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Food chains and the retailing revolution: supermarkets, dairy processors and consumers in Spain (1960 to the present)

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Food chains and the retailing revolution: supermarkets, dairy processors and consumers in Spain (1960 to the present)

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ABSTRACT
On the basis of an analysis of the retailing of dairy products in Spain from 1960 onwards, it is argued that the rise of supermarkets was conditioned by developments taking place in the food system, and not just by macro-scale socioeconomic change. Upstream, supermarket expansion depended on dairy processors' capacity to push raw milk out of the consumer market. Downstream, the expansion was favoured by the transition towards a demand pattern that featured little aggregate dynamism and much product diversification. This case suggests that a food chain perspective might contribute to the historical study of the retail sector, especially by making the study of conditional causality more systematic.

KEYWORDS
Retailing revolution; dairy chain; supermarkets; food consumption; food chain analysis

Introduction

Although the nature and implications of deindustrialisation are still widely debated, few would dispute that a major shift has been taking place in the structure of developed economies since the 1970s. The share of manufacturing in both GDP and employment has been falling steadily, while services have become ever more central. This has spurred much interest in both the economic history of the service sector and the business history of particular service industries. Within this latter field, retailing has been, alongside finance and telecommunications, among those industries that have received more attention.[1] It is now commonplace to talk about a retailing revolution by means of which a relatively small number of supermarket chains have become the main suppliers of food for millions of consumers.[2] Relying on major technological and organisational innovations (including information and communication technologies (ICTs) and integrated stock management), supermarkets have become the leading business model in the developed countries, and increasingly so in emergent economies. In contrast, smaller shops and other retail formats, once the backbone of the retail sector, have become increasingly marginal.[3]

What were the causes of this profound structural change? This article proposes a novel look at the question by moving the focus from retailing to the broader food system in which retailing takes place. The article argues that the rise of supermarkets was conditioned by

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their interaction with the structures and transformations in the other nodes of the food system. This is consistent with an intriguing empirical fact that has hardly been considered so far in the literature: the very uneven degree of supermarket penetration across different product groups. The argument is illustrated through the case of Spain since the 1960s, and more specifically through the case of dairy products. This is a case that shows the power of vertical connections in both directions: upstream, supermarket expansion depended on dairy processors' capacity to push raw milk out of the consumer market; downstream, the expansion was favoured by the transition towards a demand pattern that was not expansive and that became increasingly oriented towards those products for which the advantages of large-scale retailing were strongest.

The article is organised as follows. The next section provides a review of literature that places the food chain approach within a broader historiographical focus on the conditional causality of the retailing revolution. The basic elements of Spain's retailing revolution are presented next. After having identified dairy products as one of the major carriers of the revolution, the following two sections discuss the role of vertical connections. The influence of transformations (or of the lack of them) in dairy processing and the impact of changes in consumer demand are analysed separately. The conclusions provide a summary of the case-based argument and reflect upon the broader implications of a food chain perspective for the historical study of the retail sector.

Literature review

The literature presents the retailing revolution as a process of evolution, diffusion and assimilation of a novel business model. During the interwar period, the first self-service grocery shops and supermarket chains were created in the US.[4] In the decades after the Second World War, this business model not only expanded within the US, but also began to significantly spread to other parts of the developed world such as, for instance, Britain and France.[5] Somewhat later, and on the basis of a stronger contribution from foreign capital, supermarkets also began to penetrate the markets of more backward European economies, such as those in the Mediterranean.[6] Finally, during the period after 1990 there has been an unprecedented acceleration in the retailing revolution as a result of the rise of supermarkets in Eastern Europe, Latin America and India.[7] In nearly all cases, the spread of the new business model was based on some combination of foreign and domestic impulses, as well as on an adaptation of the model's hard core principles to local specificities.

Both the historians dealing with the early stages of this sequence and the present-oriented social scientists dealing with the later stages of it agree that scale economies were crucial. Because they operate on a larger scale than small, specialised retailers, supermarkets have been able to work with lower unit costs. This in turn has allowed them to exert a stronger downward pressure on consumer prices, which has attracted buyers and threatened the viability of smaller-scale retailing. Virtually every account of the retailing revolution includes some acknowledgement of this process.

Pure scale economies, however, have been viewed as only one part of the story. Both historical and present-oriented research has stressed that supermarkets have implemented new logistic strategies (based on integrated systems of information) in order to create their own procurement centrals and their own brands. This way they have come to absorb profit niches that were previously controlled by wholesalers and processors.[8] In other words, scale has allowed supermarkets not only to move into more advantageous areas within a given cost structure, but also (and perhaps more importantly) to shift to cost structures that are essentially different to those prevailing in other retail formats.[9]

Together with these endogenous factors, scholars have also paid considerable (and, perhaps, increasing) attention to the broader set of exogenous factors that condition the advance of supermarkets over other retail formats. This is a search for what we might label as the 'conditional causality' of the retailing revolution.[10] For instance, comparative international research traces some sort of developmental pattern, according to which the aforementioned supply-side mechanisms become active only after the country has reached a certain threshold of income and urbanisation.[11] Political regulation, in turn, has shaped the domain over which the price advantages of supermarkets could become effective. In France or Italy in the 1960s and 1970s, for instance, the pressure exerted by smaller retailers on local and State policymakers favoured the passing of restrictive urban planning legislation that slowed down supermarket expansion.[12] Finally, the rise of supermarkets has also been found to depend on its degree of fitness with household structures and practices. This includes female rates of activity, shopping and meal preparation styles, or the endowment of household appliances, to name a few. All across Europe in the post-1945 period, the pace of women's entry to the labour force conditioned the pace of supermarket advance because it had a major influence on the incentives to shift from multiple-stop to one-stop shopping practices. Furthermore, as has been found for the British case in particular, the centrality of food selection and preparation in the definition of (what was by then thought of as) a good housewife acted as an obstacle to the rise of supermarkets in product groups such as fresh meat, fruits and vegetables.[13] Analogously, the expansion of supermarkets in present day India has been said to be conditioned by their interaction with pre-existing, deeply rooted practices of shopping and consumption among the country's middle classes.[14]

A striking bias in the available literature, however, is that it tends to analyse the rise of supermarkets as a homogeneous process – that is, not considering differences among product groups. Of course, factors such as economic growth, urbanisation, urban planning legislation and household structures have exerted a transversal influence across product groups and, therefore, they have contributed to fostering the retailing revolution in an integral way. However, the rise of supermarkets everywhere took place in a heterogeneous way according to product groups.[15] In fact, supermarkets have often concentrated their early efforts on very specific products, in the hope that these would eventually become a hook that would attract new consumers to one-stop shopping practices comprising a much wider set of products.[16] As a result, what in retrospect might be seen as a transition to one-stop shopping led by wide-ranging, transversal social changes may have been to a larger extent a sequential, path-dependent process in which product-specific factors were at play.

