarkets, therefore, followed a metropolitan logic, with the less urbanized and more indigenous south remaining on the margins of these dynamics.

In the second phase of supermarket expansion, the growth of these stores was marked by strong attempts to absorb the small chains operating in the major cities (Schwentesi and Gómez 2006). For example, Super Mercado SA (SUMESA) was absorbed by Comercial Mexicana in 1981 and El Sardinero was acquired by Gigante in 1991. This phase was characterized by the first wave of mergers and acquisitions (Reardon and Berdegué 2002), by an increase in the number of new stores and by the relative democratization of supermarkets, which until then had been mainly limited to the middle class and workers through CONASUPO. This period also saw the emergence of the new format aimed at the upper-middle and lower classes, *bodegas* (warehouses, the equivalent of hard-discount stores) selling essential products, such as those that make up the basket of basic food products that Mexicans eat (beans, tortillas etc.). Tortillas are corn or wheat cakes, the bread of the Mexicans, and constitute a staple feature of Mexican diet.

### **The third phase of expansion: economic liberalization and the development of major transnational groups**

In the early 1990s, liberalization and opening up of the national market to international capital, through the General Agreement on Trade and Tariffs (1986) and North American Free Trade Agreement (NAFTA, 1994) (Casado Izquierdo 2018), together with the withdrawal of the state from various spheres of the economy, institutional flexibility and the promotion of a market economy (Gasca and Torres 2014, Vilas 2000), led to the arrival of large transnational groups in the country. This accelerated the transformation of the supermarket sector. As Schwentesius and Gómez (2006, p. 208) explain, “the policy of economic liberalization and the new domestic legal framework that allowed 100 percent foreign investment in Mexico enabled these commercial groups to achieve higher profit rates and offered them space to position themselves and expand”. Foreign direct investment has certainly been a powerful driving force behind the modernization of Mexico’s trading system. This happened well after Brazil and Argentina, where in 1976 the military dictatorship brought down customs barriers. This led to the arrival of Carrefour in 1982 and the logistical revolution that was to affect all national supermarket chains, which were forced to adapt to this new competition. However, in Mexico, most of the development of supermarkets (Walmart was not as well inserted as Carrefour, which had been established earlier, and was much less present in Buenos Aires than in Mexico City) took place after the return to economic stability in 1996, following the crisis of the devaluation of the Mexican peso in 1995, which had a negative impact on employment and the economy of the middle class.

The experience of national supermarket chains and the interplay of alliances helped to mitigate some of the impact

of the opening up of trade. Faced with the certain threat that foreign groups would invade the previously protected national market, Mexican companies chose to have the American distribution giants as partners rather than competitors and rushed to sign strategic alliances with them (Moreno 2012). For example, alliances emerged between Cifra SA de CV and Walmart, Auchan and Comercial Mexicana, and Gigante and Carrefour. The first agreement between Cifra SA de CV and Walmart was signed in 1991 and full merger occurred in 1997.

This history of alliances between domestic and foreign companies and the logic of their location are complex. Gasca and Torres (2014) point to three spatial patterns in the expansion of global companies. The first is the incursion of the most consolidated companies into countries or regions on a continental scale, as in the case of Walmart; the second is the exploration of regional or global markets, or of countries close to the headquarters of these companies, by emerging companies, as in the case of two Mexican groups, Soriana and Chedraui; the third, which has predominated in Mexico, consists of alliances as joint ventures or acquisition of national chains, as in the cases of Gigante and Comercial Mexicana, bought by Soriana.

The arrival of major multinational retailers in Argentina was also achieved either through joint ventures or through the process of mergers and acquisitions. What is striking in Mexico is that in less than a decade, the pioneer of Mexican supermarkets, Aurrerá, the largest supermarket chain in Latin America at the end of the 1980s (Moreno 2012), went into the hands of the transnational Walmart. Alliance strategies had varying outcomes. After an alliance with the American Sol Price in 1991 and France’s Auchan in 1995, Comercial Mexicana ended up unravelling its alliances with foreign groups in 1997, with Auchan selling off its assets (Casado Izquierdo 2018). In 1994, Gigante decided to team up with Carrefour, but this alliance collapsed in 2005. Gigante had to sell its assets to Soriana and Chedraui (Moreno 2012), which did not opt for alliances with foreign companies and came from emerging economic areas, respectively the metropolitan area of La Laguna (around Torreón) in the north of the country and region of Xalapa in the state of Veracruz. They have been strengthened by the absorption of other national chains (Moreno 2012), such as Soriana, which acquired Gigante in 2007, and Comercial Mexicana in 2016.

Thus, in the 1990s, this readjustment of distribution chains resulted in a high level of economic concentration, marked by the impressive development of the Walmart group, which took over many Mexican chains (Aurrerá, Superama and Sumesa), its territorial expansion in large parts of the country and the diversification of its formats. However, Walmart has not been established in regions where, for example, a local chain predominated, such as in the north-east where Soriana holds the leading position. In MCMA, Soriana and Chedraui are showing good resistance to the giant Walmart. In any case, it is very striking that Latin America has experienced the same development in just one decade which the United States witnessed across five decades (Reardon et al. 2003). Reardon and Berdegué (2002) describe the spatial

shift in supermarket distribution during this decade operating as a 'domino effect'. From their 'niche' in the capital cities of the federal states, supermarket chains spread rapidly to intermediate towns in the 1980s and then to medium-sized and small towns in the 1990s.

