

Ibiza and the introduction of capitalism in the Mediterranean: from agrarian self-consumption to full market dependence, 1857–1935

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KEYWORDS: agrarian transition, introduction of capitalism, Mediterranean agriculture, Ibiza.

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In the second half of the nineteenth century, the primary sector expanded in Ibiza as in other Mediterranean regions. However, it also overcame the protectionist crisis at the end of that century and fully integrated into the international trade channels that emerged in the twentieth century. Within a few years, the island's economy became fully dependent on foreign markets, as feeding the population and generating agricultural products overwhelmingly required external foodstuffs and inputs. The growth of the primary sector substantially improved the living conditions of Ibiza residents and incentivized the growth of associated sectors, including commerce and a merchant navy. It also permitted the accumulation of financial, human, and social capital that paved the way for Ibiza to become a leading international tourism destination in the 1930s.

Del auto-consumo agrario a la plena dependencia del mercado: Ibiza, 1857-1935. Un ejemplo de la penetración del capitalismo en el Mediterráneo

PALABRAS CLAVE: transición agraria, introducción del capitalismo, agricultura mediterránea, Ibiza.

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***E**l sector primario ibicenco se expandió en la segunda mitad del siglo XIX, como ocurrió en otras regiones mediterráneas, pero fue capaz de superar la crisis proteccionista de finales de ese siglo e integrarse plenamente en los circuitos comerciales internacionales que nacieron con el siglo XX. En pocos años la economía insular pasó a depender totalmente de esos mercados exteriores, pues la alimentación de la población y la misma producción agraria necesitaban imperiosamente los alimentos e inputs foráneos. El crecimiento del sector primario mejoró notablemente las condiciones de vida de los insulares e incentivó el crecimiento de los sectores a él asociados como el comercio y la marina mercante. Además, permitió la acumulación del capital financiero, humano y social que fue el origen de la creación de un destino turístico internacional de primer orden en los años treinta.*

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1. INTRODUCTION

Today, the name of Ibiza calls to mind one of the most competitive tourism destinations in the world. One of the characteristics of the island is that the vast majority of its tourist accommodation belongs to local companies some of which have risen to become multi-nationals and stand now among the largest hotel companies in the world (Cirer-Costa, 2014: 206; 2020). From a strictly capitalist standpoint, therefore, their trajectory clearly represents a major economic and business success.

The current situation has its immediate origins in the primary sector of the second-half of the nineteenth century, when the island succeeded in consolidating an entirely outward-looking economy that was fully integrated into international markets. Ibiza's new economic model stood on the brink of collapse between 1914 and 1919, but it rebounded and achieved peak potential at the end of the 1920s. At that point, the Great Depression of 1929 threatened to scuttle the island's economic achievements, but Ibiza residents were able to reinvent themselves. In a record time of only five years, they created an international tourism destination of the first rank by using the financial, social, and human resources that the earlier expansion of the primary sector had enabled them to accumulate. This represents a rare instance in which a highly competitive primary sector made the transition to an equally competitive tertiary sector without passing through an intermediate step based on manufacturing. In addition, Ibiza's transition was very different from the model followed by its closest neighbors: the islands of Majorca and Minorca and the mainland regions of Catalonia and Valencia¹.

The case study put forward in this paper focuses on the modernization of Ibiza's primary sector and the integration of its traditional society into a system of capitalist norms and standards in accordance with a process that has been extensively studied in the economic literature².

1. In all cases, Catalonia, Valencia, Majorca, and Minorca present particular models of rapid agricultural growth that gave rise to distinct processes of industrialization. The Catalan case has received extensive attention; see BADIA & TELLO (2014), MARFANY (2010), and TORRAS (1998). In the case of Valencia, see CALATAYUD (1999), CUEVAS (2001), GARRIDO (2010), GARRIDO & CALATAYUD (2011), and LLUCH (2001). In the case of the islands of Majorca and Minorca, see CASASNOVAS (2003), MANERA (2001), and TELLO *et al.* (2018).

2. Within the extensive literature that analyzes the multiplier potential of agricultural growth, five works stand out in terms of the theoretical guideposts that they offer for the present study: DETHIER & EFFENBERGER (2011), GOLLIN, PARENTE & ROGERSON (2002), IRZ *et al.* (2001), MEIJERINK & ROZA (2007), and SCHNEIDER & GUGERTY (2011).

The approach adopted in the present analysis of the development of the agrarian world of Ibiza and Formentera is at once local and global, because the markets where the islands' output was sold were local and global. For their products to reach international markets, the inhabitants of the islands had to develop mechanisms that were notable for their complexity. Some of the mechanisms relied on physical and technological elements, such as means of transport and the use of the fertilizers, but the majority were strictly intangible. The inhabitants had to understand the characteristics of demand to satisfy that demand and respond to the various basic challenges associated with commercialization: what were the best markets for the islands' products? Which varieties attracted the best prices? When was the best moment to bring products to market?

In the present case, how was such information transmitted? It was transmitted through merchants who were in direct contact with markets, financed operations, managed the first stage of transport in their own vessels, and coordinated any successive operations of handling and transport in ships and trains that were international in reach. The history of agriculture in Ibiza and Formentera would have been very different if the merchants in question had not been Ibiza natives³.

2. IBIZA'S UNPROMISING BACKGROUND IN THE CONTEXT OF MEDITERRANEAN AGRICULTURE

In the mid-nineteenth century, Ibiza's economy was in a slump. In this respect, it differed little from many other nearby regions, which had also been left out of the early stages of the Industrial Revolution. At mid-century, however, agriculture began to grow and flourish in various regions of the Mediterranean and the sector saw a modest boom that extended into the eighteen-nineties. The sector's expansion gave rise to a number of cash crops aimed at international markets, such as currants from Greece and Turkey, raisins from Spain, oranges from Valencia, and carob beans from Cyprus (Apostolides, 2006: 8; Garrido 2010: 224; Katz, 1990: 32; Maravall, 2020: 762; Morilla, Olmstead & Rhode, 1999: 318; Petmezas, 2006: 8). The Mediterranean agricultural boom played out in parallel with a worldwide boom in agriculture. At the close of the century, however, Mediterranean export crops ran into the rising protectionism embraced by more developed countries, which partly cut off Mediterranean agricultural output and inflicted severe damage on the trade in products such as currants, raisins and grapes (Aparicio, Pinilla & Serrano,

3. Little attention has been given to the dissemination of commercial information. The present study assumes that the information was spread through the mechanisms of the classic industrial district posited by A. MARSHALL (1920).

2009: 52; Federico, 2004: 130; Findlay & O'Rourke, 2003: 130; Koning, 2015; O'Rourke, 1997: 793; Petmezas, 2006: 9).