That is why the historical analysis of the retailing revolution may benefit from establishing a link to the literature on food chains. The latter is by no means uniform, and includes strands as diverse as the economics of agribusiness, the economics of the food system, commodity chain analysis, food regime analysis or the systems of provision approach.[17] What ties these strands together, though, is a vision of the food system as a set of interrelated activities ranging from farming to consumption. The trajectory of the system would be patterned by the reproduction of the vertical connections that link those different activities. This is a perspective that historians of agriculture and the food sector are increasingly turning to, but also one with which the historical literature on retailing has had little contact so far.[18]

Seen from this perspective, retailing is to be seen as a node within a longer chain that (among others) includes farmers, processors, wholesalers and consumers. In consequence, the structures prevailing in these other nodes, as well as the transformations taking place in such structures, can be expected to condition the evolution of business models in the retail sector. Some of the work that has been done by retail historians on consumer and shopper perceptions may be inserted within this perspective, but further additional work is needed both downstream and upstream in order to study factors such as the structural evolution of demand patterns and business dynamics in processing and farming.[19] Because these factors are likely to be very heterogeneous among the different food chains, there is a case for focusing on specific product groups in order to enrich the picture provided by transversal, integrated analysis.

Retailing, socioeconomic change and the food system in Spain since the 1960s

The case of Spain may be interesting for a broader history of the retailing revolution because of its intermediate position within the latter's chronology. On the one hand, the Spanish case shows the usual traits of a backward economy in which the retailing revolution results from the diffusion of a business model that had been previously implemented in more advanced economies; a process of diffusion, additionally, in which foreign direct investment, coming precisely from some of those more advanced economies, plays an important part. These traits make Spain a case that is comparable to those of the other 'imported' retailing revolutions that started later in Eastern Europe, Latin America or India. But, on the other hand, the fact that changes unfolded earlier in Spain than in these other cases allows us to study a retailing revolution that today is already completed (or, at least, beyond some sort of consolidation threshold). This is in contrast to those cases in which the transformation of the retail sector is still under way and in which a more definitive analysis will require some more temporal perspective.[20]

Three distinct moments can be traced in the history of Spain's retailing revolution: the situation around 1960, before the revolution; the period 1960–1990, an early stage of the revolution featuring the formation of the main supermarket chains and a slow, uneven expansion of their business model; and, finally, the period from 1990 onwards, which has witnessed the consolidation of that model over other alternative formats.

Before the retailing revolution

From the late 1950s onwards supermarkets and self-service shops began to surface in Spain's main cities. The first supermarket was created in Madrid in 1957 as a direct outcome of State policy. Francisco Franco's regime, willing to contain inflationary pressure in the food market, actively supported the new format.[21] This germ of the retailing revolution, however, was far from rapidly dominating the Spanish food market. The data available for the early 1960s, for instance, reveal a clear dominance of small shops (Table 1), most of them based on family capital and management, local connections and counter service. In addition, a variety of what we might call 'alternative networks' of food provision, such as on-farm sales by farmers, door-to-door sales by itinerant sellers and self-consumption, held by then a market share that was larger than that of the emerging supermarkets.[22]

Table 1. Percentage shares in Spain's food market (%).

	1963	1988	2000	2010
Small retailers [a]	65	36	19	17
Large retailers [b]	7	23	34	43
Alternative networks [c]	17	8	4	6
Consumption outside the home [d]	12	34	43	35

Notes: [a]Traditional (unspecialized) shops and specialized shops (bakery, butcher, dairy, fish, fruit and vegetables, pharmacies, wine);
[b]Supermarkets (both conventional and discounters) and hypermarkets;
[c]Company shops, small cooperatives, door-to-door sales, farm-gate transactions, self-consumption and all other channels for home consumption;
[d]Restaurants, bars, cafeterias, canteens and institutions.
Sources: 1963: Maixé-Altés, "Modernización de la distribución", 145, corrected with self-consumption estimates derived from INE, *Encuesta de presupuestos familiares*; rest of dates: MAPA, *Consumo alimentario* and *Alimentación*; Mercasa, *Alimentación*; www.magrama.es. For consumption outside the home, input prices were transformed into output prices by applying the profit rates in Banco de España, *Boletín* (2013 and 2014). The transformation of current per capita figures into constant aggregate figures was based on Maluquer de Motes, "Crecimiento moderno", for population, and INE (www.ine.es), for inflation.

This was consistent with the state of those socioeconomic variables that the literature identifies as conditioning factors of the progress of the retailing revolution. Spain was a backward European economy in which a remarkable share (around 45%) of the population remained rural.[23] Furthermore, household structures were not propitious for a rapid rise of supermarkets. The female rate of activity was only 15%, so that in most households there was not a strong pressure for reducing the time devoted to selecting and buying food.[24]

The situation in the food system was not propitious either. Food consumption and expenditure were low by European standards, and the nutritional transition that would eventually lead to abundant intakes and diversified diets was far from over. Those foods with a lower cost per calorie, such as cereals, potatoes and legumes, still dominated the diet.[25] The supply chain, in turn, was rather weak. Even though some innovation and growth had been taking place in both agriculture and food processing since at least the early twentieth century (with the years of the Spanish Civil War of 1936-39 and 1940s post-war period as an exception), by 1960 the degree of integration between both industries was low in most chains.[26]

The early stage of supermarket expansion

Spanish economy and society underwent deep transformations between approximately 1960 and 1990. Income grew fast between 1959 and 1975, when Spain took part in Western Europe's so-called golden age of economic growth, and in the latter part of the 1980s, after the country's incorporation to the European Economic Community.[27] In addition, there was some reduction in income inequality and rural-urban migration boomed, both of which favoured the making of a mass, urban-centred consumer society.[28] Finally, the female rate of activity increased, partly following the cultural changes brought about by the end of the strongly male-centred Franco dictatorship in 1975.[29]

The Spanish food system was involved in this set of crucial transformations. On the demand side, the nutritional transition was completed. There was a rapid rise in food intake and a shift to livestock-origin products such as meat, dairy products and eggs.[30] With some lag in relation to the Western European norm, the consumption of processed foods became massive and spread across all social groups. Most of these new demands were supplied by the country's rapidly-growing processing industry. For Spanish processors, this was a time of major technological upgrading and increasing influence upon farmers' production decisions.[31]

This was the broader context in which the first stage of the retailing revolution took place.[32] In the 1960s, the creation of the Simago chain of supermarkets and the incorporation of an increasing number of small retailers to the cooperative buying groups of Belgium-based Spar led the transition to the new business model. Spanish historians, however, agree that it was in the early 1970s when the retailing revolution really took off. French capital was crucial for this: Carrefour was the first mover, and Auchan and Promodès would soon follow. For these French firms, an important attraction of the Spanish market (and one that contrasted sharply with the situation at the home market) was the absence of restrictive regulations on land use planning or competition protection.