One aspect of this phase of the commercial revolution "has been the incorporation of logistical, organizational and technological innovations that have gradually transformed the way in which large volumes of food products are mobilized, from production and distribution to final consumption, through technologically sophisticated forms of marketing and innovations in business organization" (Gasca and Torres 2014, p. 137). In particular, logistics and supply have been transformed. Our interviews with supermarket managers confirm that most have only 2 or 3 direct suppliers, up to 10, mainly for fresh produce. They are supplied almost exclusively by central purchasing agencies (*Centros de Distribución*, CEDIS in Spanish) spread throughout the city, which avoid going through Mexico City's central market, one of the largest in the world, and allow direct negotiations with producers to influence prices by reducing the number of intermediaries: Cuautitlán Izcalli and Tultitlán for Soriana, Cuautitlán Izcalli and Chalco for Bodega Aurrerá and Superama, Cuautitlán Izcalli for Walmart supermarkets and hypermarkets, Azcapotzalco for Sumesa, Vallejo for La Comer, and so on (interviews with supermarket managers). The stores have virtually no room to maneuver and are highly dependent on the parent companies (*corporativos*) for product selection and stock management. For example, this is the case for Soriana in Monterrey. This phase also shows the integration of elements that enabled the diversification of services offered, such as the expansion of opening hours and days, and the product range, such as new departments for butchers, dairies and *tortillerías* (tortilla bakeries) along with the development of technologies that enable payment by credit card and, above all, the incorporation of new formats such as *bodegas*.

Finally, a fourth phase of supermarket development is that of e-commerce, may be unfolding (Torres 2017). Although this distribution channel was not yet very consolidated before the COVID-19 crisis when we carried out our research and factoring in the low level of bank card ownership among the population as a major obstacle, supermarket chains are considering expanding it because it allows time optimization and the expansion of channels to other scales. Before the pandemic, four of the shop managers interviewed in 2019 in middle and upper-middle class areas of Mexico City said that Internet sales varied between 1 and 15 percent of total sales, although closer to 5 percent than 15 percent in most cases. In 2020, there were a total of 27.7 million credit cards and 157.8 million debit cards for a population aged 20, according to the INEGI census of 2020 (bearing in mind that the same individual often has several cards) (*El Economista* 2020). According to another source (*inversorlatam.com*), using INEGI data, 47 percent of Mexicans had a bank account in 2020, which roughly corresponds to the middle and upper classes.

## The Spatial Distribution and Territorial Expansion Strategies of Supermarkets in Mexico City: The Walmart Oligopoly

MCMA is traditionally divided into an industrial and working-class north, a well-off south and west and a rather poor east. However, on a finer scale, it appears as a mosaic of neighbourhoods (Ruvalcava and Schteingart 2000). The social and urban fabric is changing, either because of gentrification in the central neighbourhoods or consolidation of working-class neighbourhoods, particularly in the eastern part of the city (Ribardiére and Valette 2013). Despite this social division of urban space, there is a relatively good spatial coverage of supermarkets in MCMA today, even in some areas where marginality (marginalization) is high using the urban marginality index. In total, more than 1,000 stores were counted in the Metropolitan Area of Mexico City in 2019. The urban marginality index (*índice de marginalización urbana*, IMU) was created by the *Consejo Nacional de Población* (CONAPO) in the 1990s to help implement social policies. Constructed from a set of socio-economic indicators, it aims to measure poverty in a multidimensional way and not based on income alone, especially in suburban self-built neighbourhoods (Valette and Ribardiére 2014). We have chosen the urban marginality index because it captures the prevalence of poverty more effectively.

Figure 1 shows the density of supermarkets per square kilometre in the municipalities of MCMA. It illustrates not only a centre-periphery distribution logic, but also locations along the main urbanization corridors, particularly in the north towards Pachuca from Ecatepec via Zumpango, and in the east towards Puebla through Ixtapaluca.

In the working-class eastern part of the city, a good distribution of supermarkets exists. Nezahualcóyotl, which began to urbanize from a land invasion in the 1950s, has consolidated and currently has seen the emergence of a middle class on the oldest urbanized land (Valette and Ribardiére 2014). The same is true for Chimalhuacán and Valle de Chalco to the east and south-east of Nezahualcóyotl, which are high-density areas that have urbanized more recently and yet have a high rate of marginality (marginalization). The consolidation of irregular neighbourhoods and construction of large social housing estates on the city's periphery have been accompanied by the opening of large supermarkets, mainly in the bodega format, aimed at the upper-middle social stratum who have been able to improve their self-built homes or have been able to own a social housing unit. However, there is a noticeable asymmetry between the western part of the central area (Cuauhtémoc, Miguel Hidalgo, and Benito Juárez boroughs), which is relatively well-off (except for the eastern part of the historic centre), and the eastern part of the city (Iztacalco and Venustiano Carranza boroughs). Few supermarkets are located in the more marginalized outlying areas.

