

Was Spain different?

Agricultural change in Spain in a southern European perspective, 1961 to 1985*

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Abstract

'Spain is different' has often been a way of explaining some significant and distinctive Spanish characteristics. This expression can also be applied to the agrarian changes that took place in Spain between 1960 and 1985. While the general Western trend was for cultivated acreage to decline, the Spanish countryside experienced a great expansion. This paper identifies other differences between the Spanish and the more general southern European experience. These became evident in the 25 years before Spain joined the European Economic Community (EEC) in 1986 and have marked the path Spanish agriculture has taken ever since. Throughout this process, some of the distinctive features established under the Franco dictatorship continued to reinforce the peculiarities of the agrarian transformation in Spain. Here we focus on all those changes in an endeavour to assess whether agricultural change in Spain took a different course to that of other European countries.

The English expression, 'Spain is different', became very popular in Spain in the 1960s as a way of explaining why a western European country undergoing strong economic development continued to display a range of distinctive social characteristics (different meal times, the siesta and so on) which set it apart from the European mainstream. However, the route taken by Spanish economic growth was similar to that of most Western countries, including that of their agrarian sectors. Rural exodus, extensive mechanization and the impact of high yielding crops, among other factors, shaped not only Spanish agriculture, but also the agriculture of many other countries in Europe and elsewhere.

However, Spanish agrarian development differs in a number of respects from the general European trend. These distinctions emerged in the 25 years before Spain joined the European Economic Community (EEC) in 1986 and have marked the path Spanish agriculture has taken ever since. Moreover, some of those peculiarities were totally at odds with the direction the Spanish agrarian sector had taken before that time and were without parallel in otherwise similar southern European countries such as Italy, Portugal and Greece.

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TABLE 1. Southern Europe: area harvested in production crops, 1961–2 to 1984–5 (million ha)

	1961–2	1984–5	% change
France	13.716	14.181	3
Greece	2.677	2.449	–9
Italy	12.619	9.439	–25
Portugal	3.327	2.083	–37
Spain	14.140	16.083	14
Europe total	269.199	263.511	–2

Source: FAO statistical database.

One of the main differentiating aspects of Spanish agrarian development between 1960 and 1985 was a great expansion in acreage, which was exceptional, not only in the southern European context, but also in that of the entire continent. After the Second World War, acreage declined in most of the more developed countries of Europe and North America as a result of ‘emigration from the countryside, losses to urbanization and policies designed to curb overproduction by setting aside land’.¹ Between the early 1960s and 1985 the acreage under arable and tree crops (essentially olives and grapes) shrank both in Europe as a whole (including the USSR) and in the countries in the south of the continent. However, from 1961 onwards, the acreage under arable and tree crops in Spain saw constant growth, mainly as the result of a huge reduction in fallow. Spanish cropland grew by nearly 1.8 million hectares in less than 25 years. If we compare the acreage figures for Spain with those for Italy, the largest country in southern Europe, the difference is more marked. The area harvested in Spain rose by 14 per cent, whereas in Italy it fell by 25 per cent (Table 1).

Behind this important difference in the workings of the Spanish agrarian system lies a series of significant reforms made to its economic structure, which led to substantial alterations in acreage, production and food consumption in Spain after 1960. Many of those changes are striking owing to their magnitude when compared to their nearest neighbours, which raises the question of whether the events taking place in the Spanish agrarian sector between 1960 and 1985 really were different.

After a detailed examination of the components of the great Spanish acreage expansion, we will focus on the most distinctive changes in Spanish agriculture between 1961 and 1985 (the year before Spain joined the EEC) by comparing its statistics with those of three other southern European countries (Greece, Italy and Portugal) and France. This will be done by using the data available in the FAO Statistical Database on-line (FAOSTAT).² We will also provide data from a range of sources when referring to Spain alone. Our aim is to assess the main changes in the Spanish agrarian sector between 1961 and 1985 in a southern European context, and to offer a number of explanations for them. Finally, we will assess the degree to which these changes continue to the present day.

¹ G. Federico, *Feeding the world. An economic history of agriculture, 1800–2000* (2005), p. 38.

² <http://faostat.fao.org>.

TABLE 2. Southern Europe: acreage change in cereals and pulses, 1961–2 to 1984–5
(1000 ha of area harvested)

	<i>Cereals</i>			<i>Pulses</i>		
	<i>1961–2</i>	<i>1984–5</i>	<i>% change</i>	<i>1961–2</i>	<i>1984–5</i>	<i>% change</i>
France	9.274	9.712	5	148	242	63
Greece	1.773	1.489	–16	260	46	–82
Italy	6.437	4.948	–23	1.071	202	–81
Portugal	1.890	972	–49	577	256	–56
Spain	7.091	7.590	7	1.112	418	–62

Source: Calculated from FAO statistical database.

I

To understand what lay behind the growth of cultivated acreage experienced by Spain, a detailed study of the composition of the arable land of the southern European countries is required. Table 2 reveals two main crops, cereals and pulses, as being responsible for the decline in acreage in Italy and Portugal. In France both cereals and pulses increased in acreage, while other crops, particularly starchy roots, tubers and fruits, experienced a more profound decline. Spain presents a mixed situation, with a significant fall in pulses, but with an increase in acreage under cereal crops of close to half a million hectares. This is more striking given that it had decreased by more than a million hectares between 1935 (just before the Civil War) and 1960.

Apart from a greater increase in cereals, Spain shows another difference: the expansion of the area devoted to oil crops. While Spanish acreage expansion in oil crops and oil cakes for the 1961–85 period exceeds that of France by more than half a million ha (1,684,000 ha versus 1,138,000 ha), the difference compared to Italy is above 1.5 million ha. Consequently, only two types of crops (cereals and oil crops) explain the increase in acreage in Spain between 1961 and 1985. But when we break this down to the level of specific crops, we can observe that there were essentially two crops that determined the dynamics of the sector.

The first and more important of these was barley. At the beginning of the 1960s most Spanish grain land was devoted to wheat; in terms of acreage, it accounted for 56 per cent of all cereals (34 per cent of all arable and tree crops), with an acreage that was more than 2.5 times greater than that devoted to barley. Yet, less than 25 years later, the area under barley far exceeded that of wheat with an impressive expansion of more than 2.5 million ha, accounting for 56 per cent of all cereals (32 per cent of all arable and tree crops), as shown in Table 3.