Carrefour, Auchan and Promodès, as well as emerging Spanish supermarkets such as El Corte Inglés-Hipercor, Eroski and Mercadona, spread over an ever larger number of (large- and medium-sized) cities in each of the country's regions. Yet, supermarkets were far from dominating the food market. Whereas in Britain and France, for example, the market share of supermarkets had surpassed that of smaller retailers in the 1970s, in Spain small retailers still retained a market share larger than that of supermarkets even into the late 1980s.[33] Most of the advances made by Spanish supermarkets concentrated on dairy products, oils and fats, and legumes (Table 2). In contrast, still by the late 1980s small retailers were clearly dominant in areas as crucial as vegetables, fruits, fish, meat and cereals. In short, the retailing revolution had started, but was far from completion.

Supermarket hegemony

It is mostly during the last 25 years when large retailers have become truly dominant.[34] Competition between them intensified following the entry of hard discounters, such as Germany-based Lidl, in the 1990s. Supermarket chains have since implemented two major strategies in order to remain competitive. First, they have tried to increase their scale by means of acquisitions and mergers. The most important of these was led by Carrefour in 2000, when it bought both the hard discounter Dia and Promodès' Spanish supermarkets. As a result, Carrefour became (even if for a short time) the largest retailer operating in Spain.

Table 2. Market share of large retailers (%).

	1988	2000	2010
Dairy products	43	62	68
Oils and fats	44	57	65
Legumes	39	48	58
Sugar products	n.a.	42	48
Ready-made meals	n.a.	64	47
Cereals	21	37	45
Eggs	24	32	43
Meat products	20	35	43
Fish	13	30	39
Fruits	21	42	39
Non-alcoholic drinks	37	26	36
Vegetables	17	41	34
Alcoholic drinks	7	12	16

Sources: see table 1.

A second strategy has been to become more fully involved in supply chain management. By means of supply chain management, supermarkets have sought to exert a more active role in the coordination of the production decisions of those processors and farmers linked to them. In exchange for relatively stable collaboration partnerships, supermarkets have strengthened their position in the definition of prices, payment conditions and quality standards. An important consequence has been an augmented capacity for positioning and marketing own brand products. By far the largest, Mercadona has come to lead the way in this field, which has allowed it to surpass Carrefour and become the biggest-selling retailer for more than a decade now.

During the 1990s and 2000s, one result of the heightened competition between conventional supermarkets, hypermarkets and hard discounters was the marginalisation of smaller retailers. Even in the latter's traditional areas of resistance, such as cereals, fruits, vegetables or meat, large retailers gained a market share higher than that of smaller ones. The main counterweight to the rise of large retailers was not, in fact, some sort of reformulated small-scale format focused on high-quality niches, but the remarkable share of food expenditure that became generated by bars, restaurants and other food service outlets.[35] However, the economic crisis that started in 2008 has led to a decrease in food expenditure outside the home, which has led to the market share of large retailers reaching today an all-time peak (see Table 1).

The consolidation of the retailing revolution was parallel to the consolidation of the important socioeconomic changes alluded to earlier. Spain had become a middle-high-income country, and it even experienced remarkable growth in the years from 1994 to 2007.[36] Increasing female activity kept on providing incentives for a shift to time-saving shopping styles.[37] On the other hand, rural-urban migration gave way to counter-urbanisation, which led to more and more middle-class households settling further away from the traditional urban networks of specialised small shops.[38]

The food system entered a new phase as well in the last years of the twentieth century. Signs of consumer satiation began to appear, and food intake grew much less rapidly than in the past. Underneath this apparent stability, however, there was a widespread renovation in the types and varieties of food products consumed, with a particular focus on highly processed foods and service foods that allowed for a reduction in domestic preparation time.[39] This went hand in hand with output diversification in the processing industry, whose innovation pursuits became more product-oriented than in the previous period.[40]

Dairy products and supermarket expansion

Throughout all of the period for which evidence is available (that is, from the late 1980s onwards), dairy products have persistently ranked second in the breakdown of supermarket food sales according to product groups. Only meat has been a more important source of income for supermarkets, and always by a very narrow margin. But, whereas meat was (and, to a lesser extent, remains) one of the areas of resistance of smaller retailers, the degree of supermarket specialisation in dairy products has always been much higher than in the case of meat (Table 3). A comparable degree of penetration can only be found for fats and oils, but in this case with a much lower share within total supermarket sales (Figures 1 and 2). In short, dairy products were central in the unfolding of Spain's retailing revolution.

Table 3. Top 3 products in supermarket sales in 1988 and 2010: percentage share in supermarket sales (A) and supermarket specialisation (B).

1988			2010		
Top 3	(A)	(B)	Top 3	(A)	(B)
Meat products	26	0.91	Meat products	21	1.03
Dairy products	22	1.96	Dairy products	17	1.61
Cereals	10	0.97	Fish	11	0.93

Notes: [a](A) = $(S_i / S_T) * 100$, where S_i is supermarket sales of product *i* and S_T is supermarket sales of all food products;
[b](B) = $((S_i / S_T) / (T_i / T_T))$, where S_i is supermarket sales of product *i*, S_T is supermarket sales of all products, T_i is aggregate sales (all retail formats) of product *i* and T_T is aggregate sales (all retail formats) of all food products.
Sources: see table 1.