In the specific case of Spain, the country's agriculture recorded Europe's poorest results in the closing years of the nineteenth century (Federico, 2011: 23-4). The Levante region of eastern Spain had a thriving irrigated agriculture, but most of the country's farmland was devoted to rainfed agriculture, which was a very poor fit for the introduction of foreign grains and could support only wine and olive oil as competitive products (Clar, Martín & Pinilla, 2015: 178).

If the focus is narrowed to Ibiza, the historical record features two highly credible first-hand accounts of the impoverished state of agriculture and the population on Ibiza and its neighboring island of Formentera in the mid-nineteenth century. The first account comes from a report submitted by the political governor of the province in 1845. He expressed his surprise at the extreme material shortages that afflicted Ibiza's rural population: "The frugality of the Ibizans is such that there are rural people who go months on end without so much as a taste of bread" (Macabich, 1965: 251). The second example is an account from Archduke Ludwig Salvator of Austria, who noted in 1867 that the "meagre pittance" of the rural population was typically limited to "a crust of hard black bread and a bowl of boiled rice" (Austria, 1982: 40).

The same authors, together with Vuillier, note that all of the rural population lived scattered across the countryside, with each family inhabiting an isolated dwelling on the holdings that they cultivated (Vuillier, 2000: 42).

This particular distribution of the population reflected a similarly peculiar distribution of land ownership. Unlike on the other neighboring islands of Majorca and Minorca, land ownership on Ibiza was extraordinarily dispersed. Only 5% of Ibiza land was in the hands of landowners who lived in Ibiza Town (Bisson, 1972: 12). Moreover, Ibiza's distribution of land ownership had a long history. As early as 1797, the territory was described as "the most highly distributed land in Spain, with one landowner for every nine inhabitants" (Fajarnés, 1961: 23).

The fact that nearly all of the rural population held title to a plot of land did not imply by any means that they could live off the bounty of their property. Many farmers had to offer their surplus labor to the owners of larger holdings and take part in salt production to earn a day's wages that proved vital to their livelihood.

Throughout much of the period under study, the population of Ibiza and Formentera grew very little. Between 1860 and 1920, the number of inhabitants rose from 23,492 to 26,984, which represents a cumulative annual growth rate of only 0.23%. The growth rate remained low because of large-scale emigration to the Americas and North Africa⁴. Between 1920 and 1930, by contrast, the population grew at a cumulative annual rate of 1.58% and reached a total of 31,575 inhabitants. As can be observed in Figure 5, economic growth over this ten-year period eliminated the root cause of the earlier emigration, but the outflows resumed again between 1930 and 1935 as a result of the Great Depression.

3. EVOLUTION OF TRADE ON THE ISLANDS OF IBIZA AND FORMENTERA

3.1. Commercial products of Ibiza's primary sector

The economies of Ibiza and Formentera became increasingly outward-looking. This is apparent from the statistics on inbound and outbound freight traffic at the port of Ibiza Town (Ibiza's only port in the period). The statistics come from documents known as *balanzas de cabotaje* (roughly, "cabotage balances") that were published by the Directorate-General of Customs. The efforts to collect port data began in 1857 and continued to produce statistics of good quality until 1935.

If any of the island's products towers above the rest, it is salt. From antiquity, salt stood at the center of Ibiza's economic activity. Proof of its importance comes from the geographer Vilà Valentí, an expert familiar with the islands, who does not hesitate to call Ibiza and Formentera the "salt islands" (Vilà, 2000).

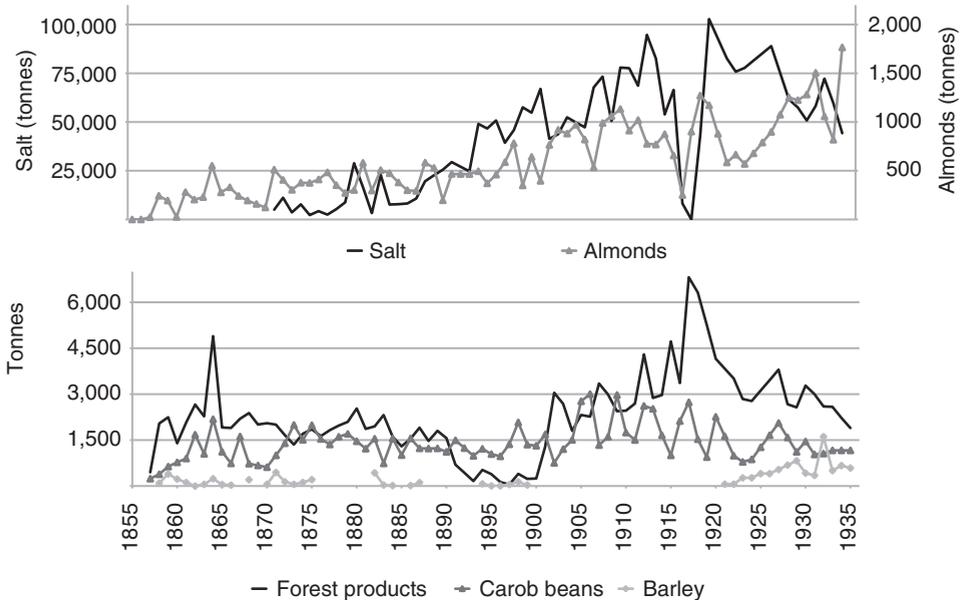
Since the Catalan conquest in 1235, the island's salt pans were regarded as a public good of common use that belonged to the entire population. After the War of the Spanish Succession in the early eighteenth century, however, the Spanish Crown seized the salt pans and added them to its patrimony (Marí, 1976). From that point onwards, salt production on Ibiza went through periods of highly varied intensity. By the mid-nineteenth century, however, production was erratic and limited. In 1871, the Spanish state finally sold the salt pans to a group of shipowners and merchants from Majorca. The new owners undertook repairs and improvements that carried on well into the twentieth century.

4. Data corresponding to Sant Antoni de Portmany, which is one of the four rural municipalities into which the island of Ibiza is divided, indicate that between 1860 and 1920 an average of 0.83% of the municipality's inhabitants left each year.

Their efforts included the construction of dozens of kilometers of dykes and canals, the laying of inland railway lines, new loading docks and storage depots, new steam-powered mills, and more. Upon completion of the building works, the salt pans of Ibiza and Formentera were an operation with cutting-edge technology that employed over a hundred year-round workers and up to two thousand laborers during the two or three months of the annual salt collection.

FIGURE 1

Ibiza's export sales of salt, almonds and other major products of the primary sector



Source: Dirección General de Aduanas.

As Vilà notes, salt is genuinely a crop and bears no relation to mining (Vilà, 2000: 133). Salt production is not a matter of damming up seawater and simply letting it evaporate. Such an approach would yield very few millimeters of a useless mix of chlorides and sulphates. Salt production, by contrast, involves the regular influx of seawater under strict controls. The process entails successive stages of settling, decanting, filtering, cleaning and partial evaporation to remove any impurities and undesirable components, and the product at the end of the summer is an accumulation of 20 or 30 centimeters of pure salt in collection ponds (Torres, 1997). Not only is the production process highly complex, but it is also entirely dependent on weather conditions. Hence the salt pans can be equated to a large farming operation dedicated to a single crop.