This remarkable expansion in Spanish barley acreage is even more unusual if we consider the improvement in wheat yields. Starting with a yield of 0.0884 Tonnes/ha, which was even below that of barley, and an area harvested of 3,890,000 hectares in 1961, wheat productivity had overtaken that of barley by 1985 (2.608 Tonnes/ha v. 2.519) but 1.8 million hectares less land was devoted to wheat. Thus, wheat showed the intensive growth frequently associated with the agrarian period that began after the Second World War, while barley combined this with an

TABLE 3. Spain: area harvested, wheat, barley and other cereals, 1961–2 and 1984–5 (thousand ha)

	1961–2		1984–5		% change, 1961–2 to 1984–5
	ha	%	ha	%	
Wheat	4.077	57	2.043	27	–50
Barley	1.450	20	4.134	54	185
Other cereals ^a	1.564	22	1.416	19	–9
Total	7.091	100	7.593	100	7

Note: ^a other cereals include rice (milled equivalent), rye, maize, oats, millet, sorghum and other minor cereals not specified.

Source: Calculated from FAO statistical database.

TABLE 4. Southern Europe: composition of cereal output (per cent), 1961–62 and 1984–85 by volume

	Wheat			Barley			Maize		
	1961	1985	% change	1961	1985	% change	1961	1985	% change
France	51.3	54.3	3	24.8	20.2	–5	9.5	20.1	11
Greece	68.9	40.5	–28	10.0	13.1	3	10.3	42.8	33
Italy	63.8	49.7	–14	2.0	8.7	7	25.8	35.0	9
Portugal	30.2	29.8	0	3.7	4.9	1	44.4	41.3	–3
Spain	50.0	25.4	–25	23.7	44.8	21	12.0	13.3	1

Source: calculated from FAO statistical database.

outstanding growth in the area cultivated, which had even more impact on the expansion of output than the increase in land productivity. If the barley yield is held constant, the growth in hectares explains 44.6 per cent of the expansion in output between 1961 and 1985, whereas the improvement in land productivity (holding the 1961 extent constant) only accounts for 25.1 per cent of the total barley produced in Spain during the same period.

In terms of output, the leading role of barley marks another difference between Spain and the other four countries. A closer look at the composition of cereal output reveals the peculiarity of the Spanish case. At the beginning of the 1960s the composition of the grain grown in Spain was quite similar to that in France, with wheat to the fore and barley in second place, more than 25 per cent behind (Table 4). By the mid-1980s barley had become the leading cereal in Spain with 44.8 per cent of production by weight, a situation not seen in any other southern European country. Moreover, the impressive increase in barley output (433 per cent) accounted for 56 per cent of all of Spain's growth in grain production during the 1961–85 period. Spain's cereal expansion was the largest (183 per cent) of all five countries. In fact, barley itself accounted for a quarter of the entire increase in arable and tree crop output in Spain between those two dates.

No other arable or tree crop could match the increase in barley acreage and output in Spain. For example, the noteworthy expansion in the area under maize was only around 80,000 ha.

TABLE 5. Southern Europe: sunflower seed, by area harvested, 1961–85 (ha)

	1961	1985	% change
France	7,144	638,500	8,831
Greece	6,994	57,770	726
Italy	3,170	97,474	2,975
Portugal	2,098 ^a	39,620	1,788
Spain	3,300	988,575	29,856

Note: ^a Data for 1971. FAOSTAT does not record data for earlier years.

Source: calculated from FAO statistical database.

Based on irrigation and hybrid varieties, the maize yield grew at a higher rate than that of barley, nearly matching the figures for France (and not far off those for Italy) in 1985. Such intensive growth produced a 220 per cent increase in output, little more than half the rate observed for Spanish barley. As we explain later, environmental conditions were influential in the different experiences of barley and maize in Spain. Such conditions were behind the second big Spanish crop to experience an acreage increase: sunflower seed. As mentioned, oil crops are the second major distinctive feature of Spanish acreage growth. At the beginning of the 1960s the total area harvested for sunflower seed amounted to 3300 ha, on a par with Italy and around half the area under sunflowers in both Greece and France. From that moment on, the area under sunflower seed crops grew quickly, reaching 988,500 ha in 1985. No other country had seen such an increase in acreage, not even France, where total sunflower seed production was higher (Table 5). Again, the increase in Spanish sunflower seed production was due more to the increase in the area cropped than to advances in yields.

II

The first section identified the main differences in the acreage evolution in Spain compared to its neighbours in southern Europe. We identified barley, in particular, and sunflower seed as the crops responsible for the huge expansion in acreage in Spain between the beginning of the 1960s and the mid-'80s. The question we will try to answer in this section is what lay behind this unusual crop trend in Spain, starting with barley and ending with some references to sunflower seed production.

The overwhelming increase in barley production was prompted by a new pattern of demand and a shift from food to feed grain. In barely two and a half decades the amount of barley devoted to animal feed grew spectacularly in Spain (Table 6). Barley was not the only feed grain to experience such an increase, as is shown by the parallel huge increase in maize. In fact, no other country in southern Europe showed similar growth in cereals destined for animal feed. While production in France nearly doubled between 1961 and 1985, it grew nearly fivefold in Spain.

An increase in cultivation of cereals for animal feed was not exclusive to Spain. In all five countries the percentage of feed grain over total cereal domestic supply (production + imports

TABLE 6. Southern Europe: barley, maize and total cereal for animal feed, 1961–2, 1984–5 (million tonnes)

	<i>Barley</i>			<i>Maize</i>			<i>All cereals</i>		
	<i>1961</i>	<i>1985</i>	<i>% change</i>	<i>1961</i>	<i>1985</i>	<i>% change</i>	<i>1961</i>	<i>1985</i>	<i>% change</i>
France	2.616	4.783	83	2.276	4.993	119	10.944	18.918	73
Greece	204	613	200	222	1.685	659	659	2.506	–100
Italy	651	2.298	–100	5.292	6.545	24	6.741	11.597	72
Portugal	37	86	132	289	2.097	626	392	2.39	–99
Spain	1.818	8.546	370	1.061	6.088	474	3.602	16.872	368

Note: 'all cereals' includes wheat, barley and the lesser crops listed in the note to Table 3.

Source: calculated from FAO statistical database.

TABLE 7. Southern Europe: cereals used for animal feed as a percentage of total domestic cereal production

	<i>1961–2</i>	<i>1984–5</i>
France	57	68
Greece	28	52
Italy	39	52
Portugal	22	60
Spain	39	72

Source: calculated from FAO statistical database, balance sheets.