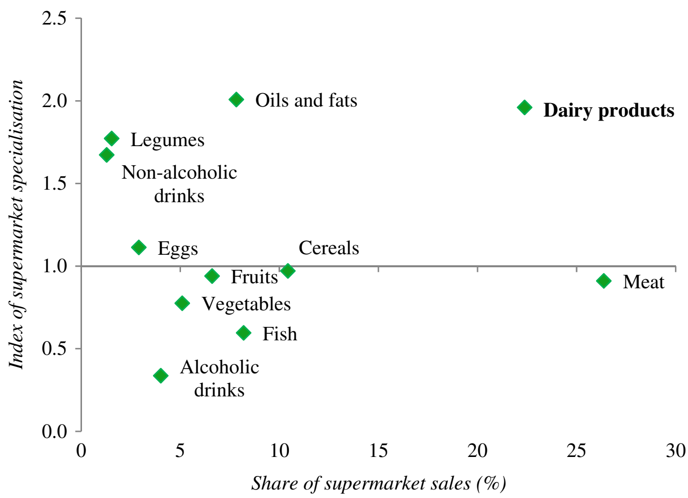

Figure 1. *Share of supermarket sales and supermarket specialisation by product groups, 1988.*
Source: see table 1.

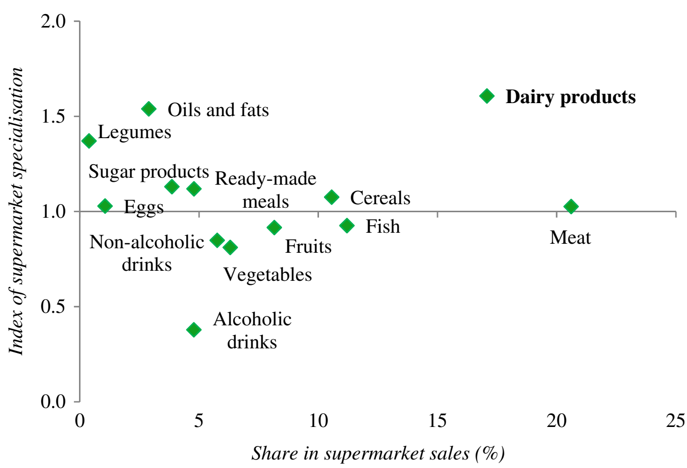

Figure 2. *Share of supermarket sales and supermarket specialisation by product groups, 2010.*
Source: see table 1.

Table 4. Percentage shares in Spain's dairy market.

	1988	2000	2008	2013
Small retailers	25	7	4	4
Large retailers	44	62	64	71
Alternative networks	12	4	4	4
Consumption outside home	19	28	27	21

Sources: see table 1.

Table 5. Market share of large retailers (%).

	1988	2000	2013
All dairy products	44	62	71
Liquid milk	42	67	74
Preserved milk	49	55	43
Cheese	43	56	60
Yoghurt and other fermented milk	60	76	87
Butter	23	50	43
Other dairy products	37		70

Sources: see table 1. "Other dairy products" includes mostly shakes, ice creams and refrigerated desserts other than fermented milk.

Still in the early 1960s, consumers accessed milk through a variety of channels, among which supermarkets played a marginal part. Small urban shops were important in the retailing of both pasteurised and raw, unprocessed milk. In addition, many consumers bought raw milk (which was by then more widespread than processed milk) within highly decentralised, alternative networks such as on-farm sale by farmers (both in rural areas and on the outskirts of cities), door-to-door sales by middlemen (or farm-related populations) and self-consumption, the latter accounting for as much as nearly 20% of Spanish milk consumption.[41]

Half a century later, the situation has changed radically. Instead of a variety of formats, we find a large majority of sales being absorbed by supermarkets (Table 4). Both smaller outlets and alternative networks are (very close to) irrelevant, while restaurants, bars and other food service operators hold a market share that is not only modest, but also declining in the last few years. Supermarkets are particularly powerful in the most important dairy products (milk, cheese, yoghurt and other refrigerated desserts), and only moderately less in rather marginal products (such as butter or preserved milk) (Table 5).

Because the available statistical sources do not give product-disaggregated information prior to 1988, one has to speculate about the longer-run chronology of this profound transformation. Change took place earlier than in most chains of the Spanish food system: in 1988 large retailers were already dominant, even if the market shares of small retailers, alternative networks and food service outlets were by then far from irrelevant. However, had similar information been available for just one decade earlier, the resulting image would have surely been different. We would have certainly found supermarkets on the rise (especially in the country's largest cities), but, considering that by 1980 raw milk still made up for around 40% of total milk consumption, we would have also found that alternative networks retained much of their traditional vitality.[42] In other words, the retailing revolution in the dairy chain may have started in the 1970s, but much of its critical progress was concentrated in the 1980s and 1990s.

This means that the process unfolded some ten years later than in France, where large retailers started to significantly displace small shops in the 1960s, or in Switzerland and the Netherlands, where it was also in the 1960s when supermarkets began to control substantial areas of a market that national dairy policies had until then reserved for highly organised systems of home delivery and/or specialised shops with a specific license for the sale of milk.[43] On the other hand, Spanish transformations may have taken place earlier than comparable ones in the UK, where the rise of supermarkets did not gain momentum until in the 1990s the government dismantled the system of political economy that the Milk Marketing Boards had been coordinating since the 1930s and that had traditionally favoured home delivery.[44]

The following two sections examine the ways in which the rise of supermarkets was conditioned by developments in the broader dairy chain. We will consider the role played by the upstream connection with processors, and we will later move to the role played by the downstream connection with consumers.

The upstream connection

In the early part of our period, a major obstacle in the way of supermarkets was the weakness of Spain's processed milk industry, which in turn led to most of the milk consumed in the country being raw milk. It was not until the 1970s that processed milk started to dominate the market, and even so raw milk still held a market share as high as 39% in 1980. In other words, even though the move towards mass milk consumption in the 1960s and 1970s was mostly driven by processed milk, the contribution of raw milk was far from insignificant.[45]

The size of the raw milk market erected a barrier that was difficult for conventional retailers, and large ones in particular, to overcome (Table 6). The 1952 legislation had forbidden the raw milk trade, but only there where State-sponsored local monopolies were successful at supplying populations with pasteurised milk. Because this applied to large cities only, the alternative networks for the sale of raw milk were perfectly legal in smaller cities and in the countryside, which together accounted for more than half of Spain's population. And, even though supermarkets were originally located in large cities (and, therefore, their expansion was not terribly constrained by the situation in minor local markets), practical experience was soon to show that much urban door-to-door sale by farmers or middlemen was not to be clearly defined as illegal. The State's plans to foster the production of pasteurised milk were progressing so slowly in many of these cities that it was not evident that local authorities were legally forced to act against itinerant sellers. And, finally, even in those large cities where the State's plans were making reasonable progress, the resources devoted by the