Figure 1: Density of supermarkets per square kilometre by municipality in MCMA, 2019

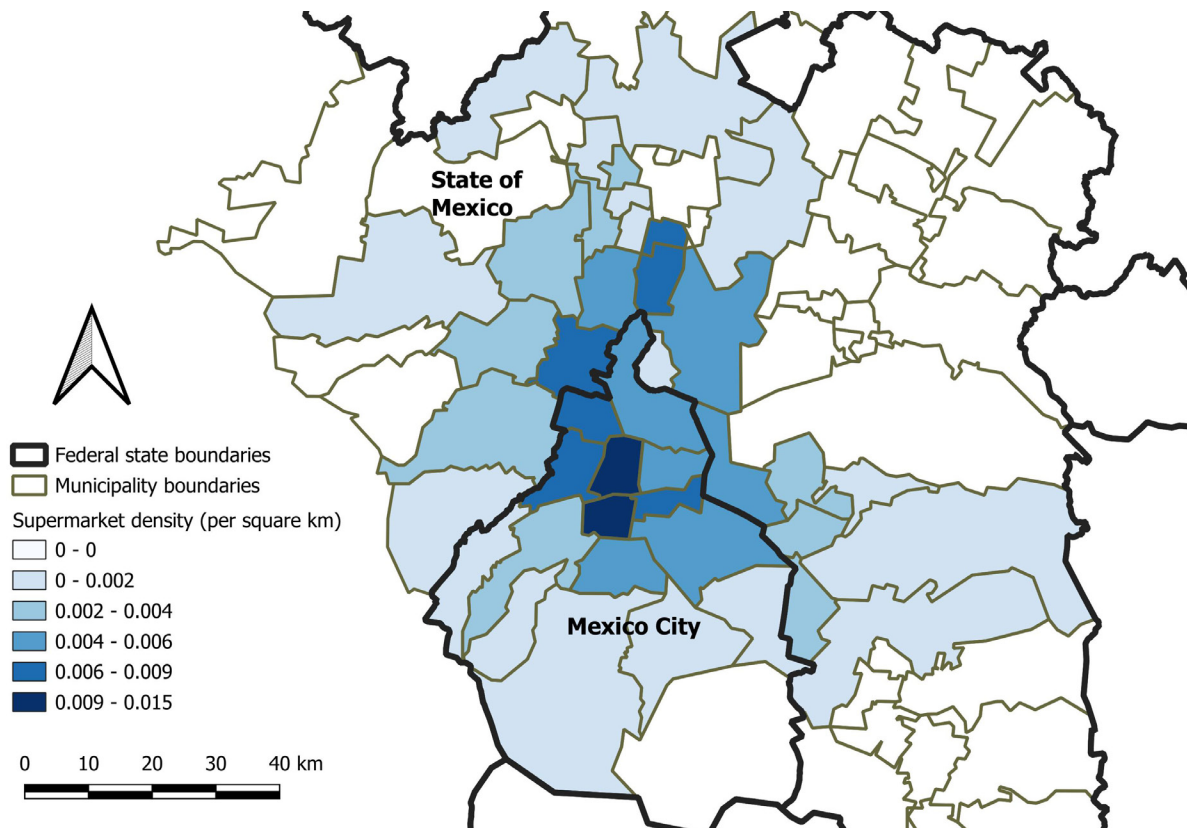
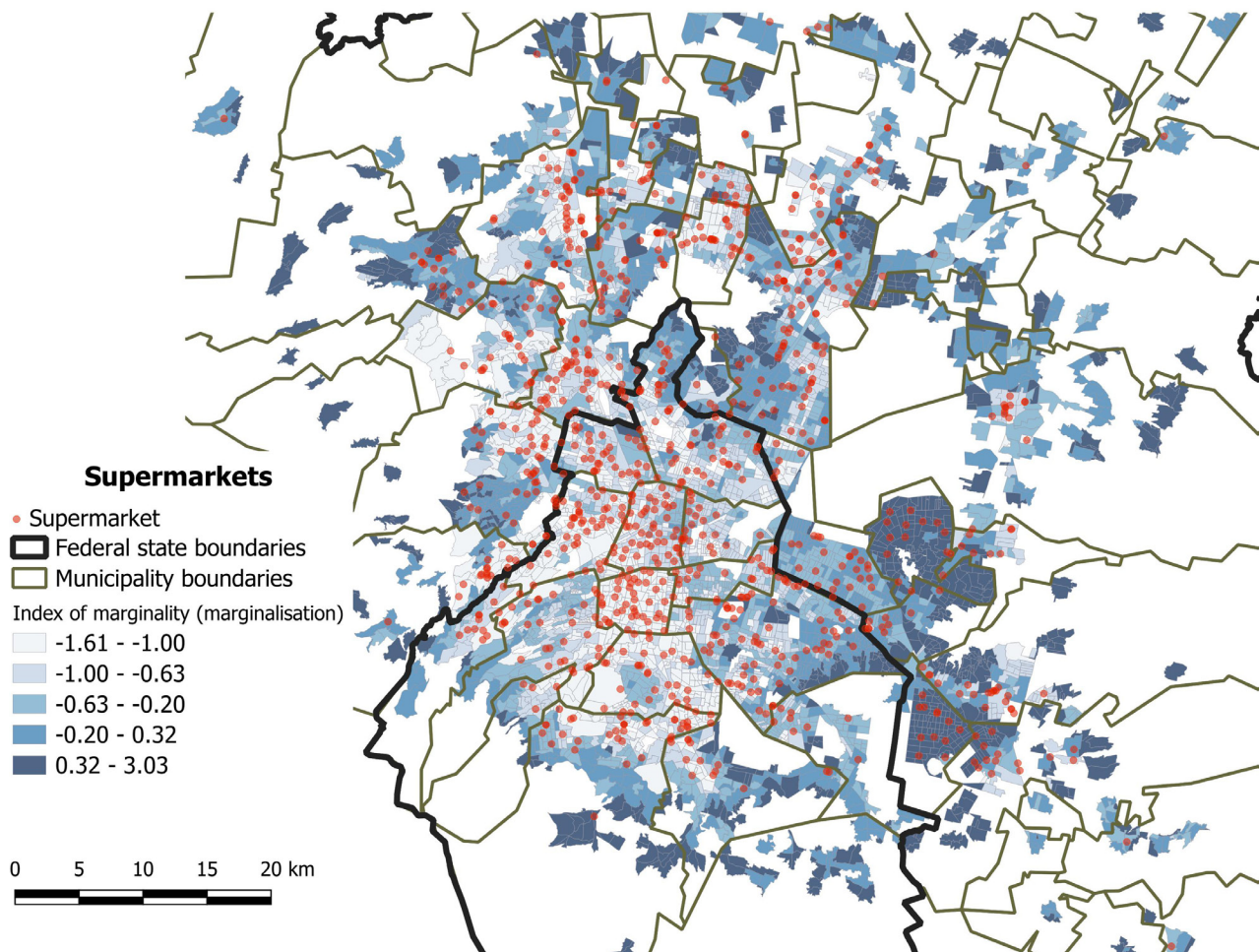