– exports + or – stock variations) grew to almost 50 per cent or more between 1961 and 1985. Again, it was in Spain where that percentage reached a peak (72) surpassing even France (Table 7). Coming from a similar position to Italy in 1961, Spain ended up overtaking France, where livestock production was traditionally much more important, as a consumer of cereals. As had occurred in France, the shift from food to feed was also the result of a marked decline in the human consumption of cereal. In fact, according to FAOSTAT, the decline in wheat consumption between 1961 and 1985 in kilos per capita in Spain (which was mainly responsible for the fall in cereal consumption, a trend common to all southern European countries, with the exception of Portugal) was the largest decline in the five countries (28.5 per cent), just above that of France (27.5 per cent).

The similarity of Spain's experience to that of its northern neighbour in this reallocation from food to feed has no evident explanation. In the first half of the 1960s France presented a more developed food consumption structure with a proportion of animal products above 25 per cent (according to FAOSTAT domestic supply per capita), while the other four countries, including Spain, were slightly below 20 per cent. Yet in 1985, French livestock consumption (meat, fats, offal, eggs and milk) amounted for 388 kilos per capita, with that of Italy being 343, and Spain 271. Moreover, French livestock exports were of some importance (15 per cent of the

TABLE 8. Southern Europe: pig meat and poultry meat consumption, 1961–2 and 1984–5 (kg/per capita/per annum)

	1961–2		1984–5	
	<i>Pig meat</i>	<i>Poultry meat</i>	<i>Pig meat</i>	<i>Poultry meat</i>
France	26.0	11.1	35.2	17.2
Greece				
Italy	7.9	5.8	27.9	18.0
Portugal	9.1	2.1	17.75	10.5
Spain	8.2	3.1	37.1	21.4

Source: calculated from FAO statistical database: domestic supply, balance sheets.

TABLE 9. Southern Europe: egg consumption, 1961–2 and 1984–5 (kg/person/year)

	1961–2	1984–5
France	10.6	14.9
Greece	5.7	12.5
Italy	9.1	11.6
Portugal	3.3	5.5
Spain	8.3	15.4

Source: calculated from FAO statistical database, domestic supply, balance sheets.

total French meat production) during the mid-1980s, while they were still insignificant in Spain (0.7 per cent of Spanish meat production). Those differences came to determine a much higher need for feed grain in France than in Spain, and consequently, a cereal distribution between food and feed that was far from similar.

Nevertheless, the answer to this paradox is found with the group that showed the largest increase in Spanish per capita output during the studied period: meat (243 per cent). If we turn our attention to the composition of 'meat', it is easy to understand why feed grain production grew so much in Spain. Between 1961–62 and 1984–85 the strong growth in the per capita supply of poultry (590 per cent) and pig meat (352 per cent) left bovine meat (82 per cent) as the third component in terms of total Spanish meat consumption. Table 8 shows the magnitude of Spanish growth in poultry and pig meat consumption. In 1985 it lead all five countries when barely 25 years earlier the Spanish figures were far behind from those of France and much closer to those of Portugal.

Eggs were the first animal product to experience a boom in Spain. By the second half of the 1950s egg production had already expanded strongly with new intensive breeding methods. In only ten years (1961–71), Spanish egg consumption matched figures for France, and by 1985 they were higher than the other southern European countries (Table 9). With the arrival of broiler chickens from the United States in the 1960s, Spanish poultry producers concentrated more on meat, with a success similar to that of eggs, as shown above.

These changes were the result of an international phenomenon that took place with particular vigour in Spain: the rise of intensive livestock farming. Chickens and pigs were the pioneers in the Fordist model of breeding, based on systems of intensive feeding. This new intensive model, developed in the US in the 1920s and brought to Europe after the Second World War, was the result of an industrial process that applied advances in genetics and animal nutrition, and took advantage of improved consumer purchasing power to turn previously high value foodstuffs into products of mass consumption.³

Crops such as barley and maize played an important role in intensive feeding systems. Their importance is clearly evident when the composition of animal feedstuffs in the 1970s is considered. Barley accounted for nearly half of the ration in the pig rearing stage, reaching 63.7 per cent in the fattening stage, and 47.8 per cent just before slaughter. Maize was more important for broiler chickens, reaching 54.2 per cent of feed composition in the last stage of rearing. Barley and maize were equally important in the diet of laying hens. Thus, all three main intensively produced livestock products (pork, chicken and eggs) required significant amounts of barley and maize as feed.⁴

Obviously the relationship between the growth in feed grain production and the rise in meat and egg consumption does not hold if those animal products were substantially imported. However, that was not the case in Spain at that time. The proportion of domestic consumption supplied by domestic producers was very close to parity both in 1961–62 and in 1984–85 (Table 10). Spain was self-sufficient in the first feed grain, barley, during the mid-1980s but had to rely heavily on maize imports until it became necessary to increase its domestic supply.

Apart from maize, soya beans were the other product that Spain had to import in substantial quantities in order to develop its intensive livestock production. Given the crucial role of soya in the feed rations for pigs and broiler chickens, none of the five countries analysed could avoid a rapid growth in soya bean imports during the period. Nevertheless, Spain was the country in which soya bean imports grew most strongly in the 1970s, when from 1975 onwards it became the largest importer of the five (Table 11). However, soya beans were not the only oilseed product used in feed portions during that period. Sunflower seed came to be used as a substitute for soya in Spain on many occasions, particularly after the USA launched an international soya embargo in 1973. Spain had become the leading southern European producer of oil crops by 1985, in both production and domestic supply. While sunflower seed was the main oil crop in terms of domestic supply, soya beans dominated through imports. As we observed in the case of barley, the huge expansion in sunflower seed output in Spain was the result of acreage increase rather than any increase in output per acre. According to FAOSTAT, Spanish sunflower seed yields were below those of France, Italy and Greece in 1961–2, and in spite of some improvement, Spain still obtained only half the yield of France and Italy in 1985 (10,089 hg/ha versus 20,454 in Italy and 21,554 in France).

³ D. Goodman and M. Redclift, *Refashioning nature: food, ecology and culture* (1991); H. Friedman, 'Changes in the international division of labor: agri-food complexes and export agriculture', in W. H. Friedland *et al.* (eds), *Towards a new political economy of agriculture*

(1991), pp. 3–18.

⁴ For an example of the rations used by Spanish feeding firms, see M. Ocaña *et al.*, *Estudio económico de la producción de cebada en España para su empleo en alimentación animal* (1971).

TABLE 10. Spain: production, trade and domestic supply of selected products, Spain (1,000 tonnes)

	<i>Production</i>	<i>Import</i>	<i>Export</i>	<i>Domestic supply</i>	<i>Production as % of domestic supply</i>
Pig meat					
1961–2	242	11	0	253	95.8
1984–5	1409	21	4	1423	99.0
% change	482	91		462	3.2
Poultry meat					
1961–2	96	0	0	96	100.0
1984–5	802	24	4	822	97.6
% change	735			756	2.4
Eggs					
1961–2	269	1	1	269	100.0
1984–5	643	1	4	647	99.4
% change	139	0	300	141	0.6
Barley					
1961–2	1953	242	1	2183	89.5
1984–5	10,039	127	477	9,872	101.7
% change	414	91	47.600	352	12.2

Source: FAO statistical database and own calculations.