Ibiza salt was a product of great purity and excellent quality, which made it ideal for use in the curing of fish like salt cod or salt herring. As a result, it was in demand in Norway, Iceland, Scotland and Newfoundland (Canada). In a world with a constantly growing urban population, there was also a growing demand for food that was easy to preserve and transport like salted fish, which led in turn to a growing demand for salt itself.

Salt production gave rise to all sorts of positive externalities for the island economy. Maintenance of the salt ponds, docks and auxiliary vessels sustained the local shipyards and a whole host of craftsmen such as blacksmiths and carpenters. In addition, the salt trade annually attracted at least fifty foreign vessels, whose crews laid in all the necessary provisions locally for their long return voyage to northern Europe.

As Figure 1 shows, salt production reached peak capacity shortly before the First World War, which then caused sales to plummet. In the 1920s, the full potential of production was reached, resulting in an annual output in excess of 80,000 tonnes until the Great Depression, which forced sales and especially prices to fall.

Ibiza's foremost agricultural product in the years under study is almonds. In 1867 the cultivation of almonds was still uncommon, but it was undergoing rapid expansion in response to export opportunities (Austria, 1982: 61; Morey & Fornés, 2021: 120). The almond was a nut put to widespread use in confectionary in northern Europe and therefore had a high-income elasticity. In essence, almonds were a modern, strictly commercial product. Figure 1 leaves no doubt as to the expansion of the crop, whose exports already exceeded 1,000 tonnes by the start of the twentieth century.

Until 1914, approximately half of all almond sales took the form of direct exports to ports in southern France. The remaining almonds were shipped to Barcelona or Palma (Majorca), where they were added to larger Catalan or Majorcan shipments bound for northern Europe or North America. Once the First World War came to an end, however, direct exports declined precipitously.

The First World War dealt a heavy blow to trade in such a relatively "luxury" product and the Great Depression of 1929 also caused sales to plunge, particularly as a consequence of the introduction of Smoot-Hawley tariffs in the United States (Findlay & O'Rourke, 2003; Irwin, 1998; McCalla, 1969).

One consequence of the growing dominance of almonds was the replacement of wheat by barley. Wheat was gradually pushed out of its traditional growing areas by a combination of almond groves and barley fields (Serres, 1961). As Figure 1 shows, barley saw

only sporadic sales until the 1920s, when the large-scale application of fertilizer swelled production and turned barley into a common commodity for sale on Ibiza.

Carob beans represent the most stable of all the island's outputs, indicating that the crop already had a wide distribution across Ibiza in the mid-nineteenth century. In an increasingly urbanized world that was nevertheless still dependent on draught animals, the carob bean provided ideal feed for mules and horses in the cities owing to its excellent conservation in any climate and its low weight relative to energy potential. The First World War multiplied the demand for carob beans but consumption soon declined with the spread of motor vehicles (Apostolides, 2008: 18). As a consequence, prices trended downward until 1929, when they collapsed.

In 1933, after overcoming an array of problems and many delays caused by the poor economic outlook at the time, an industrial group from Majorca set up an alcohol production facility that used local carob beans as a raw material. The new plant, however, was plagued by technical and commercial difficulties and it was soon forced to impose temporary closures. This set a bad precedent for anyone interested in making an investment in firms that processed Ibiza's agricultural products.

Until the start of the 1920s, Ibiza's only livestock export was eggs. Large-scale purchases of fodder, forage and fertilizer, however, made it possible to feed growing herds of pigs and sheep and to expand egg production.

In no case, however, were any farms built specifically for livestock production as they were in Minorca in the same period (Méndez, 2007: 285). Rather, the existing model was intensified. Rural families began to fatten one or two pigs for market in addition to the pig that they had always slaughtered each year for their own consumption, and they increased their flocks of laying hens.

The growth in egg sales began to take off at the turn of the century, rising from 50 tonnes a year to 80-90 tonnes a year in the twenties and thirties. Sales of sheep and pigs took off in 1921 and grew into the 1930s, when Ibiza exported an average of 3,300 sheep and 2,300 pigs a year.

The island's livestock output offers another example of "modern" production that was entirely focused on external markets. Livestock became another one of the island's exports when almonds lost steam, because there was no more land available for the planting of additional almond trees.

The forests of Ibiza offer six basic products: firewood, lime, tar or pitch, lumber, charcoal and bark. The first three products were consumed only on the island and very intensively. By contrast, pinewood lumber, which has a low density and is very pliable, was extremely easy to fashion into slats for packing crates. As a result, the main purchasers were export horticulturists in Valencia. Similarly, charcoal was the main fuel in the kitchens of Spain's cities and Barcelona absorbed most of Ibiza's charcoal (often over 2,000 tonnes per year). Lastly, finely ground pine bark was used as a tanning agent in the leather industry because of its high tannin content.

An important characteristic of forest use is that it was less tied than any other primary activity to the seasons of the year or the weather conditions. As a result, it permitted optimal exploitation of the local workforce, who focused on forest products when the crops and salt production did not require attention.

The First World War prompted a dramatic increase in the demand for forest products that resulted in the practical deforestation of the island and drastically reduced any opportunities to gain benefit from forest use in the years that followed.

The last notable product of Ibiza's primary sector is fish. The coasts of Ibiza and Formentera are surrounded by an extensive continental shelf that is highly productive. Fish had always been the main source of protein within easy reach of the islands' inhabitants (Austria, 1982: 81; Vuillier, 2000: 37). Sales of fish abroad only became widespread with the construction of an ice factory, which produced ice to ensure the preservation of export fish destined for the port of Barcelona, and the introduction of fishing trawlers with internal combustion engines, which –it must be said– soon depleted the local fishing-grounds. Fish sales began at the close of the First World War and reached a peak of 541 tonnes in 1927, before falling back to a steady level in the region of 300 tonnes a year.

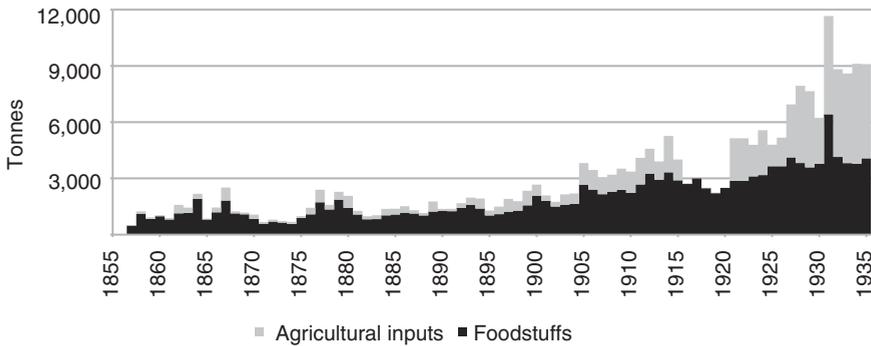
3.2. Goods purchases

Around 1880, large-scale sales of salt commenced and the export of almonds became consolidated. As a consequence, Ibiza saw a sharp rise in total income and consumption options. Unsurprisingly, the first items sought by residents were staple foodstuffs to supplement their customarily meagre diets.