Table 6. The raw milk market.

	c. 1950	1980	1988	2000
Share in total milk consumption (%)	96	39	25	4
Share in raw milk sales (%)				
Small retailers			19	33
Large retailers			1	6
Door-to-door sales			17	9
Farm-gate transactions			44	16
Self-consumption			16	36
Other			3	0

*Sources: c.*1950 and 1980: Collantes, "Evolución del consumo", 117; 1988 and 2000: MAPA, *Consumo alimentario* and *Alimentación*.

central administration and the local authorities were largely insufficient for systematically eradicating illegal door-to-door sales of raw milk.[46]

Alternative networks, fully specialised on raw milk, were able to supply milk at a price that was lower than that of conventional retailers, supermarkets included. The earliest systematic evidence available (for the late 1980s, when the raw milk trade was declining but still made up for more than one fourth of the market) reveals that alternative networks were selling their milk at a price that was around 20% lower than that of supermarkets.[47] A wide array of qualitative, contemporary testimonies suggests that this had been the case from (at least) several decades earlier on.[48] This does not mean, however, that alternative networks did not suffer from shortcomings of their own.[49] The chain linking dairy farmers to milk consumers was very opaque, and milk often reached the end of the chain in a deteriorated condition. Furthermore, fraud (for instance, adding water to the milk) was widespread. In other words, alternative networks resembled more those in the UK or Switzerland in the late nineteenth or early twentieth century than the home delivery systems prevailing in those countries at the time.[50] A structural analysis of the responsiveness of milk consumption to changes in income and prices suggests that, at least since the late 1950s, consumers were willing to pay a price premium in order to avoid the inconveniences of raw milk.[51]

Both for consumers wanting to drink processed milk and for supermarkets wanting to increase their market share, the problem was located upstream: Spain's processed milk industry did not seem to be able to take off. It is true that as early as the 1920s new companies started to pasteurise milk for the supply of the country's largest cities, but in aggregate terms they had remained marginal.[52] Moreover, the Civil War and the long post-war period of the 1940s imposed a halt in Spain's industrialisation, and the processed milk industry was not an exception. The adoption of an autarkic policy by the Franco regime made it substantially more difficult to import technology-intensive inputs (for instance, pasteurisation machinery) for which domestic substitutes were not readily available.[53]

In 1952 the State implemented a new dairy policy oriented towards promoting a regular and sufficient supply of pasteurised milk in urban areas.[54] The new policy was based on the concession of local monopolies for the production of pasteurised milk and the fixing of transference prices all along the chain connecting farmers, processors and retailers. During its first 15 years, this policy, however, failed. Local monopolists soon discovered that the prices fixed by the State implied too low profit rates and, therefore, too long periods for the amortization of their start-up investments in plant building and machinery. In addition, machinery sourcing remained subject to great uncertainty as a result of the widespread presence of non-tariff barriers in Spain's protectionism. Therefore, investment in the processed milk industry progressed little during the 1950s and much of the 1960s.

The processed milk industry only took off after the policy environment was made more flexible in the mid-1960s. At a time of accelerated income growth and mass consumption, a more profit-friendly price policy and a less extreme version of protectionism stimulated investment. In fact, many of the leading firms of Spain's dairy processing industry became specialised in liquid milk, and not (as it had been the case since the early twentieth century) in the production of condensed or powdered milk.[55]

The rise of the processed milk industry eventually made it possible for conventional retailers, and supermarkets in particular, to rise as well. Especially in the 1980s, all supermarket chains identified UHT milk (a long-lasting variety of sterilised milk, with clear logistic advantages over the more delicate pasteurised milk) as a key product in their early expansion. In an attempt to attract consumers, supermarkets strongly privileged UHT milk when it came to allocating shelf space and implemented very aggressive price policies. Selling UHT milk at a price below its cost (a practice that Spanish laws would not forbid until 1996) actually became a widespread strategy – and largely a successful one.[56] These developments were possible only once the development of the processed milk industry was strong enough to marginalise the raw milk trade and the alternative networks associated to it.

The upstream connection has also been important in the later stage of the retailing revolution. During the 1980s, all major supermarket chains launched one or even two own brands in order to intensify the downward pressure on prices. Such brands were not initially very successful, especially as the degree of non-market coordination between retailers and processors remained low. Around the turn of the century, however, retailers followed a more active strategy of supply chain management that allowed them to exert a stronger influence on the decisions of retailer-brand producers. During the first decade of the twenty-first century, the price gap between retailer and processor brands grew from around 15% to 30%, while the market share of retailer-brand milk multiplied by a factor of more than two and rose beyond one third.[57] In other words, upstream developments have ceased to be an exogenous variable the state of which might become an obstacle for supermarket expansion and instead have become a variable that supermarkets strive to endogenise as a source of competitive advantage. Along the way, their traditional dependency in relation to processors has been subverted.

The downstream connection

Whereas most of the literature that has so far considered the downstream connection has focused on consumer behaviour as a potential obstacle to the rise of supermarkets, the case of dairy products in Spain goes in the opposite direction. Demand patterns tended to foster, rather than to hinder, the prevalence of supermarkets over the rest of retail formats.[58]

There have been two distinct phases in the evolution of the demand for dairy products in Spain since the 1950s (Figure 3). The first phase, approximately between 1960 and 1980, was very expansive. From 1980 onwards, however, the sales of dairy products have ceased to grow in a solid way. In fact, they fell during the 1980s and much of the 1990s, and have been falling since 2008; it is true that they grew in the decade prior to 2008, but more so due to population growth (stimulated by an exceptionally large inflow of foreign migrants) than to the evolution of per capita sales. The end of the phase of rapid and sustained expansion in the demand for dairy products created a propitious environment for the development of the rationalising tendencies that had been latent in the retailing sector since the 1970s. As has been argued by some Schumpeterian economists, the introduction of major innovations does not necessarily imply a rapid destruction of the (technological/organisational) pre-existing alternatives, especially in the context of economic expansion. The pressure for rationalisation (that is, for the concentration of resources in vanguard production units) will be stronger in posterior periods of stagnation or contraction.[59]

The fact that the demand for dairy products expanded so strongly until 1980 favoured the co-existence of large retailers, small retailers and alternative networks. In sharp contrast to the much more radical moves needed later (in the 1990s) by hard discounters to establish themselves in Spain, early supermarket chains were able to implement a strategy of gradual, slow expansion, which implied that smaller retailers and alternative networks could still