TABLE 11. Southern Europe: soya bean imports selected years, 1961–85 (tonnes)

	<i>1961</i>	<i>1965</i>	<i>1971</i>	<i>1975</i>	<i>1981</i>	<i>1985</i>
France	112,165	283,483	468,868	490,126	761,082	600,004
Greece	197	36	10	11,610	97,874	100,001
Italy	204,646	387,201	838,230	1,225,600	1,321,075	1,505,175
Portugal	0	0	44,624	74,525	340,543	881,833
Spain	15,790	198,100	683,675	1,662,395	3,034,360	2,220,945

Source: Calculated from FAO statistical database.

Initially this rapid growth served no other purpose than that of feeding animals in a country where the household oil was invariably olive oil. In the second half of the 1950s, by far the most important oil crop farmed in Spain was cottonseed, used for feeding ruminants. Given the expected increase in Spanish demand for meat, a specific recommendation was made by the 1966 FAO Spanish Agrarian Situation Report that soya substitutes should be sought. The speed of the shift from cottonseed to sunflower seed reflected the new direction taken in livestock farming in Spain in the 1960s. But this new direction also brought unexpected consequences in other fields. The huge increase in sunflower production affected the Spanish oil market, paving

TABLE 12. Southern Europe: domestic supply of sunflower and olive oil (kg/per capita/per annum)

	1961			1985		
	<i>Sunflower oil</i>	<i>Olive oil</i>	<i>Sunflower as % of Olive oil</i>	<i>Sunflower oil</i>	<i>Olive oil</i>	<i>Sunflower as % of Olive oil</i>
France						
Greece	0.2	14.6	1.4	2.7	19.9	13.6
Italy	0.7	9.5	7.4	2.2	11.0	20.0
Portugal	0.0	6.3	0.0	5.9	4.1	143.9
Spain	0.2	8.3	2.4	8.0	10.5	76.2

Source: Own calculation from FAO statistical database.

the way for a product cheaper than olive oil: sunflower oil, whose consumption reached three quarters of the total quantity of olive oil consumed in Spain by 1984–5. Neither Italy nor Greece, both with higher per capita olive oil consumption than Spain, saw a similar trend (Table 12).

If, in barely two and a half decades, Spain had shifted from being a country focusing on typically Mediterranean production (wheat, olives and grapes), with a limited presence of livestock in both production and consumption, to become a country where intensive livestock farming emerged as a major force, producing the reorientation of a number of its main crops, this was clearly the result of the implementation of a livestock farming model that exploited the few virtues of the Spanish countryside. Crops without better alternatives in a dry climate, such as barley and sunflowers, encountered strong complementarity with 'landless' livestock farms where chickens and pigs were raised. Specifically, pig farming also found in the cold and dry climate of much of the country an ideal environment for the development of ham and cold meat production, and it was able to take advantage of strong domestic demand. Thus, despite starting with such poor results in around 1960, Spain became one of the leading exponents of intensive poultry and pig farming in Europe in terms of both production and consumption. Why then did chicken and pork make such inroads in Spain so quickly and with such strength? The reasons for this can naturally be found in factors of supply and demand, which were in part determined by political calculation. However, there were also profound social and economic reasons.⁵

III

The shift into livestock farming in Spain that started in the 1960s, and the effect this had on both crops and the nation's diet, are even more striking when the process is seen from a historical perspective. After the crisis that affected transhumance in the eighteenth century, Spain had turned to wheat farming, which reduced the area of land for pasture. This was

⁵ E. Clar, 'A world of entrepreneurs: the establishment of international agribusiness during the Spanish pork and poultry boom, 1950–2000', *Agricultural Hist.*, 48 (2010), pp. 176–94. For a history of the traditional Spanish agrarian structure, see J. Simpson, *Spanish Agriculture: the long siesta, 1765–1965* (1995).

reflected in the Spanish diet with its strong cereal base and low consumption of animal products, except in areas close to the Atlantic (Galicia, Asturias, the Basque Country and Cantabria) whose wet climate encouraged cattle production, and large cities such as Madrid and Barcelona. Even though consumption of animal products was traditionally low, the period after the Spanish Civil War (1936–9) saw a further marked fall. Meat consumption is estimated at an average of approximately 24 kg per person per year in 1931–5 but it had fallen to 13.5 kg by 1950–4.⁶ The post-war difficulties faced by the population, with low income levels and rationing of basic foodstuffs until 1951, and the drive by the government for the expansion of cereal food crops (mainly wheat and rye) at the expense of feed crops (barley and oats) had a negative effect on both livestock production and consumption. A comparison of Spain with its neighbours shows this situation quite clearly, particularly the low levels of meat consumption when compared to Italy and Portugal.⁷

The degree of hunger and deprivation in Spain between the start of the Civil War and the early 1950s and the presence of an increasingly widespread black market in foodstuffs certainly had an influence on the rapid growth in demand for animal protein thereafter. Compared to the gradual change in dietary trends in the first three decades of the twentieth century (incorporating more animal products in place of cereal), the 1960s saw a rapid and intense shift in eating habits. The remarkable change in the Spanish diet that took place in the 1960s needs to be understood in the context of the scarcity of certain foodstuffs during the period immediately preceding that decade: the recent memory of post-war hunger and scarcity was replaced by a trend towards surfeit when improved markets and incomes made it possible. The new diet conferred social prestige. It might even be justified for health reasons although it tended to cause obesity. Even Spanish comic strips from the period reflected this preoccupation with food in the popular character of Carpanta, a tramp who was always hungry and had a recurring dream in the form of a roast chicken.⁸

The establishment of mass consumption in 1960s Spain, during its period of strong economic growth (the so-called ‘Spanish Miracle’), and the appearance of an expanding middle class with higher levels of income, had much to do with the rising demand for meat. Naturally, this phenomenon was common to many Western countries during this period, including those of southern Europe. Nonetheless, the effect of income growth on the consumption of meat, especially that of pork and chicken, was more remarkable in Spain than in other neighbouring countries, even those that grew more rapidly between 1961 and 1985 (Table 13). Consequently, the greater increase in demand for meat in Spain is not only to be explained by the improvement in income levels in the population alone, but by additional factors that applied specifically to Spain.