Between 1880 and 1900, the consumption of rice rose from 10 kilograms per inhabitant to over 15 kilograms per inhabitant, and the purchase of wheat flour from abroad reached 75 kilograms per person per year in the 1930s. The purchase of olive oil climbed

from 2 liters per person per year to more than 6 liters per person per year in 1916, while the consumption of sugar nearly doubled. The modernization of Ibiza's agriculture pushed out traditional wheat fields and olive groves and forced the entire population to live on imported staple foodstuffs. Once their appetite for cereals and olive oil was satisfied, Ibiza residents began to consume beer, spirits, chocolate and coffee, and the consumption of these items would grow exponentially after the First World War.

FIGURE 2
Goods entering the port of Ibiza Town



Source: Dirección General de Aduanas.

The conclusion to be drawn from the above data is very clear. At the outset of the twentieth century, Ibizans had definitively lost their food self-sufficiency and become completely dependent on markets. Indeed, the trend intensified to extraordinary levels after the First World War.

First and foremost under the category of agricultural inputs is fertilizer, whose consumption in the Balearic Islands grew far in excess of the Spanish average⁵. The purchase of fertilizer first appears in the early years of the twentieth century and reached 500 tonnes prior to the First World War, when it dissipated. By 1921, however, fertilizer purchases had reached 1,500 tonnes, and they climbed to 4,000 tonnes by 1935. The second most important item in the category is made up of forage and bran, whose purchases exceeded 1,000 tonnes after the First World War.

Figure 3 shows systematic inbound quantities of cotton yarn and Figure 4 shows a high level of sales of cotton fabric, indicating the existence of significant textile activity. The

5. In the 1930s, the Balearic Islands were one of Spain's leading provinces in the consumption and production of mineral and chemical fertilizers (PUJOL, 1998: 161).

trade data indicate that the business began to develop in 1880 and reached its peak shortly before the First World War.

The earliest textile activity to appear on Ibiza was the cottage manufacture of hosiery, which was a low value-added activity that disappeared in the 1920s as the island's economic boom eliminated any production whose competitiveness was based on the use of unskilled labor. However, this process did not in any way lead to the disappearance of textile production more broadly or the putting-out system in particular.

The manufacture of hosiery continued, but the scale changed. Fully industrial production began in 1925 when the island's first textile factory opened in Ibiza Town under the ownership of the Catalan Ventosa family, with a workforce of over a hundred women⁶. However, the new business was not without its problems. In 1929, the fall in demand forced frequent temporary closures.

The textile putting-out system carried on with the embroidery of handkerchiefs and bandanas, which was, unlike the manufacture of hosiery, a strictly artisanal job that required a high level of skill and afforded good returns. The labor of women embroiderers was centralized through workshops in Ibiza Town, which took charge of distributing yarn and virgin cloth and then collecting the output of thousands of women scattered across the island. In 1924, two of the workshops were already important enough to become members of the Chamber of Commerce. The existence of other workshops is also evident from advertisements that they published in the print media in search of additional women embroiderers. In the 1930s, the most important of the workshops, Llambies, even employed twenty full-time women who were not embroiderers, but instead focused solely on distribution and packaging (Cirer-Costa, 2021a).

Beginning in 1920, embroidery hoops invaded the island's homes, where they remained until the closing years of the twentieth century. Notably, it was this cottage industry that became, in the 1970s, the origin of the Ibiza fashion style known as Adlib.

Despite its importance, however, the activity of embroidery was not recorded in any statistics. As a consequence, its economic results do not appear in Figures 3 and 4. Both the raw materials used by the embroiderers and their final output were lightweight, but

6. Thus, Ibiza poses a clear example of success in the transition from a proto-industrial production model to a model that was genuinely industrial in nature. In this case, Ibiza appears as an extension, a satellite, of the process followed by Catalonia in its industrialization (MARFANY, 2010; TORRAS, 1998).

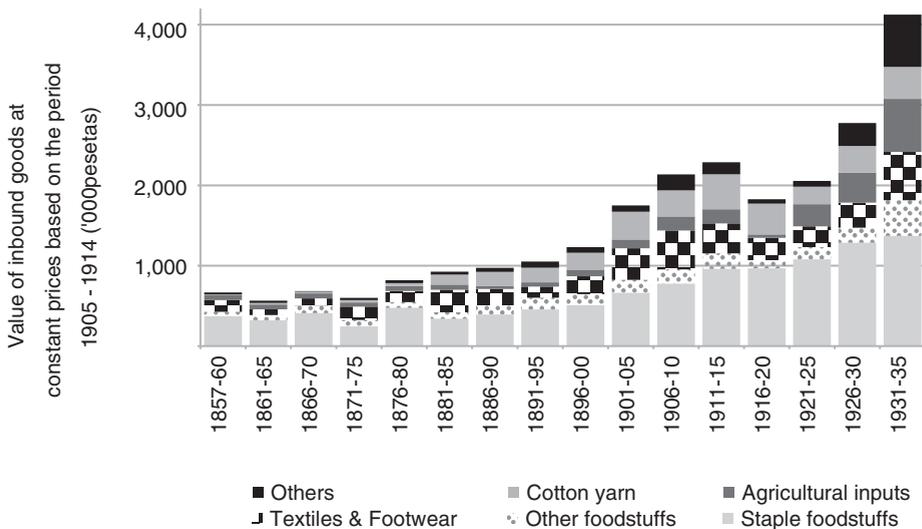
high-value goods that were not loaded onto merchant vessels. Rather, the materials travelled to and from the port of Barcelona as personal baggage and their transport was therefore not recorded in the cabotage balances kept by the port officials in Ibiza Town. This statistical problem accounts for the misleading decline in textile production that is conveyed by the official data.

3.3. An overview of island trade

The analysis thus far has focused on the physical quantities of goods. However, this approach proves insufficient, because it is also necessary to introduce the value of goods in order to gain a complete picture of the relative importance of each product in Ibiza's balance of payments and its ability to generate income. To examine the value of different goods, the analysis makes use of constant prices based on the prices prevailing in the period 1905-14.