Figure 2: Spatial distribution of supermarkets according to the degree of marginality (marginalization) of the population by AGEB (Basic Geostatistical Area) in MCMA, 2019





It is interesting to note that even when new areas are urbanized, demographic concentration in metropolises, greater income stability and maturing of urbanization processes have contributed to the growth of a new food supply model (Torres 2011: 76). This does not suggest that there is a lack of new branches in small, sparsely populated or recently urbanized localities. The small formats of self-service stores have enabled the large supermarket chains to penetrate these localities to increase their territorial coverage. However, this has not been enough to ensure that outlying localities with a higher marginality index (marginalization) are well equipped, as can be seen in Figure 2. However, smaller, more popular supermarket chains that were not included in our survey are present in these areas.

Mass retailers have shown great flexibility by offering a range of formats, including the model of convenience stores imported from the United States, which have been a runaway success in Mexico. This flexibility enables them to reach markets that might otherwise be inaccessible, either because of the small number of inhabitants or because of their low incomes. These companies have been able to adapt to the characteristics and demand of the population in all its diversity: Superama for the wealthy class, Soriana for the middle and upper-middle classes, and Bodega Aurrerá for the working classes (Gasca and Torres 2014). The manager of a Bodega Aurrerá in the Buenos Aires neighbourhood in Mexico City explained the process by which a new establishment is created as well as the identification of its type or format.

*We carry out a market survey starting by looking at how far the shop is from other shops in the same chain or in the same format within a five-kilometre radius. This is based on a population of at least 5,000. Then, depending on the socio-economic profile of the population, we decide on the format: Superama, Sam's...*

The large retail groups are seeking to attract a new clientele, that is, population living in the outlying working-class areas and small towns abandoned by the Mexican state after the demise of CONASUPO in the 1990s (Torres 2003), with the introduction of formats with a smaller sales area, such as *bodegas*, in the new social housing zones. Walmart has adopted the *bodega* formats (Casado 2018), while Soriana has focused on supermarket and hypermarket formats aimed at the middle class. The manager of La Comer says that the group favours the La Comer and Fresko supermarket formats, which are aimed at both the lower-middle and upper-middle classes, depending on the location of the shops. The middle class, especially the lower middle class, is the core target of the group's supermarkets, although it does have a small number of high-end stores aimed at the wealthy customers (City Market): "We have plans to reach out to the market of middle and lower-middle socio-

economic customers and meet their needs, because the middle-high segment is not the largest in the country".

The diversification of self-service shop formats has allowed distribution companies to have coverage at several inter- and intra-urban scales, making it possible for them to reach populations of different income levels (Gasca and Torres 2014). However, Casado Izquierdo (2018) observes that the spread of supermarket chains (and not *bodegas*) reproduces the expansion model it had at its inception. That is, it follows the development of the middle class, but with strategic peculiarities, such as the construction of new branches in spaces where supermarkets were already present, usually large localities, due to the advantages that economies of density represent for the reduction of distribution costs.

In the State of Mexico, *bodegas* aimed at the working classes, and, to a lesser extent, warehouse clubs predominate. In Mexico City, the split between *bodegas* and supermarkets is more evenly balanced (Figure 3). The distribution of the different formats (*supermercados* versus *bodegas*) reflects social divisions on a very fine scale, as each format targets a different market segment.