A new middle class emerged from the great exodus from the country to urban areas. It is calculated that in the 1960s alone more than two million Spaniards moved to the city from the

⁶ S. Piquero and E. López, ‘El consumo de pescado en España’ in *XI Congreso de Historia Agraria* (2005), pp. 00–00.

⁷ M. Bekele *et al.*, *Estudios de la FAO sobre los alimentos y la población* (Rome, 1976).

⁸ See a summary of the difficulties in Spain during

the 1940s in E. Clar and V. Pinilla, ‘The contribution of agriculture to Spanish economic development, 1870–1973’, in P. Lains and V. Pinilla, *Agriculture and economic development in Europe since 1870* (2009), pp. 319–22.

TABLE 13. Southern Europe: income elasticity in the per capita consumption of meat and the per capita consumption of pig and poultry meat between 1961–2 and 1984–5

	<i>Income growth</i>	<i>Meat consumption increase</i>	<i>Elasticity</i>	<i>Poultry meat consumption increase</i>	<i>Elasticity</i>
France					
Greece	166.3	216.9	1.30	460.5	2.77
Italy	112.2	140.5	1.25	235.0	2.10
Portugal	152.4	112.5	0.74	152.2	1.00
Spain	147.8	242.1	1.64	417.7	2.83

Source: increase in per capita income taken from Agnes Maddison, *The world economy, 1820–1992* (1995), own calculation; increase in per capita meat consumption (%) and per capita pork and poultry consumption (%): FAOSTAT, own elaboration.

TABLE 14. Spain: consumption of livestock products, 1964–65 (per cent of total food consumption)

	<i>Urban</i>	<i>Rural</i>
Beef and veal	8.0	3.2
Pork, ham and sausages	6.9	8.6
Chicken, rabbit and game	4.2	2.7
Total Meat	24.3	19.8
Eggs	6.1	6.3
Milk, cheese and butter	8.9	11.0

Source: Instituto Nacional de Estadística, *Encuesta de Presupuestos Familiares, 1964–65* (1965).

countryside. However, until that time, any growth in the urban population had been reflected in greater consumption not of pork or chicken but of beef and, more particularly, veal. This partly explains why meat consumption in Spain was so low, given that veal tended to be seen as a luxury and its price was subject to large fluctuations. However, rural emigrants were generally unaccustomed to eating either beef or veal. On the contrary, meat consumption in the Spanish countryside was heavily biased towards pork and its derivatives, although meat consumption was much greater in urban areas than in rural ones. The difference in chicken consumption was less than with beef and veal, and the consumption of eggs was practically the same in both the cities and the countryside (Table 14).⁹

Therefore, considering that growing urbanization in Spain in the 1960s and '70s was caused by rural emigration, the main virtue of intensive chicken and pig farming was that it cornered

⁹ L. Leal, J. Leguina, J. M. Naredo and L. Tarrafeta, *La agricultura en el desarrollo capitalista español, 1940–1970* (1975); A. Langreo, 'La articulación del sistema agroalimentario: agricultura', in *Lecturas sobre el sistema agroalimentario en España* (1985) and J. A. Segrelles, *La ganadería avícola y porcina en España. Del aprovechamiento tradicional al industrializado* (1993), pp. 291 and 318–21.

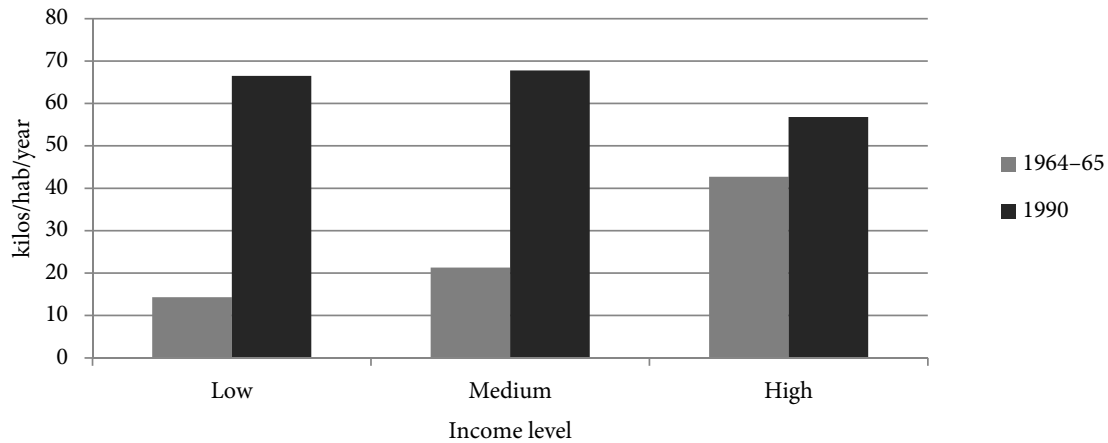


FIGURE 1. Meat consumption by income level in Spain, 1964-65 and 1990

Source: calculated from INE, *Encuestas de Presupuestos Familiares*.

the new demand for meat. The emigrants initially earned low wages but these rose over time. They found that of the animal products available in the market, the most affordable were the ones they had also eaten in their places of origin (pork and eggs in particular). A comparison of meat consumption in Spain according to income before and after chicken and, to a larger extent, pork flooded the market is a good reflection of this development. In the mid-'60s there was still a considerable gap between the amount consumed by the high-income classes and the rest. Twenty-five years later, the lower classes were consuming almost as much meat as the middle classes, and both were consuming meat more than the classes with the highest incomes (Figure 1).

The new intensive livestock farming systems that had been in place since the 1960s made chicken and pork available at lower prices than those of veal and beef; in addition, the prices of the former performed better over time (Table 15). The greater ability of new breeds to produce meat at lower feed ratios, and the industrial-scale production that offered a large number of products and sub-products to be prepared for sale in the supermarkets that were beginning to proliferate in Spain allowed the market to be flooded more easily. This was reflected in the higher price elasticity for the consumption of veal and beef in Spain between 1958 and 1971 (1.6) compared to that of chicken (1.1) and pork (1.0).¹⁰

IV

There is little doubt that what lay behind the superior competitiveness of the intensive livestock farms was the introduction of new hybrid varieties of chickens and pigs with great productive capacity when used in an industrial production system. However, the superiority of the new livestock farming technology (genetics, feed and facilities) exported by US multinationals after

¹⁰ R. Soria, M. Rodríguez and J. Ruiz, 'El consumo de carnes en España. Un análisis por series cronológicas', *Revista de Estudios Agrosociales* 97 (1976), pp. 7-37.