FIGURE 3

An overview of island trade: Inbound and outbound trade at the port of Ibiza Town, at constant prices (based on average prices, 1905-14)



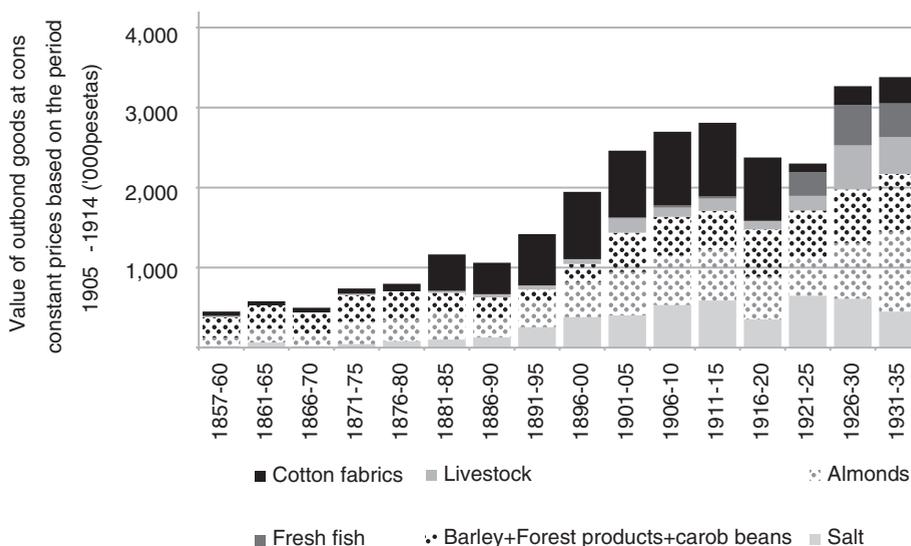
Note: the category of "Others" includes energy products, building materials, and manufactured goods.

Source: Dirección General de Aduanas.

The prices used for the most common items come from Carreras and Tafunell, who offer data on key products such as wheat flour, sugar, corn, etc. (Carreras & Tafunell, 2005).

For the remaining goods, the analysis draws on statistic evaluations in the cabotage balances mentioned earlier. For the years under study, it is necessary to bear in mind that the relative weight of food in the consumer's shopping basket was very high and that the evolution of the general price index in Spain was extraordinarily mild (Ballesteros, 1997: 367; Maluquer, 2013: 55). These two conditions make it possible to build and interpret the corresponding indices.

FIGURE 4
Outbound trade at the port of Ibiza Town, at constant prices
(based on average prices, 1905-14)



Source: Dirección General de Aduanas.

The values represented in Figure 3 and Figure 4 point to three distinct stages in the trade recorded at the port of Ibiza Town:

- a) 1857-80. Opening up to the external market. This process was slow, gradual and based on traditional primary products, namely salt, almonds, carob beans and forest products, which constituted 85% or more of sales, while the most prevalent purchases were foodstuffs.
- b) 1881-1920. Integration into the market. Peak of putting-out system in the cotton industry. The purchases of staple foodstuffs continue growing, but more income-elastic foodstuffs as well as manufactured consumer goods like clothing and footwear now appear.

- c) 1921-35. Complete dependence on the market. Decline of the cottage cotton industry and deterioration in the sales of carob beans and forest products. Total food dependence compounded by dependence on production factors, given that agricultural production relies overwhelmingly on imported inputs: fertilizer and forage. The sales of “modern” primary products become large-scale in nature.

In any event, the data on inbound and outbound goods record the consistency of the sales of salt and almonds (which together accounted for 40% or more of sales in all three stages) and of the purchases of staple foodstuffs (which likewise exceeded 40% of total purchases).

The trend followed by Ibiza’s trade is clear. In the first stage, the top ranks of traded goods are held by traditional agricultural items, such as almonds, carob beans and forest products, which produce and shape the basic commercial networks. In the second stage, salt production acts as a powerful trigger of economic activity and almond groves spread across the entire geography of the island, pushing out wheat fields, vineyards and olive groves. In the third stage, the market is now the main protagonist. Farmers sell abroad nearly everything that they produce, and they need to buy large amounts of fertilizer and forage to sustain their holdings. At the same time, the introduction of the internal combustion engine revolutionizes fishing. Figure 3 leaves no doubt of the increasing dependence of Ibiza’s population on imported foodstuffs, while also showing the dependence of its farmers and fishermen on imported inputs to carry on their activity.

At the close of the 1920s, Ibiza had consolidated a totally outward-looking economic model that was fully integrated into international markets, which were vital to its survival.

4. AN ESSENTIAL HUMAN FACTOR: MERCHANTS

The previous sections examined the boom in trade at the port of Ibiza Town in terms of goods, prices and the capacity of Ibiza’s farmers to adapt to market demands and adjust to food dependence. The farmers, however, were only one of two groups that managed the economic development of Ibiza. The second group was made up of merchant shipowners.

The main function of merchant shipowners was to administer maritime transport, but this activity was only part of their business. In addition, all of them kept warehouses to store the island’s output and they sold import goods. They also financed operations and

often became known as bankers. They all needed to build a dual network of interests: on one side with farmers, who sold their products to the merchants and bought their foodstuffs and agricultural inputs from the merchants; and on the other side with other merchants in Barcelona, Algiers, Marseilles, Nice, etc., who sent Ibiza's products to England, France or the United States. The figure of the merchant shipowner was doubtless the linchpin around which the new Ibiza economy revolved. As "indigenous classes of capital", they were indispensable to the process by which new capitalist value chains came to encompass the entire economy (Banaji, 2016: 428).

The first was Edmund Wallis, a merchant of English origin, who was born in Minorca (a British possession at the time) and came to Ibiza in the late eighteenth century. Many others followed in his wake, so that by the start of the twentieth century the existence of no fewer than two dozen such merchants points to a fertile "seedbed" model for the dissemination of entrepreneurial skills (Baten, 2003: 302 Cavallo *et al.*, 2018: 240; Dosi, Pereira & Virgillito, 2017: 191). At the beginning of the twentieth century, one of the leading figures was Abel Matutes Torres, who owned a dozen ships, built the island's first power plant, and in 1918 built the main shipyard. Other important names were Pineda, Verdera, Tarres, etc. Most notable, however, is that none of these men was in a position to dominate the market or had any power whatsoever over the land. They constituted a paradigmatic example of an industrial district that gave rise quickly to monetary externalities, such as the possibility to acquire cheap inputs and gain access to an extensive market of specialist workers, and to non-monetary externalities, such as the deluge of knowledge that kept them informed of events in every market, even markets in which they were not involved (Johansson & Quigley, 2004: 168-71; Dei Ottati, 2002: 449; Popp, Toms & Wilson, 2006: 350).

It should be noted that all of these figures engaged systematically in a variety of activities as shipowners, merchants, financiers and sometimes industrialists; none specialized in only one activity. They did not make up a closed social group, nor did they typically intermarry with families of professionals or landowners. Some, though, did enter into marriages with other Catalan or Majorcan merchant families.