In MCMA, the supermarket sector is in the hands of three groups (Figure 4). The top group is Walmart SA de CV with 618 out of a total of 2,571 stores in the country (*Resumen financiero de Walmart* 2020). Walmart's national net sales were just under 700,000 million Mexican pesos in 2020. Nearly 25 percent of these supermarkets are in MCMA, which accounts for only 17 percent of the national population. The second group is Soriana SA de CV with 114 stores (out of a total of 795) (*Informe financiero de Soriana* 2020). Soriana's national net sales were just under 154,000 million Mexican pesos in 2020. It has made a successful foray into MCMA, especially after the takeover of Comercial Mexicana, which had 89 stores (Tilly 2005). Finally, Chedraui has a smaller presence with 55 supermarkets out of a national total of 321, which are located mainly in the state of Veracruz and in MCMA (*Informe financiero de Chedraui* 2020). Chedraui's net sales nationwide were just under 146,000 million Mexican pesos in 2020.

The Walmart group is in a situation of oligopoly and has a very aggressive pricing policy (Castañeda 2012), holds 60 percent of the supermarkets operating in MCMA (all formats combined), which is reflected in the spatial distribution of establishments by groups and chains (Figure 4). Walmart has penetrated the market in almost the entire MCMA, except in the more peripheral areas. Among these stores, the Walmart Supercenter and Bodegas Aurrerá formats account for 18 percent (114 stores) and 16 percent (105 stores) respectively of the stores owned by the Walmart de México SA group.

Figure 3: Spatial distribution of supermarkets by format (supermarkets, bodegas, and warehouse clubs) according to the degree of marginality (marginalization) of the population by AGEB in MCMA, 2019

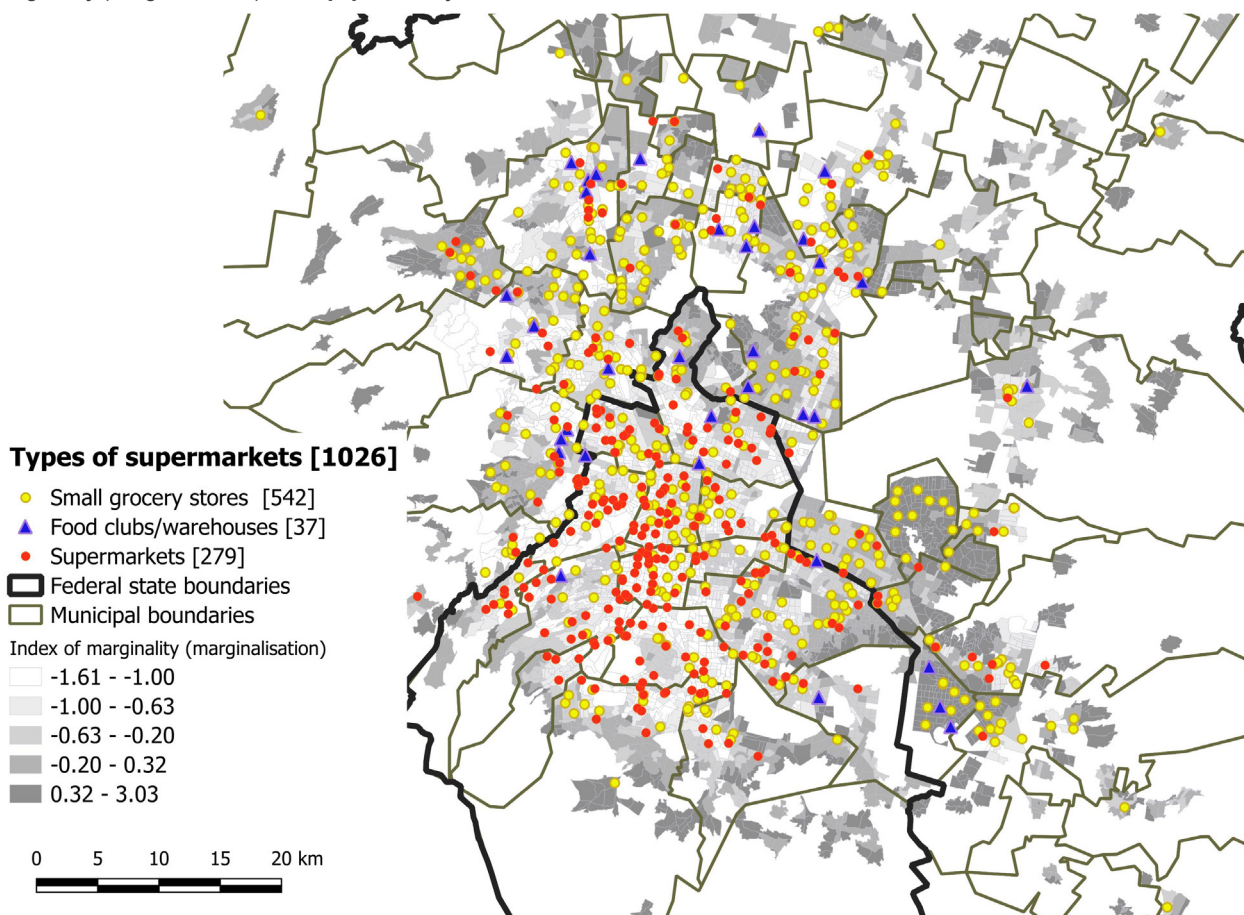
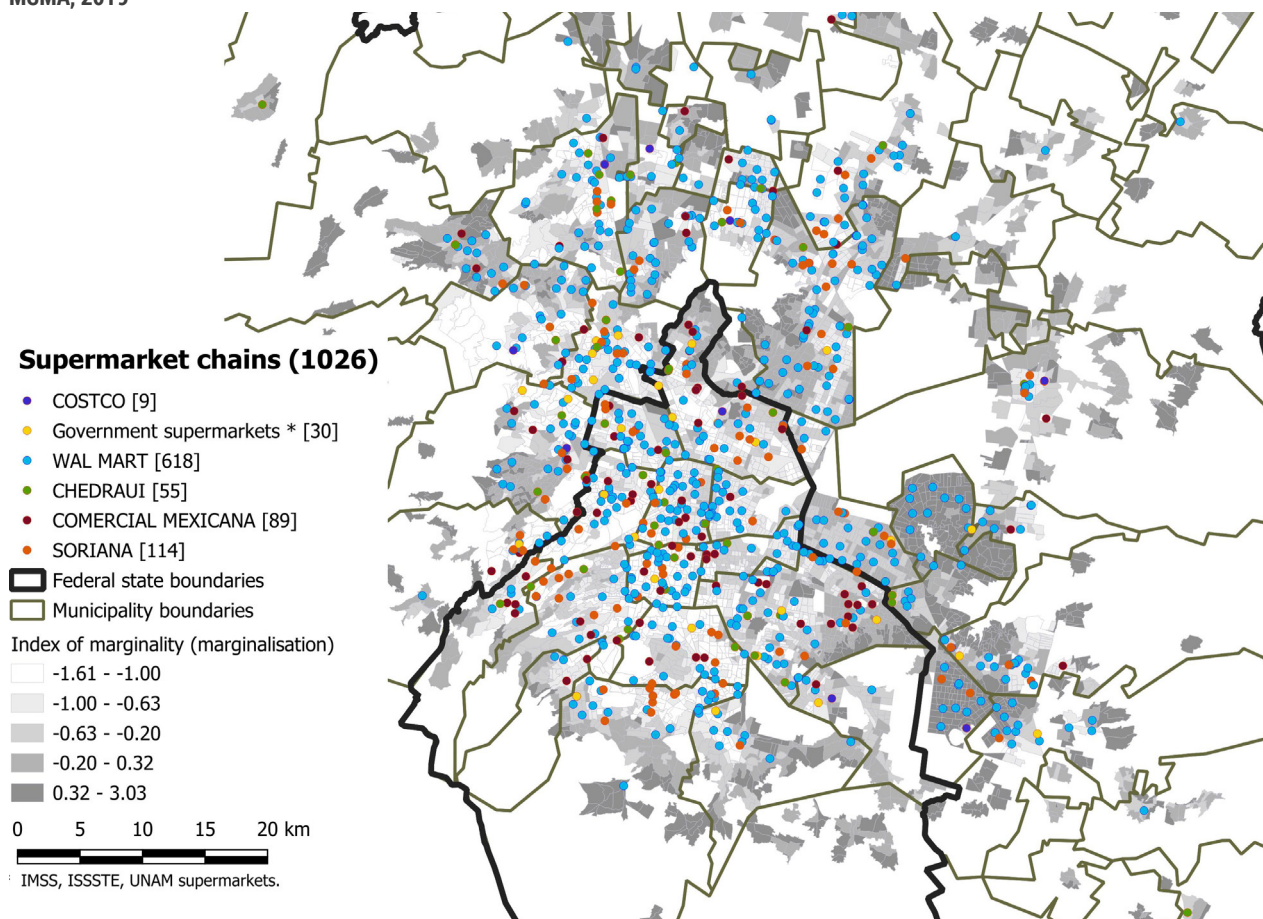