TABLE 15. Spain: meat price evolution, 1960–1970 expressed a ratio of prices in pesetas/kg)

	<i>Poultry/beef</i>	<i>Pig meat/beef</i>	<i>Poultry/cow</i>	<i>Pig meat/cow</i>
1960	92	74	119	96
1961	85	81	116	111
1962	80	80	105	106
1963	66	72	96	105
1964	65	66	83	85
1965	54	71	74	98
1966	50	61	71	85
1967	45	55	67	83
1968	49	60	72	89
1969	43	58	66	91
1970	41	54	62	83

Note: beef includes veal and calves.

Source: R. Soria, M. Rodríguez and J. Ruiz, 'El consumo de carnes en España. Un análisis por series cronológicas', *Revista de Estudios Agrosociales* 97 (1976), pp. 7–37.

the Second World War was especially marked in the case of Spain, as a consequence of the weakness in its livestock sector. The scarcity of food in the post-war period was a stimulus to the expansion of wheat at the expense of pastures and the production of fodder, which harmed the more traditional forms of extensive livestock farming (cattle and sheep). The Spanish meat industry in the 1950s showed noticeable weakness, with very high production costs that were reflected in the equally high cost of products.¹¹

The country was neither self-sufficient in veal and beef, even at low levels of per capita consumption, nor in the foodstuffs needed to produce them. Given this situation, which was the same for the entire Spanish food industry, the widespread adoption of foreign technology and industrial processes in the 1950s had a significant impact. The introduction by the multinationals of transnational feed-livestock complex industries in Spain replicated the systems present in many other Western countries at the time, but their influence was much greater given the weak competition from traditional production and absence of large Spanish food companies. Consequently, the demand driven by the improving incomes of Spain's population was exploited by industrial-scale intensive livestock operations, which achieved a significant reduction in the production cost per calorie. Their supply of products with uniform quality flooded the market. While this experience mirrored that of the US and Great Britain, it differed in that supermarkets and large-scale retailers played almost no role in Spain, with local entrepreneurs in alliance with transnational companies becoming the main drivers of change.¹²

¹¹ E. Clar, 'La soberanía del industrial. Industrias del complejo pienso-ganadero e implantación del modelo de consumo fordista en España, 1960–1975', *Revista de Historia Industrial* 36 (2008), pp. 133–65.

¹² For the British example see A. Godley and

B. Williams, 'Democratizing luxury and the contentious "invention of the technological chicken" in Britain', *Business History Rev.*, 83 (2009), pp. 267–90. By contrast see Clar, 'World of entrepreneurs' for Spain.

Throughout this process, the policies of the government under General Franco were also a determining factor. For example, foreign capital enjoyed important advantages when establishing local subsidiaries, given that government authorization was not required for investments of less than 50 per cent of total capital until 1973. This eased the way for penetration by multinationals, particularly in the food sector. Moreover, legislation did not regulate the contracts between companies and livestock farmers (as was the case in France from 1964), enhancing the power of large companies to set conditions and to control output, prices and the market.¹³

More specifically, the policies of Franco's regime were even more decisive in relation to animal feed. The 1953 economic and military agreements between the United States and Spain, which drew Spain out of international isolation (although it did not join the United Nations until 1955) led to the import of substantial quantities of surplus American soya and maize, channelled by American multinational feed companies. Restricted before that time, soya bean imports were further liberalized in 1962, giving soya commercial advantages over other oil crops. And if this were not enough, the government undertook to purchase the seed oil milled in Spain at international market prices, which encouraged greater investment by multinationals in Spain, and explains why Spain became an importer of soya beans, as seen in the previous section. The facilities offered by the government gave the feed supply industries a key role in the development of large-scale intensive livestock farming, particularly chicken farming, the effect of which was transferred to the Spanish diet. The participation of multinationals enabled them to obtain feed at prices that were among the cheapest for products made by Spanish feed factories.¹⁴

The advantages given to large multinational companies were an aspect of a deliberate policy of increasing the output of affordable livestock products for the Spanish people. The FAO report on the state of Spanish agriculture of 1966 advanced the notion that only the cheaper meat offered by intensive livestock farming could satisfy the growing demand for meat, given the impossibility of using traditional production methods to double the output of beef and veal products in a short time frame. However, fluctuations in the world price of soya and other ingredients of animal feed could lead to significant increases in the price of those meat products. As a result, the FAO proposed that locally produced feed should form 60 per cent of the whole, to lower the cost of feeding animals. To achieve this, steps should be taken to encourage the replacement of wheat with barley. The report stressed the need for turning wheat land over to animal feed grains, which required a change in the Spanish government's policy of giving preferential support for grain. It was desirable that there should be a correction in the wheat/feed grain price ratio.¹⁵

Franco's government implemented these proposals and encouraged strong growth in the internal production of feed grains, particularly barley. Among the government's main

¹³ Langreo, 'La articulación del sistema agroalimentario: agricultura', pp. 37–66; Segrelles, *La ganadería avícola*, pp. 219 and 318–21.

¹⁴ Segrelles, *La Ganadería avícola*, pp. 154, 168–169, 283 and 291; A. Langreo, *El ganado porcino y las casas de piensos en la Comunidad Valenciana. Sus fórmulas de coordinación y su desarrollo histórico* (1990),

pp. 15 and 81; L. Viladomiu, 'La inserción de España en el complejo soja mundial', *Agricultura y Sociedad* 34 (1985), pp. 151–77.

¹⁵ BIRD and FAO, *El desarrollo de la agricultura en España* (1967), pp. 198–202 and 206–207; also pp. 16–18 and 199.

short- and medium-term goals in its Second Development Plan (1968–71) were the reduction of wheat surpluses, control of the agrarian trade deficit, and the promotion of greater livestock self-sufficiency both for outputs and, especially, inputs. The official wheat price (the price at which the government-controlled National Wheat Board purchased the harvest from producers) was frozen between the 1966–7 and 1971–2 seasons, while the guaranteed price for barley rose. The dry climate found in most of Spain permitted the interchangeability of barley and wheat, which was why the ratio between their prices was such an important element for farmers' decision-making. The government also reduced the advantages given to wheat (subsidies, bonuses, loans to wheat growers) to place it on an equal basis with other grains.¹⁶

The effect was almost immediate and the result spectacular. The acreage under wheat in Spain in 1965 was some 4,254,000 ha, with output of 4,715,000 tonnes, while barley acreage was 1,374,000 ha, with an output of 1,891,000 tonnes. By 1975 the acreage under wheat had fallen to 2,661,000 ha, while that of barley had grown to 3,262,000 ha; and although wheat output was steady at 4,302,000 tonnes, barley output had hit 6,728,000 tonnes.¹⁷ Barley output went from supplying 75 per cent of domestic demand in the mid-'60s to exceeding 100 per cent at the end of the decade. As sunflower cultivation could readily be alternated with wheat in the country's drier areas, it too saw a massive increase in the area devoted to its cultivation. At the same time Franco's government also sought to reduce Spain's degree of dependence on imported maize. However, the need for irrigation to grow maize in most of the country made a large-scale import substitution project unfeasible.¹⁸