On 11 October 1903, a dozen merchant shipowners founded the Ibiza Chamber of Commerce. Presided over by Matutes, the newly established body marked the definitive institutionalization of the commercial class as the backbone of island society and the social group able to impose rules of conduct and legitimacy (Ma, Ding & Yuan, 2016: 12; Thornton & Ocasio, 2008: 449; Valdaliso, 2006: 239). The chief activity of the new Chamber of Commerce was focused on improving the island's communications with the outside world, specifically through the enlargement of the port, the establishment of regular

transport lines subsidized by the Spanish state, an improvement in the quality of postal and telegraph services, and more. Notably, the Chamber of Commerce's early interest in the island's promotion of tourism led to its financing, in 1909, of the publication of the first tourist guide for the islands of Ibiza and Formentera (Planells, 1984).

5. DIRECT AND INDIRECT EFFECTS OF GROWTH IN THE AGRICULTURAL SECTOR

In short order, the major dynamism of the agricultural sector spread through the island economy and dramatically changed the relationships that had hitherto existed. The entire population enjoyed a significant increase in well-being and complementary economic sectors underwent a thorough overhaul. We can summarize the effects under three headings: a) direct effects on the agricultural sector itself; b) direct effects on other economic sectors; and c) indirect effects.

5.1. Direct effects on the agricultural sector itself

Foremost among the direct effects on the agricultural sector itself was the impact of the new situation on the well-being of the rural population. The first result of the improved economic situation of Ibiza's population was a sharp fall in mortality rates. Between 1870 and 1890, the annual mortality rate hovered in the region of 26 deaths per 1,000 inhabitants (Cirer-Costa, 1986: 27). From 1890 onwards, however, the figure dropped to 17.2 deaths per 1,000 inhabitants and even registered additional small drops in subsequent years. It must be noted that the overall mortality rates in Spain stood in the region of 26 to 30 deaths per 1,000 inhabitants over the same period. By contrast, Ibiza's birth rate was very similar to Spain's overall birth rate at the time: 33-5 births per thousand inhabitants⁷. The wide difference between Ibiza's rates of birth and mortality should have produced a sharp rise in population. Initially, however, such a rise did not occur because the excess population was siphoned away by emigration.

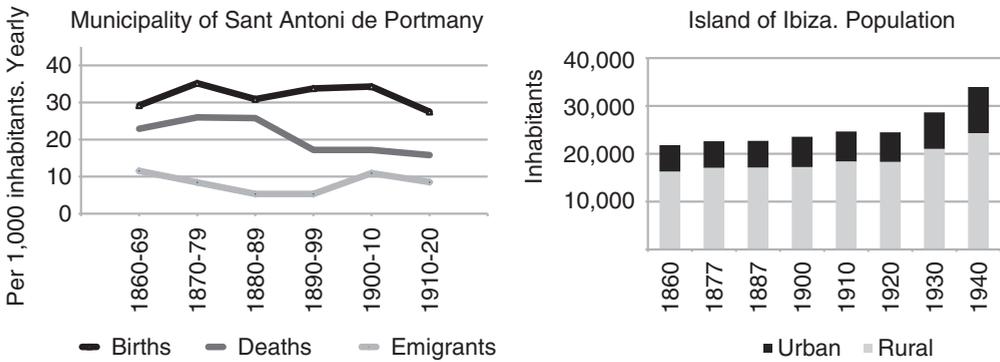
In Figure 5, we can see that despite strong natural growth there was no significant increase in population because emigration absorbed the excess population in a handful of ways. Quantitatively, the most important contingent was made up of young men who emigrated early and often illegally in order to avoid military service. Their destination was

7. The Ibiza data correspond to the municipality of Sant Antoni de Portmany, which is perfectly representative of the Ibiza countryside. The demographic data for Spain come from NADAL (1976).

typically Argentina, Uruguay or Cuba, and they were almost always the younger sons of farmers, who collaborated through their departure in maintaining the farm holdings of their older brothers. A second type of migration consisted of those who went temporarily to French colonies in North Africa with a specific aim in mind, namely to take part in the harvesting of grain or grapes, house building, or some other activity. The third most common type was made up of sailors who usually signed on as crew on foreign ships for several years before returning to Ibiza. On many occasions, the latter two types started out as temporary only to turn into cases of permanent emigration.

FIGURE 5

Estimated demographic data on births, deaths and emigration for the municipality of Sant Antoni de Portmany and the population of the island of Ibiza



Source: Cirer-Costa (1986).

Data on per capita consumption of imported foodstuffs show that the islands of Ibiza and Formentera saw a radical improvement in their diet during the period under study. In the case of accommodation, the number of dwellings increased by 44% between 1873 and 1920, while the population grew by only 10%. As a consequence, the average number of people living in each dwelling fell from 5.6 to 4.3. In addition, the quality of rural housing rose sharply. Such a widespread improvement in living conditions can only be the result of a substantial rise in incomes.

As ownership of the land was evenly divided, there were no landowners who could absorb the new surpluses, nor were the merchant shipowners able to do so, because they were locked in competition with one another and could not engage in dishonest or predatory behavior that might lead to their expulsion from the circuits of buying and selling (Guiltinan & Gundlach, 1996: 91).

The rise in incomes spread rapidly through the entirety of rural society as the owners of smallholdings or lands that were poorly suited to the new crops saw increasing opportunities to obtain income from their labor. It was common for holders of larger farming operations to hire their more disadvantaged neighbors and relatives for seasonal labor, such as the harvesting of cereal crops, the picking of grapes or the gathering of almonds and carob beans, and the rendered services typically earned payment in kind (Fajarnés, 1985). Work connected to forest use and house construction already existed as a clear example of contract labor. This was even more the case with salt production, which was an extraordinarily powerful source of demand for a workforce that was strictly wage-earning. In addition, the cotton industry made it possible to capitalize on the labor of women, whose work in the manufacture of cotton enabled them to earn income for their families.

5.2. Direct effects on other economic sectors

With respect to the direct effects on other economic sectors, maritime transport and warehouse storage were doubtless the activities that developed most rapidly with the rise in agricultural production. The growth was not induced, but rather symbiotic. The blossoming of Ibiza's merchant navy also had an extraordinary leveraging effect, since the vessels were built on the island itself. Shipbuilding also required two products from Ibiza's primary sector (pinewood lumber and tar) and it generated robust demand for highly skilled professionals. Shipbuilding made use of tools and techniques that were increasingly more modern, giving rise to an important source of immersion in the most advanced technologies of the time and creating a strong demand for skilled labor in the shipyards, especially for machine operators able to use mechanical saws and cranes, sailmakers, blacksmiths and more. In addition, the crews of vessels were made up entirely of Ibiza natives, giving rise to a requirement for a large share of highly skilled workers, particularly skippers and pilots.

Other important operations included the bagging and storage of goods prior to export. To this end, many warehouses and depots were built in the vicinity of the port. In addition, forest products needed to be processed prior to shipment. For instance, pine bark had to be finely ground and lumber sawn. Indeed, these two operations prompted the electrification of the island in 1907. By contrast, attempts to set up a canning industry foundered.