Figure 4: Spatial distribution of supermarkets by chain according to the degree of marginality (*marginación*) of the population by AGEB in MCMA, 2019



## Supermarkets and Socio-Spatial Inequalities

The development of supermarkets in Mexico is the result of several factors similar to those that led to their expansion in towns and cities in high-income countries, albeit with differences in their intensity. In the second half of the 20th century, the following crucial events occurred:

- Dramatic population growth in MCMA compared to high-income countries, with an average annual growth rate of 5.87 percent between 1940-50 and 4.04 percent between 1970-1980, when it began to fall significantly (Negrete 2000) and the predominant location of establishments in urban areas, as we have seen previously.
- Advance of the tertiary sector, which in 2010, accounted for 87.6 percent of GDP in the capital (Rámirez López 2016).
- Consolidation of the middle class.
- Entry of women into the labour market, although this has been very gradual and female employment rate has not reached that of high-income countries. In 1970, female employment rate was 27 percent for population aged 12 and over, rising to 39 percent in 1998 (García and de Oliveira 2000).
- Increased use of refrigerators and freezers, although less so than in high-income countries (Casado Izquierdo 2018, Delgadillo and Gasca 1993, Gutiérrez and Lorenzo 2004, Reardon and Berdegué 2002). In 2010, 88.1 percent of households in MCMA had a fridge (Valette and Ribardière 2014, based on INEGI census data).
- Uneven automobile usage across social classes, especially for the middle and upper classes. An urban travel survey conducted by INEGI in MCMA found that just under 80 percent of households with low socio-economic levels did not have access to a car in 2017, while 70 percent of high socio-economic level households owned at least one car (Pérez and Capron 2018).