The introduction of improved sunflower varieties in the south was hastened by the need to replace soya in animal feed rations. Although soya bean imports continued to grow in quantity and importance throughout this period, the domestic market for oilseeds was liberalized and their production was subsidized through the national development plan that was started in 1971. As milling companies had already been replacing sunflower seed with soya whenever the price of the former rose, the changeover was not difficult. The enormous growth in sunflower production, closely linked to poultry output, was also driven by strong government stimulus. It unbalanced the entire Spanish oil market, creating an 'oil lake' that harmed the traditional consumption of olive oil, given that sunflower oil was the cheaper product. This explains the strong inroads made by sunflower oil into the Spanish diet that we described in the previous section. The greater competitiveness of sunflowers is explained not only by the employment of modern technology and the greater ease of supply than with soya, but it was also as a result of higher productivity in the sector. It would not take long for sunflower oil production to form an oversized subsector in which a small number of companies competed intensely with each other.¹⁹

¹⁶ E. Clar, 'De la subordinación al cereal al cereal subordinado. Historia y balance de un intento de auto-suficiencia ganadera, 1967–1972', *Historia Agraria* 37 (2005), pp. 513–44.

¹⁷ C. Barciela, J. Giraldez, GEHR and I. López, 'Sector Agrario y Pesca', in A. Carreras and X. Tafunell (coords): *Estadísticas históricas de España: siglos XIX y XX* (2005), pp. 301 and 308; Segrelles, *La ganadería avícola*, p. 150.

¹⁸ Clar, 'De la subordinación', pp. 534–7. To appreciate the importance of irrigation in maize production, see the case of Zaragoza in V. Pinilla, 'The development of irrigated agriculture in twentieth-century Spain: a case study of the Ebro basin', *AgHR* 54 (2005), p. 135.

¹⁹ Segrelles, *La Ganadería avícola*, p. 150; C. Tió, *La política de aceites comestibles en la España del siglo XX* (1982), p. 210.

In summary, Spain experienced a rapid and strong expansion in its livestock sector and in the products related to it: soya beans, sunflower seed and feed grains, of which the last two underwent an increase in acreage on a scale sufficient to explain the distinctive development of the Spanish agrarian sector between 1960 and 1985. As in other countries, the application of important technological innovations (the introduction of new livestock varieties with improved feed conversion ratios into meat) as part of an increasingly industrialized economy was heavily reflected in their agrarian output and diet. However, the series of distinct economic and political factors mentioned explain why the case of Spain presented significant quantitative and qualitative differences, at least prior to its joining the European Community. The rapid installation of those livestock operations could not have taken place on such a scale had it not been for the large animal feed-livestock companies arriving in a market where there were no significant food industries. The ability to offer cheap meat to a population with growing incomes guaranteed a rapid transition to a model of production and consumption that was heavily geared towards livestock. This was understood by Franco's government, which chose to facilitate the conquest of the Spanish market by those livestock operations, while stimulating domestic feed production. The same government that had overprotected wheat farming since 1940, harming the development of the livestock sector, made a 180-degree turn in the 1960s by encouraging barley and maize production, while it imported soya beans in huge quantities. Spain's existence as a dictatorship, outside the EEC, enabled such policies to be implemented, despite the failure of the returns from such a strong acreage expansion in barley and sunflowers to justify them. For these aspects alone it can be said that 'Spain was different', even though it conformed to the broad Western model of agrarian transformation that characterized the third quarter of the twentieth century.

V

In its broad shape, the agrarian structure established in the 1970s and 1980s has been maintained, albeit with slight changes in emphasis: a reduction in the weight given to cereal (particularly owing to the retreat of wheat farming) and an increase in that given to meat, resulting from the advances made in both chicken and pig farming (Table 16). Since 1985 the sector that has proved to be the most successful is that of pork production, with pork meat becoming one of the leading agrarian products in kilos per capita. In terms of total animal output, the primacy of pork in 1985 (48.2 per cent) was consolidated further during the following two decades to reach 59.3 per cent in 2005.

The magnitude of Spain's success in pig production has led to the country becoming one of the leading producers per capita. Comparison with some of the western countries with the largest meat output is evidence of the scale of growth in Spain, both for meat in general and for pork in particular, given that Spain started from a very low base (see Table 17). The importance of pork is also reflected in the establishment of a strong pork meat export trade after 1985, a development permitted by Spain's admission to the European Union. Pork accounted for three quarters of Spain's meat exports in 2005, having grown from 21,000 tonnes to over a million tonnes in the space of 20 years.

As with barley and sunflower production, the success of pig production is the result of a

TABLE 16. Spain: domestic supply distribution in Spain, 1985 and 2005 (per cent)

	1984-85	2004-05		1984-85	2004-05
Vegetable products	73.7	71.9	Animal products	26.3	28.1
Wheat	9.6	8.4	Bovine meat	1.1	1.5
All cereals	10.3	9.4	Pig meat	3.6	5.6
Potatoes	10.6	7.1	Poultry	2.1	2.6
All vegetables	16.4	15.4	All meat	7.6	10.5
Fruits	9.0	9.8	Eggs	1.5	1.4
Alcoholic Beverages	10.7	11.4	Milk	17.4	16.5

Source: FAO statistical database and own calculations.

TABLE 17. Five western countries: meat, poultry meat and pig meat domestic supply (kg/per capita), 2004-5

	Poultry meat	Pig meat	All meat
France	22.7	34.6	92.1
Germany	14.8	54.4	84.1
UK	30.9	26.2	84.6
USA	51.5	29.4	123.9
Spain	27.1	57.5	108.1

Source: FAO statistical database.

series of favourable natural factors. Apart from the native Iberian breed that is raised in a specific natural environment (mainly the mixture of cork oak woods and pasturelands known as *dehesa*, with acorns as the main food source), white pig breeds found an ideal place for their development in inland provinces such as Soria and Teruel with their cold and dry climates. There they are raised mainly for ham and cold meat products, but also for pork. This, together with the traditional presence of pork in the diet of much of the country and the large variety of pork products consumed in Spain, has strengthened the position of pork as the main Spanish meat product. This has also been consolidated by the presence of large meat production companies with the capacity to compete in export markets.