5.3. Indirect effects

A good deal of the indirect effects from agricultural growth appears to be linked to the improvement in communications both internally and abroad. Internally, the export of commercial products required a dense network of roads to integrate the island market. In addition, the road network enabled rural residents to gain access not only to foodstuffs arriving from off-island, but also to fruits and vegetables grown in the island's coastal orchards. As a result of the new situation, irrigated land doubled in area over the period studied (Barceló, 1970).

In the case of external communications, the central feature to consider is the low opportunity cost of transporting goods for consumption to Ibiza and Formentera. Throughout the period under study, the weight of outbound goods from the port of Ibiza Town was at least twice as great as the weight of inbound goods. As a result, the freight costs of importing foodstuffs and other goods were low. Feeding the island soon depended on purchases abroad, but this dependence had the advantage of stabilizing the prices of essential staples. Indeed, food prices in Spain between 1830 and 1936 were characterized by long-term stability, except during the years of the First World War (Maluquer, 2013).

Given the aims of the study, the analysis has been limited to the direct and indirect effects of agricultural growth on the island economy itself, but this process also had macroeconomic effects on Spain as a whole, the most important being the acquisition of foreign currency. Ibiza's agricultural and salt sector exported most of its output. That said, effective collaboration to earn foreign exchange did boost the Spanish economy as a whole. Agricultural and salt exports were part of a wide array of export initiatives in Spain's primary sector that provided the main source of the country's foreign exchange throughout the first third of the twentieth century (Ayuda & Pinilla, 2020; Barreiro, 1983; Clar, Martín & Pinilla, 2015; Cuevas, 2001; Hans, 1923; Hernández, Rubio & Garrués, 2016; Pinilla, 2001, 2004, 2017; Pons, 1993; Uriarte, 1995).

6. ACCUMULATION OF FINANCIAL, HUMAN AND SOCIAL CAPITAL FROM AGRICULTURAL GROWTH

Agricultural and salt exports drove shipbuilding, the construction of buildings, electrification and a number of ancillary industries, such as sawmills and ice factories. However, local capital did not create any manufacturing businesses that were independent of agricultural exports.

Meanwhile, agricultural exports generated important economic surpluses that needed to be employed in some way. The failure of the two manufacturing initiatives gave rise to a unique phenomenon: the creation of a major tourism industry. In the 1930s, tourism absorbed the investment capacity of Ibiza's entrepreneurs.

Since the late nineteenth century, the island of Ibiza had attracted only a few adventurous travelers, who captured their experiences in a host of books and articles. Their accounts, in turn, inspired the arrival of the first tourists, who began appearing as the island's maritime communications improved.

In 1932, the first establishments specifically dedicated to international tourism opened their doors. Then, in 1933, tourism on Ibiza saw explosive growth. Three luxury hotels opened on the coast. Most prominent among them was the Gran Hotel, which could accommodate over a hundred tourists and offer first-class comfort. In the two years that followed, more hotels opened. So did dozens of bars, restaurants, shops, and businesses that offered excursions on boats and in buses, to name but a few examples. (Cirer-Costa, 2021a).

All the finance needed to build modern, luxury infrastructure for tourism came from the networks that had been built up around agricultural exports. Landowners, independent professionals and merchants threw themselves into the venture of building and managing hotels or complementary tourism enterprises. In Ibiza, agricultural surpluses were not absorbed into the secondary sector, but were instead targeted directly at the tertiary sector, specifically at tourism-related services in a process recently documented by Cirer-Costa (2021a).

It should be noted that few merchants were involved in the tourism industry in the thirties. Instead, tourism at the time was dominated by landowners. The situation, however, changed dramatically in the following decade. A period of war began in 1936 and did not end until 1945, resulting in the collapse of the entire island economy, especially the newly launched tourism sector. In 1946, an association of eleven merchant shipowners undertook to promote the revival of tourism, taking the lead in doing so by reopening the Gran Hotel (Cirer-Costa, 2021b: 495; Planells, 1984).

With respect to the formation of human capital, there was also a dramatic shift in the field of education, which was an area in which the starting point of all the Balearic Islands was particularly unfavorable. Broadly, the literacy figures for the Balearic Islands point to a trend that is highly unusual in the Spanish context. For a relatively rich, developed region, the rates of illiteracy were bleak and there was not the same close correlation be-

tween industrialization and literacy that appears in the rest of Spain. This state of affairs was due to the fact that literacy was being pursued exclusively in Spanish, which was unfamiliar to a large part of the local population who used Catalan to express themselves (Cirer-Costa, 2008: 101; Martínez Carrión & Puche, 2009: 173).

The situation, however, was quickly overcome when the island residents had an opportunity to take action. In the 1920s, once the engine of economic development was up and running, the people of Ibiza showed an unwavering commitment to the education of their children. Faced with the passivity of the Spanish state, the islanders launched a growing number of local initiatives aimed at building schools in every corner of the islands. Some of the initiatives were the work of municipal governments, while others were undertaken by the Catholic church. Most surprising and significant, however, was the contribution of associations and cooperatives that were strictly civic in nature, pushed forward by farmers and sailors. Bodies like *El Progreso*, *La Minerva* and *Pósito de Pescadores* succeeded in building and maintaining schools in places as remote as Sant Vicent de Sa Cala. As a result of all these initiatives, the literacy rate climbed from 9% in 1900 to 34% only thirty years later (Cirer-Costa, 2008: 106).

In addition, the example of Ibiza fully confirms the hypothesis that a rapid improvement in agricultural yields fosters the adoption of innovations and investment in human capital⁸. Similarly, it confirms the hypothesis linking the concentration of land ownership to illiteracy (Beltrán & Martínez Galarraga, 2018: 81). In Ibiza, the rapid increase in yields and a relatively equitable distribution of land ownership promoted the rapid introduction of technological innovations and large-scale investment in formal education, which enabled people to acquire the knowledge, capabilities and skills that empowered them to face unfamiliar situations and adopt further innovations (Sandberg, 1979: 228; Schultz, 1975: 843).

Human capital is an intangible element that is accumulated individually, whereas social capital is acquired collectively, together: “Social capital consists of the stock of active connections among people; the trust, mutual understanding, and shared values and behaviours that bind the members of human networks and communities and make cooperative action possible” (Cohen & Prusak, 2001: 4). Social capital appears as a skill set that is shared among the members of a social group and enables them to cooperate with one another (Staber, 2007: 506; Stepahn & Uhlaner, 2010: 1360).

8. “A rise in literacy and numeracy may reflect a desire to acquire skills that were increasingly important once peasants became more integrated into markets.” (GALOR & ÖZAK, 2016: 3068). (MARFANY, 2018: 21).

The first individuals who were forced into establishing cooperative structures in order to exploit new opportunities were farmers. Most of the roadways in the interior, which were essential to extract the products of the land and gain access to import goods, were built by means of cooperative methods undertaken by different rural communities. This was also the case with the island's water distribution networks. The result of these efforts was the creation of a considerable endowment of social capital (Litina, 2016: 352).