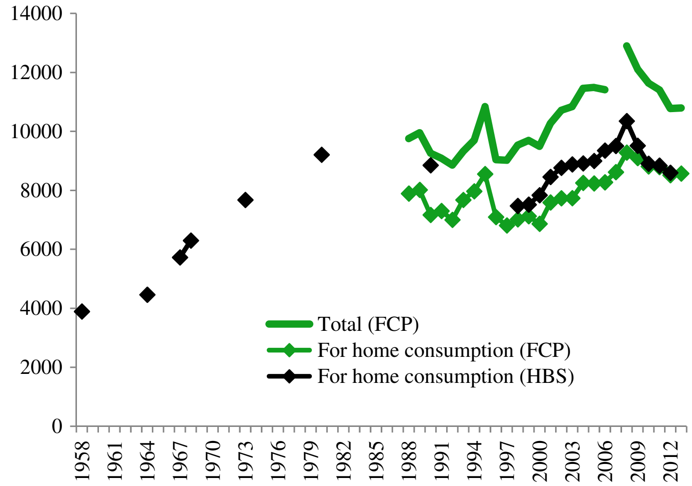

Figure 3. *Sales of dairy products (constant 2013 million euros).*
Sources: MAPA, *Consumo alimentario* and *Alimentación*; Mercasa, *Alimentación*; INE, *Encuesta sobre cuentas*, *Encuesta de presupuestos*, *Encuesta continua*, and www.ine.es. FCP: Food Consumption Panel; HBS: Household Budget Surveys.

retain geographical spaces and market niches that were (even if increasingly secondary) still remarkable.[60] On the contrary, in the context of a contractive demand, in the 1980s and 1990s the steady expansion of supermarkets led to a shrinking of the sales in small shops, which became close to expelled from the market (Table 7).

It was not a matter of the aggregate trend of demand only, but of its internal structure too (Table 8). Liquid milk had clearly been the central element of the pre-1980 expansion, but from the 1980s onwards other dairy products, such as cheese and refrigerated desserts, became the new engines of demand.[61] Today dairy products other than milk account for nearly 70% of total dairy sales, while sales of liquid milk have been declining in absolute terms since the 1980s (Figure 4).

This structural change contributed to accelerating the rise of supermarkets because price differentials between the latter and smaller retailers were even larger for the new engines of demand than for liquid milk. The price differential was highest for yoghurt and other refrigerated desserts (Table 9), an area in which supermarkets combined the use of cold chain technologies with an integrated management of warehouses, shelves and checkout counters. This allowed them not only to exert a stronger downward pressure on consumer prices, but also to manage in a more competent way a set of procurement (or, in the case of own brands, induced production) decisions that were more complex than in the case of milk.

Table 7. Compound annual rate of change in sales of dairy products (%).

	1988-2000	2000-2008	2008-2013
Small retailers	−11.5	−1.1	−6.1
Large retailers	5.3	4.8	−2.5
Consumption outside the home	4.7	4.1	−9.3
All formats	−0.2	3.9	−3.5

Sources: see table 1. "Total" includes alternative networks as defined in table 1.

Table 8. Breakdown of consumer expenditure (%) according to product types and place of consumption.

	1958	1973	1988	2000	2013
Milk	79 [a]	73 [a]	54	42	31
All other dairy products	21 [a]	27 [a]	46	58	69
At home	n.a.	n.a.	81	72	79
Outside the home	n.a.	n.a.	19	28	21

Note: [a]Domestic consumption only.
Fuente: 1958: INE, *Encuesta sobre cuentas familiares*; 1973: INE, *Encuesta de presupuestos familiares*; 1988 and 2000: MAPA, *Consumo alimentario* and *Alimentación*; 2013: Mercasa, *Alimentación*; www.magrama.es

Table 9. Price differentials (%) of small retailers in relation to large retailers.

	1988	2000	2008	2013
Liquid milk	+3.2	+12.0	+18.5	+27.4
Cheese	+3.1	+17.4	+31.4	+38.6
Yoghurt and other fermented milk	+13.7	+28.7	+40.8	+57.0
Other dairy products	+11.7	+52.7	+55.3	+61.8

Sources: see table 1.

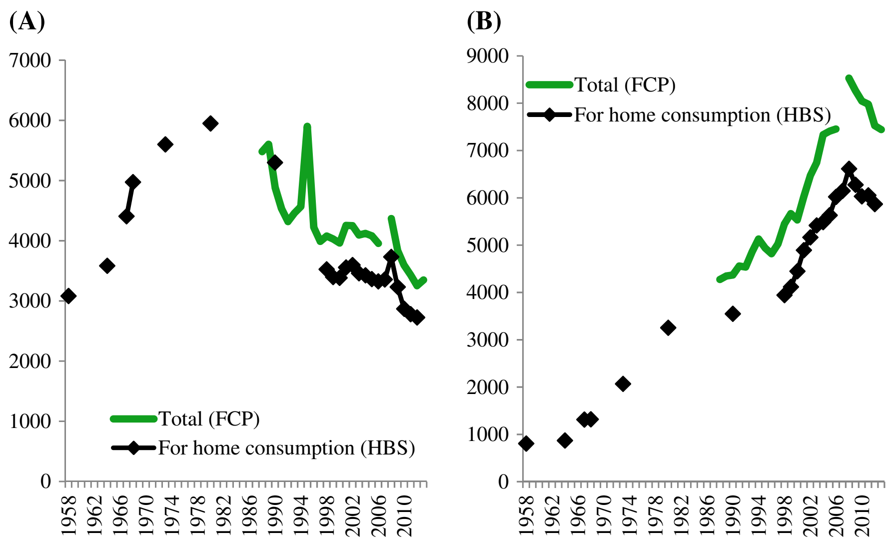

Figure 4. *Sales of milk (A) and other dairy products (B) (constant 2013 million euros).*
Sources: see figure 3.