The availability of processed products (Reardon and Berdegué 2008) has also marked the beginning of a change in the consumption habits of a large part of the population, even though traditional stores such as grocery shops remain firmly anchored in purchasing practices, particularly when it comes to food supplies. At the national scale, according to the National Survey of Household Income and Expenditure (*Encuesta Nacional de Ingresos y Gastos de Hogares*, ENIGH 2020), 18 percent of the total purchases of all types of products by Mexican households were made in supermarkets, just behind grocery shops with 26.6 percent share. However, when it comes to spending on food, households mainly buy from grocery shops and specialized shops, accounting for 38 percent of purchases, from specialized food shops, with 20.2 percent of total food purchases, and from supermarkets, with just 10.2 percent of total food consumption. If we look at purchases made in supermarkets, three product groups dominate household consumption: food products (28.3 percent), cleaning and maintenance products (32 per-

cent) and personal care products (35 percent). This clearly shows that although there have been major changes at the national scale, these have been uneven across the country, with food still largely purchased in traditional stores.

As in other Latin American countries, notably Argentina (Rodríguez et al. 2002), changes in consumption patterns have been more rapid for middle- and upper-class households that combine female employment, ownership of fridges and freezers, and above all, car ownership (Capron 1999). In Mexico today, the middle class refers to a fairly heterogeneous group, divided into lower middle class, middle class and upper middle class. Using the ENIGH 2010 (National Survey of Household Income and Expenditure), INEGI (2021) estimates that in 2020, 44.9 percent of the urban population belonged to the middle class (1.3 percent for the upper class) and had an average household income of 23,451 Mexican pesos (USD 1,357), with a larger middle class in Mexico City (58.9 percent of the population in 2020).

The fact that supermarkets are less well established on the urban periphery does not necessarily mean that these areas are food deserts, since the network of *tianguis* and retail outlets is very dense. Indeed, a survey conducted in MCMA, which included questions on food purchases in shops by households classified according to their degree of food security shows that there is a statistically insignificant relationship between food insecurity and access to supermarkets (using Spearman's Rho correlation), as well as to other types of food supply such as markets, small general food shops and street shops. However, these results need to be qualified (Wagner et al. 2019). According to the Hungry Cities Partnership survey on food insecurity in MCMA (Capron et al. 2018), which produced these statistical results, 70 percent of food-secure households surveyed buy their food from supermarkets, but this proportion falls to 40 percent for households with high food insecurity. Based on information from DENU, Ruiz-Rivera et al. (2016) conclude that supermarket supply is better in rich segregated neighbourhoods and non-segregated neighbourhoods than in poor segregated neighbourhoods (0.9 and 0.3 respectively compared with 0.1 per 10,000 inhabitants).

According to FAO, food security refers to the ability to eat a sufficient variety of foods of good nutritional quality. It is measured in four different ways: physical availability of food; economic and physical access to foodstuffs; the use of food, its variety in relation to its nutritional quality; and temporal stability of the three dimensions mentioned previously. In Mexico City and Mexico in general, it is largely the third dimension that is deficient, since in MCMA households consume an average of 5.8 different types of food, whereas the recommended average is at least 6. This explains the incidence of obesity and cardiovascular disease (Capron et al. 2018). The Household Food Insecure Access Prevalence (HFIAP) scale, which measures the second dimension, measures inequalities in physical and economic access to food and the poverty line (Lived Poverty Index, LPI). As Casado (2018) observes for Mexico: "although the most marginalized population is better served, the differential remains stable: 91 percent of the least marginalized pop-

ulation have a supermarket within 1.5 km of their home, a figure that drops to 40.9 percent for the most marginalized population” (p. 184). What these figures reveal is that supermarkets are culturally and economically ill-suited to the food and related needs of the poorest. Capron et al.’s study (2018) has shown that 85 percent of people do not buy in supermarkets because they do not offer credit, 67 percent because food products are too expensive and more than 50 percent because supermarkets are too far away. The survey does not specify if the latter is in terms of time or distance.

However, to attract the middle and lower social classes, supermarket chains have developed innovations, such as seasonal offers (‘Market Wednesdays’ at La Comer, inspired by *tianguis* offers, or ‘July bargains’ at Sumesa and La Comer), which converted the traditionally slow seasons in the best sales periods. In the case of Buenos Aires, and probably Mexico City too, the way the poor use supermarkets, especially discount stores, is similar to their manner of shopping in small local stores, through frequent purchases and shopping for basic needs. However, the fact that they often buy on credit and make purchases in small quantities limits their use of supermarkets.

Ruiz-Rivera et al. (2016) point out that grocery shops and tortillerías (tortilla bakeries) are well distributed in segregated low-income neighbourhoods. The number of shops per 10,000 inhabitants is 75, compared with 54.8 in non-segregated neighbourhoods and 24.4 in segregated high-income neighbourhoods. We can see that the concept of food desert, and therefore the criterion of physical access to shops, including supermarkets, is not very operational for understanding food insecurity in the case of Mexico City, whereas the criterion of economic access is: prices are a barrier to purchases by the poor in supermarkets, but, paradoxically, industrialized foods cost more in small grocery shops (*tienditas*) than in supermarkets because of the lack of economy of scale. People living in smaller, more marginalized areas, especially on the outskirts of the city where there is not always a supermarket, get their fresh food from the *tianguis*, which are relatively well spread out around the city, and their industrialized food from small local shops, where prices are attractive. Although this population generally buy their supplies from small grocery shops and less from supermarkets, they end up paying higher prices for the main industrialized consumer products (Saucedo 2003).