As for the feed that keeps the livestock sector (mainly pork and, to a lesser extent, chicken) growing, soya bean imports had grown slightly between 1985 and 2005. The importance of barley, the main locally produced product, had diminished somewhat, while that of maize had remained constant and that of wheat had grown significantly. Despite the decrease in the amount of barley used for feed, the amount of cereal destined for this use continued to grow in Spain, with an increase in the total proportion of grain used to make animal feed. Another of the basic differences between the period immediately before Spain's entry into the EEC and 2005 is the increase in the quantity of imported feed used in animal feedstuffs; this particularly affected wheat and barley, the latter to a lesser degree (Table 18). There is no doubt

TABLE 18. Spain: feed domestic supply, 1984–85 and 2004–05

	1000 tonnes		Feed use / total domestic supply (%)		Total imports / total domestic supply (%)	
	1985	2005	1985	2005	1985	2005
Cereal	16,872	21,833	72.1	85.2	17.6	47.8
Wheat	1,479	6,250	25.7	59.4	3.4	59.3
Barley	8,546	6,948	86.6	82.3	1.3	16.0
Maize	6,088	6,989	90.8	85.3	49.1	44.8

Source: FAO statistical database and own calculations.

that Spain becoming subject to the Common Agricultural Policy (CAP) was a decisive factor in its opening the door to cereal imports. Nevertheless, the percentage of imported barley in domestic consumption did not grow much in Spain, so the strength of the domestic supply of barley that was consolidated in 1961–85 seems to have continued in different circumstances.

The experience of sunflower oilseed in Spanish agriculture since the 1960s has been similar. Domestic output has fallen and been replaced by greater foreign supply. While the percentage of imports over domestic supply was negligible (0.3 per cent) in 1985, almost half (48.1 per cent) of the sunflower seed consumed in Spain in 2005 was imported, with internal output falling by 40 per cent (from one million tonnes to six hundred thousand tonnes). Poor sunflower seed yields in Spain (55 per cent of Greek, 41 per cent of Italian and 39 per cent of French yields) led the sector to become more open to imports when Spain came under the CAP. Nonetheless, sunflower seed continues to be the most important oilseed in Spain, not owing so much to its use as feed, but to it being the basis of sunflower oil, the second most consumed oil in Spain, which has over time kept its position close to olive oil.

Logically, all of these changes have contributed to the increase in the harvested acreage, the great Spanish peculiarity that we spoke of at the start of this article. Barley decreased by almost one million hectares between 1985 and 2005, although there is still twice the area under barley than there was in 1961. This loss of barley resulted in the decline of cereals as a whole for an equivalent surface area. Likewise, sunflower seed acreage was reduced by close to 364,000 hectares between 1985 and 2005, leaving a harvested area of approximately 634,000 hectares. All of this was responsible for a significant decrease in the harvested area, although the most relevant aspect is that barley continues to be the crop with the largest harvested area in Spain, whereas the sunflower seed crop is the fifth (Table 19).

VI

This article has analysed a series of changes from the 1960s onwards that produced a profound agrarian reorientation of Spain. From a form of agriculture centred on Mediterranean arable, with a great emphasis on wheat and tree crops (olives and grapes), Spain quickly shifted to livestock farming, which massively increased the demand for feed grains and oil seeds, such as sunflower seed.

TABLE 19. Spain: area harvested of selected arable and tree crops, 2004–05 (ha)

	<i>Area harvested</i>	<i>%</i>
Barley	3,167,440	21.9
Olives	2,465,015	17.0
Wheat	2,224,570	15.4
Grapes	1,166,020	8.1
Sunflower seed	634,168	4.4
Almonds	624,030	4.3
Total	14,462,840	100.0

Source: FAO statistical database and own calculations.

Whilst the passing of time has resulted in some reduction of acreage, in accordance with growth of a less expansive agriculture than that occurring in Spain between 1961 and 1985, in large measure the agricultural variations that took place in that period have been consolidated. The Spanish diet has reflected these changes in a particularly intense manner. The main outcome highlighted in a study of the Spanish nutritional transition since 1960 was the greater calorie intake, the consequence of high consumption of fats. The result of this has been to the distance the Spanish diet from its Mediterranean origins as it approaches more northern models.²⁰

The force with which those agrarian changes occurred have left their mark on the Spanish agriculture and economy. Although Spain's membership of the European Union has attenuated some of its peculiarities, such as the huge acreage expansion, the distinctive features of that process still remain. Meanwhile, Spain has become one of the world's main producers and consumers of pork, a situation that could not have been foreseen in 1960. This exemplifies how the transnational agribusiness model developed after the Second World War was able to transform rapidly an agrarian sector such as the one existing in Spain.

The sum of very different factors turned a country with insignificant meat production and consumption into a great producer and consumer of meat in less than three decades, and redirected its agriculture to support this new trend. The benefits provided by government to multinational feed producers connected to a series of local producers enabled an expansion of the products from intensive livestock farming. Franco's government also paved the way for large-scale imports of soya beans, whilst it changed its policies for the protection of wheat production to encourage the shift to feed cereals, assisted by the easy substitution of barley for wheat. The abundance of dry-land farming areas enabled the rapid expansion of barley and sunflowers to take place without making use of fallow, whereas the huge expansion in irrigation, brought about by the obsession of Franco's government with the construction of dams and reservoirs, led to some increases in maize and alfalfa crops. All of these changes in supply encountered sufficient demand in the Spanish market as a result of mass internal

²⁰ L.A. Moreno, A. Sarriá and B. M. Popkin, 'The nutrition transition in Spain: a European mediterranean country', *European J. Clinical Nutrition* 56 (2005), pp. 992–1003.

rural-urban emigration and improving per capita income which, starting in 1960, was directed towards those new products of intensive livestock farming. Spanish meat and dairy companies cornered a market with barely any imports, regardless of the restrictions imposed by coming under the CAP, growing quickly in both size and importance.

Even allowing for the reservations that have been expressed (mainly from the perspective of eating habits that have shifted away from the healthy Mediterranean diet), this virtuous production and business cycle was one of the few projects undertaken under Franco that can be considered successful and whose effects are still very evident today. The dictatorship took all the necessary initiatives designed to enable Spaniards to eat cheap protein produced in Spain with inputs (with the exception of soya and a large proportion of maize) from Spanish agriculture. However, this combination of factors was also possible as a result of the actual characteristics of the Spanish countryside (soil and climate) and to the familiarity that emigrants from the country had with pork. It remains questionable whether this re-orientation of agriculture could have been achieved so quickly in a democratic Spain, and whether its speed and thoroughness should be seen as an aspect of the totalitarian regime of the Franco years. It is perhaps this political context that enabled Spain's trajectory of agricultural development in the third quarter of the twentieth century to be different.