Such complexity stemmed from the extraordinary surge that was taking place in product innovation, moving from (for instance) natural yoghurts to flavoured yoghurts or yoghurts with fruit bits, and later to fat-free versions and milk fermented with probiotics – all with high levels of product differentiation and heterogeneous quality-price ratios.[62]

Even in the area of processed milk, consumers' gradual identification of milk to UHT milk was favourable to supermarkets. In the 1970s, the consumption of sterilised milk began to prevail over that of pasteurised milk, and by the 1990s pasteurised milk had nearly disappeared. Pasteurised milk was a commodity with a shorter, and necessarily refrigerated, life, which made it more similar to what would become the areas of resistance of smaller retailers (such as fruits, vegetables, meat or fish). In fact, the data available for the late 1980s (a late date, but one in which the market share of pasteurised milk had not yet become insignificant) show that the price advantage of supermarkets over small shops was greater for UHT milk than it was for pasteurised milk; for pasteurised milk there was actually almost no price differential at all.[63] It comes therefore as no surprise that supermarkets privileged UHT milk in the distribution of shelf space, aggressive pricing and the launching of own brands. What deserves highlighting is that these manoeuvres were endorsed by consumers. Contrary to other countries (such as the UK or the US) where consumers have to this day remained uninterested in UHT milk, Spanish consumers did not resist the gradual demise of a tastier product such as pasteurised milk.[64] They rather seem to have prized the advantages of UHT milk in terms of decreasing shopping frequency and favouring a transition towards time-saving shopping styles.[65] This drove competition to the area where the advantages of supermarkets over small retailers were greatest. A stronger demand for pasteurised milk would not have prevented the rise of supermarkets (as the aforementioned Anglo-Saxon cases show), but it would have slowed down the destruction of the spaces of viability for smaller retailers.

Under these conditions, with small retailers and alternative networks virtually out of the business, the only counterweight to the rise of supermarkets could come from consumption outside the home. This is indeed what was happening in some other chains, such as drinks (both non-alcoholic and, even more so, alcoholic) and, more moderately, sugar and sweets. But consumption outside the home never ceased to be a modest part of total dairy consumption. Contrary to Anglo-Saxon countries, where in the central part of the twentieth century milk bars became popular, drinking liquid milk (on its own) in public places was never a part of consumer culture in Spain.[66] Only butter has had relevant shares of extra domestic consumption, but this is largely due to the extreme weakness of domestic consumption, which is in turn related to the historical prevalence of vegetal over animal fats in a Mediterranean-climate country.[67] Neither of the two main dairy products other than milk (cheese and refrigerated desserts) has won a truly relevant presence in food consumption outside the home, in particular as an option for the final dish in lunch or dinner.[68] Furthermore, the economic crisis that started in 2008 caused a sharp fall in dairy consumption outside the home.

Conclusion

The historical literature on the retailing revolution has so far paid much attention to the microeconomic strategies of supermarkets and to macro-scale socioeconomic changes (such as economic growth, urbanisation or rising female activity rates), but not to the mesoeconomic level of the food system. This has contributed to the available accounts approaching the rise of supermarkets as a single, homogeneous process, when it actually was a heterogeneous process across product groups. Incorporating the food system to the study of the retailing revolution, as this article has done, is a way of facing this empirical regularity and sharpening the analysis.

This article has focused on Spain, a country in which the retailing revolution took place later and in a more exogenous way than in most Western countries. The transition to self-service and the supermarket format did not start before the late 1950s; the transition did not gain momentum before the entry of foreign multinationals in the 1970s; and, in terms of market share, supermarkets were not able to overtake small retailers before the 1990s. Because of their relevance in both supermarket sales and supermarket strategies, dairy products were a central part of this story – and one that shows the analytical importance of developments in the broader food system.

The early expansion of supermarkets in the retailing of dairy products had to face the obstacle of the processed milk industry being too weak. This meant that the size of the raw milk market remained remarkable until the late twentieth century. And this was a market in which a variety of alternative networks, including urban sellers and on-farm sales, prevailed over conventional retailers. Only once the growth of Spain's processed milk industry began to push raw milk out of the consumer market did it become possible for supermarkets to implement strategies that would turn milk into one of the keys to their expansion, among them very aggressive price policies (including below-cost sales) and the launching of own brands.

On the other hand, the rise of supermarkets in the retailing of dairy products was also favoured by developments taking place downstream. The end of a long cycle of expansion in aggregate dairy consumption led to an intensification of competition between and within retail formats from the 1980s onwards, while the diversification of demand towards products other than milk (yoghurt and refrigerated desserts, in particular) made such competition focus on those areas in which supermarkets held particularly large price advantages. Finally, the unremarkable role played by extradomestic consumption also contributed to large retailers dominating the dairy market more profoundly than any other food market in Spain.

A broader implication of this case study is that the historical analysis of retailing would benefit from a fuller engagement with the issue of conditional causality. So far the literature has (implicitly) identified elements of conditional causality involved in the rise and fall of different business models, but has not (explicitly) conceptualised or systematised such elements. Few would dispute that writing the history of the retailing revolution requires writing not only about what retailers did (or did not), but also about the broader socioeconomic and cultural context in which retailing was taking place. So far, however, the study of such context has been driven mostly by logical intuitions or empirical suggestions. The next step may be, in line with the argument in this article, to systematise conditional causality by defining two distinct areas of analysis: first, general, transversal factors dependent on the trajectory of social change in a given country or region; and, second, factors that are specific to the food system and the various production-consumption chains that compose it. More realistic and precise explanations of the retailing revolution may be waiting at the end of that road.

Notes

1. Recent examples include Clifton, Comín and Diaz-Fuentes, "From National Monopoly"; Ryan, Trumbull and Tufano, "A Brief Postwar History"; and Alexander, "Past, Present and Future Directions". For the economic history perspective, see for instance Broadberry, *Market Services*.
2. See for instance McMichael and Friedmann, "Situating the 'Retailing Revolution'."
3. Lescent-Giles, "Rise of Supermarkets"; Lawrence and Burch, "Understanding Supermarkets"; Harvey, "The Rise of Supermarkets"; Malassis, *Les trois âges*. Throughout the article, and following the previously cited literature, the term "supermarket" is used a shorthand for large-scale retailers, including hypermarkets and supermarkets proper.
4. Tedlow, *New and Improved*.
5. Shaw, Curth and Alexander, "Selling Self-service"; Lescent-Giles, "The Rise of Supermarkets"; Lang and Barling, "Environmental Impact"; Godley and Williams, "The Chicken."
6. De Grazia, *Irresistible Empire*; Maixé-Altés and Castro, "Structural Change."
7. Reardon and Timmer, "The Rise of Supermarkets."