Finally, drawing on a survey of spatial practices in peripheral working-class neighbourhoods, Valette (2017) proves that three quarters of food purchases are made close to the home, in the neighbourhood or in neighbouring areas. In line with Duhau and Giglia (2007: 87), the predominance of supermarket chains in areas with low purchasing power does not mean that traditional consumption channels have been superseded or are in the process of disappearing, but rather that the two modalities coexist and respond to the logic of proximity, that is, of street micro-commerce in its various forms. Households also prefer to buy in *tianguis*, which continue to be the most popular place to buy fresh produce such as fruit and vegetables. Flexor (2014) mentions the same phenomenon for small food shops in the city of Rio

de Janeiro, which have a good capacity for social integration and are a local resource. However, no map of *tianguis* existed at the scale of MCMA until very recently. In 2022, a map of *tianguis* in Mexico City was published for the first time (Infobae 2021).

In conclusion, we can state that the development of supermarkets in MCMA has a paradoxical effect on social inequalities. On the one hand, it reduces them insofar as part of the poor population also has access to supermarkets due to the diversification of supermarkets and to the *bodega* segment. Conversely, it reproduces these hierarchies through the segmentation of the offer and finally, it increases them in poorly served peripheral sectors and because of its unsuitability for the cultural and economic practices of the poor.

## Conclusion

Mexico was one of the first countries in Latin America, after Argentina and Brazil, to experience the supermarket revolution, which originated mainly in the United States and Western Europe driven by major transnational retail groups such as Walmart and Carrefour. After an initial period of slow development by companies with national capital, opening of the economy (through NAFTA) and alliances and mergers between transnational companies, especially Walmart from the neighbouring country, and national companies, led from the 1990s onwards to a major restructuring, concentration, and modernization of the sector, as well as centralization of distribution and an acceleration in the opening of new supermarket outlets. The development of supermarkets in MCMA, which mirrors their development on a global and national scale (from the most profitable countries/segments to the least profitable), is characterized by Walmart’s oligopolistic position, whereas in France, for example, the market is divided between six groups (Carrefour, Leclerc, Système U, Casino, Intermarché and Auchan) (Hocquet et al. 2016), and by a very high degree of flexibility linked to the diversity of formats, which enables them to reach markets that are a priori not very accessible. However, national groups such as Soriana and Chedraui are very active in MCMA.

Paradoxically, the expansion of supermarkets in MCMA is both a factor in mitigating inequalities (due to their relatively good distribution in the metropolitan area) and a factor in reproducing socio-spatial inequalities (due to the segmentation of supply). Although supermarkets are ill-suited to the consumption practices of working-class households, who rely on credit, which is not available for them in supermarkets, they do not turn away completely when there is a supermarket not too far from their home, as their use often complements that of the *tianguis*, where mostly fresh produce is bought.

In an area characterized by strong economic liberalism, supermarkets are a vehicle for intense competition with other establishments, particularly in the vicinity of municipal covered markets, and also for complementarity. On the other hand, the proximity of *tianguis*, where they exist, also forces supermarkets to adapt and lower their prices, as the manager of an Aurrerá *bodega* pointed out to us. In Mexico

City, Regulation 29 (Improving the conditions of fairness and competitiveness of the public offer), published in 2011 in the Official Gazette of the Federal District, with the aim of regulating the establishment of supermarkets near covered public markets by limiting competition and the impact on market sales, was successfully applied but challenged by the supermarket sector, in particular ANTAD, in the name of the free competition enshrined in Article 1 of the Constitution of the Mexican States (González 2017). This regulation was then ruled out.

In any case, the supermarket has become an integral part of the Mexican way of consuming and living, and its spread to small and medium-sized towns and to the middle and lower social classes shows a trend for a highly segmented socio-economic offering. Although the negative or positive consequences of the expansion of supermarkets on people's nutrition are debated, with some accusing supermarkets of being responsible for the epidemic of obesity and overweight in the population (Hawkes 2010, Nickanor et al. 2017), in Mexico, their development in response to an emerging demand for processed products and changes in people's lifestyles (women working, self-employment, etc.) have led to significant changes in urban consumption habits, even among the poor. At present, there is an emerging demand for foods that are healthier compared to processed foods and for conventional agricultural production, particularly organic foods, which would help to mitigate the effects of food insecurity associated in Mexico with diseases such as obesity. However, the demand for organic foods is restricted by their high prices. Also, uncertified agro-ecological products, which are cheaper than organic foods but poorly distributed by supermarkets, rarely reach the plates of consumers, especially the poorest ones.

Finally, it is remarkable that, in the case of MCMA, a single group, Walmart, owns most supermarkets in this territory and largely decides what inhabitants eat (Nazaret 2017). This is a sign of great dependence on a foreign group that has ended up buying many of the national chains and is undoubtedly a factor of vulnerability in terms of food sovereignty and security.

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