8. Lescent-Giles, "The Rise of Supermarkets"; Lawrence and Burch, "Understanding Supermarkets."
9. In theoretical terms, these two different mechanisms of competitive advantage would be associated to the seminal contributions by Young, "Increasing Returns", and Schumpeter, *Business Cycles*.
10. On conditional, as opposed (and still complementary) to, generative causality, see the theoretical elaboration by Lloyd, "Evolution Theory."
11. Reardon and Timmer, "The Rise of Supermarkets."
12. Lescent-Giles, "The Rise of Supermarkets"; De Grazia, *Irresistible Empire*.
13. Alexander, Phillips and Shaw, "Retail Innovation". More broadly, see the important role played by consumer perceptions and behaviour in Ekberg, "Confronting Three Revolutions", or Haupt, "Small Shops."
14. Neilson and Pritchard, "The Final Frontier?"
15. See Alexander et al., "Retail Innovation" for post-war Britain; Langreo and Germán, "El papel de la industria" for Spain; and Reardon and Timmer, "The Rise of Supermarkets" for developing economies today.
16. See for instance Moser and Brodbeck, *Du lait pour tous* for Switzerland; or Langreo, "Nuevas formas de distribución" for Spain.
17. The order reflects the chronological sequence of emergence of these strands. For pioneering contributions, see respectively Davis and Goldberg, *A Concept of Agribusiness*; Malassis, *Économie agroalimentaire*; Friedland, "Commodity System Analysis"; Friedmann and McMichael, "Agriculture and the State System"; Fine, *The World of consumption*. See Hamilton, "Analyzing Commodity Chains" for a recent review.
18. On the food chain perspective in agricultural and food history, see for instance Brassley, "Food Production"; Otter, "The British Nutrition Transition."
19. On shopper attitudes and behaviour, see Alexander et al., "Retail Innovation.
20. Compare for instance the necessarily tentative approach of Reardon and Timmer, "The Rise of Supermarkets", to the rounded historical picture provided by Maixé-Altés and Castro, "Structural Change."
21. Langreo and Germán, "El papel de la industria."
22. On the concept of alternative agri-food networks, see Goodman and Redclift, "Modernisation."
23. Prados de la Escosura, *El Progreso económico*; Collantes and Pinilla, *Peaceful Surrender*.
24. Nicolau, "Población."
25. Cussó, "Transición nutricional."
26. Abad and Naredo, "Sobre la 'modernización'."
27. Prados de la Escosura, *El Progreso económico*.
28. Alonso and Conde, *Historia del consumo*.
29. The female rate of activity rose from 13% in 1970 to 27% in 1991; Nicolau, "Población," 147.
30. Cussó, "Transición nutricional."
31. Juan, *La formación de la agroindustria*.
32. The following is based on Maixé-Altés, "La modernización"; Castro, "'Máquinas de vender'"; Maixé-Altés and Castro, "Structural Change"; Langreo, "Nuevas formas de distribucíon"; and Langreo and Germán, "El papel de la industria."
33. For comparable British and French figures, see respectively Lang and Barling, "The Environmental Impact"; and Lescent-Giles, "The Rise of Supermarkets."
34. The following is based on Langreo, "Nuevas formas de distribución"; Langreo and Germán, "El papel de la industria"; and Maixé-Altés and Castro, "Structural Change."
35. For a full study see Díaz Méndez and García, "La alimentación fuera del hogar."
36. See Maluquer de Motes, *La economía española*, for a complete macroeconomic picture of the period.
37. Langreo, "Nuevas formas de distribución." The female rate of activity increased from 27% in 1991 to 54% in 2015; Nicolau, "Población," 145, and INE (www.ine.es, "Encuesta de Población Activa").
38. Camarero, *Del éxodo rural*.
39. Díaz Méndez and Gómez Benito, "El consumo alimentario"; Collantes, "A la mesa con Malassis."
40. Langreo, "El sistema alimentario español"; Langreo and Germán, "El papel de la industria."

41. Calculated from INE, *Encuesta de presupuestos familiares*.
42. Collantes, "La evolución del consumo."
43. On France, Vatin, *L'industrie du lait*; and Pinard, "The Development of Cheese Consumption." On Switzerland and the Netherlands, see respectively Moser and Brodbeck, *Du lait pour tous*; and den Hartog, "Serving the Urban Consumer."
44. Atkins, *Liquid materialities*; Fenton, "Milk and Milk Products"; and Vernon, "Milk and Dairy Products."
45. Collantes, "Dairy Products".
46. Langreo, *Historia de la industria láctea*; "La leche."
47. Calculated from MAPA, *Consumo alimentario*.
48. This affirmation is based on an extensive reading of the professional journal *Revista Española de Lechería* in the 1950s and 1960s. As an illustration, see "Información" for a particularly sharp testimony.
49. The following is based on Collantes, "La evolución del consumo."
50. On Britain and Switzerland, see respectively Atkins, "The Retail Milk Trade" and *Liquid Materialities*; Moser and Brodbeck, *Du lait pour tous*.
51. Collantes, "Because They Just Don't Want To."
52. Hernández Adell, "La difusión"; Domínguez, "Industria láctea."
53. Langreo, *Historia de la industria láctea*; Domínguez, "Industria láctea."
54. The following is based on Langreo, *Historia de la industria láctea*.
55. Langreo, *Historia de la industria láctea*; Domínguez, "La industria láctea."
56. Cruz, Yagüe, Rebollo and Oubiña, "Concentración y competencia"; Langreo, "El sistema alimentario español" and *Historia de la industria láctea*. For a very similar supermarket strategy in Switzerland, see Moser and Brodbeck, *Du lait pour tous.*
57. On retailer-brand milk, see Serra and Puelles, "Las marcas"; Puelles and Puelles, "Marcas de distribuidor" and "Evolución."
58. Demand-side factors as obstacles for supermarket expansion, in Alexander et al., "Retail Innovation"; de Grazia, *Irresistible Empire*; Reardon and Timmer, "The Rise of Supermarkets"; or Neilson and Pritchard, "The Final Frontier?"
59. Schön, *An Economic History*.
60. On the contrast between the strategies of early supermarkets and those of hard discounters that entered the market later, see Castro, "'Máquinas de vender'."
61. Collantes, "Dairy Products."
62. Collantes, "Dairy Products."
63. Calculated from MAPA, *Consumo alimentario*.
64. Velten, *Milk*.
65. Collantes, "La evolución del consumo."
66. On milk bars, Valenze, *Milk*.
67. Cussó, "Transición nutricional."
68. Collantes, "Dairy Products."

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