A second source of the accumulation of social capital arose in the consolidation of relationships between farmers and merchants. At first, they had to negotiate the terms and conditions of transactions. With the repetition of their agreements, however, trust was systematically consolidated between the parties and their contracts became implicit, driving transaction costs sharply downward (Williamson, 1993: 479).

These relationships clearly have a business component: the customer–supplier relationship. However, as such relationships become repetitive and expand their reach, they soon transcend the immediate sphere to encompass the affected social body as a whole and bring social legitimacy to the activity of businesspeople (Hopp & Stephan, 2012: 923; North, 1991: 97). Innovative entrepreneurs cannot develop their businesses if they are unable to count on a minimum level of social support or a mental openness capable of accepting the downside of Schumpeterian “creative destruction” (Eckhardt & Shane, 2003: 336; Fitjar, Gjelsvik & Rodríguez Pose, 2013: 504; Holmes *et al.*, 2013; Schumpeter, 2003).

This entire theoretical environment builds a conceptual framework in which the actions of Ibiza's merchant shipowners dovetail very neatly. Without them, the island's economic model would not have been able to evolve as the previous sections have described. At the same time, however, their adaptability to changing market conditions required a permanent change to the conditions in which they developed their relationships with Ibiza's farmers. Without strong social cohesion, there would have developed no relationships of trust, no individual and group bonds that gave legitimacy to this adaptability and that constitutes the foundation of any successful business network (Besser & Miller, 2011; Suchman, 1995: 574).

The establishment of social bonds that had a strong economic impact soon extended beyond the islands. Thousands of natives of Ibiza and Formentera emigrated to the south of France and North Africa, regions that were often visited by Ibizan vessels carrying salt, carob beans, charcoal, almonds, etc. Both of these factors helped to multiply the capacity of the islands' society to absorb commercial information that proved especially trustworthy and well adapted to their potential.

7. CONCLUSIONS

Throughout the first half of the nineteenth century the island had very limited resources and its only hope of development rested on producing marketable products that would bring in sufficient means to cover the subsistence of the residents and provide an additional surplus that would help to improve their precarious situation (Banaji, 2016; Bertram & Poirine, 2007: 327; Karampela, Kizos & Spilanis, 2014: 294).

In accordance with Lewis's two-sector model, we can assert that a capitalist sector appeared and in three generations swept away the subsistence sector. Lewis points to two elements that can in many cases delay or impede this transition: a rapid increase in the price of foodstuffs and the opposition of a traditional privileged class whose dominance will be threatened by any structural change (Lewis, 1954: 293; Timmer, 1988: 293). In the case of Ibiza, both factors are clearly absent. No inflation in food prices took place because it was possible to feed the local population with imported foodstuffs. Nor did any opposition arise from big landowners for the simple reason that none existed on Ibiza.

Agriculture modernized rapidly on the islands, but without falling into the monoculture trap. The farmers of Ibiza and Formentera applied a polyculture that followed a very precise seasonal sequence, which enabled them to gain the maximum benefit from their labor. Given the Mediterranean climate, crops required little attention either in the winter or in the summer. Winter was a time to work in the forests, for example, felling pine trees to obtain firewood, bark and charcoal, or operating kilns to produce lime and pitch. By contrast, summer occupied the youngest and strongest workers in the salt pans, while the remaining workers expanded and maintained the islands' thousands of kilometers of stone terraces or they built houses. Those who lived near the coast also went fishing. Many of Ibiza's farmers performed three or four jobs a year outside of their homes in addition to cultivating and maintaining their own holdings.

Women, for their part, had a more constant workload throughout the year: taking care of children, cooking, looking after livestock and tending a small kitchen garden. Also, in the middle hours of the day, when there was good light, rural and urban houses alike were filled with embroidery hoops and frames.

Only a small share of these outputs were for their own use; the remainder was bound for external markets. It is clear that the farmers of Ibiza and Formentera were highly motivated to engage in production for the market and take utmost advantage of their capacities, no risk aversion is detected, nor is any inclination to ensure self-consumption (Federico, 2005: 227). As occurred in the rest of Europe, smallholders were better posi-

tioned to adapt to the new circumstances than the large landowners who employed wage laborers (Carlson, 2018: 707; Carmona & Simpson, 2012: 889; Garrabou, Planas & Sagner, 2012: 177; Hahn *et al.*, 2014: 426; Koning, 2007).

The evolution of agriculture and trade, the production of salt, and the subsequent introduction of tourism all developed as a result of non-hierarchical social mechanisms. No one acted in the role of planner nor did any agent have sufficient power to steer the process. Resources were widely distributed. Also, the process of institutionalization and the creation of incentives that focused Ibiza society on innovation and increases in export-oriented production were entirely synchronous with economic development (North, 1991: 97; Popp, Toms & Wilson, 2006: 350; Timmer, 1988: 319). The process of institutionalization was strictly local, but the individuals who carried it out were able to build in global components even in the face of constraints imposed by the Spanish context (Crouch, Schröder & Voelzkow, 2009: 674; Ebner, 2016: 4; López Losa, 2010: 16).

By the end of the 1920s, the subsistence sector had disappeared, salt production had reached peak capacity, the entire countryside of the island had integrated into the market economy, and all of the new technologies that could be applied were being applied. Ibiza had reached a situation described by Lewis in which no further mechanisms remained available to drive additional increases in productivity (Lewis, 1954: 431). Ibiza's primary sector had attained such a high level of productivity that, in practice, it kept the manufacturing sector from embarking on a process that still faithfully followed the model put forward by Matsuyama (1992). In spite of various prior attempts, only one factory, Can Ventosa, was built. Even then, it achieved only mediocre economic results and its workforce always consisted exclusively of women.

Indeed, productivity was already falling. Throughout the period of study, the area under cultivation grew by over 30% thanks to the exploitation of marginal lands that necessarily drove yields downward. In addition, the newly prevailing conditions induced a rapid process of property division so that the size of holdings fell, on average, from 6.8 hectares to 5.2 hectares. Any holdings that were significantly smaller than average were unable to sustain a family. In this case, wages were no longer a complement, but a pressing need (Barceló, 1963a, 1963b).

At the same time, the island's development model began to bump into external constraints of the first order. Engel's law had begun to operate against Ibiza's products, which were also affected negatively by recent technological innovations: carob beans were no longer necessary in a motorized world, charcoal had been definitively replaced by gas, and salt was losing its appeal as a preservative in favor of refrigerators (Timmer, 1988: 279).

The poor economic conditions overall, together with the sudden rise of protectionism in purchasing countries because of the Great Depression, led to a collapse in the incomes of farmers and merchants at the outset of the 1930s (Federico, 2011: 30; Morilla, Olmstead & Rhode, 1999: 56; Petmezaz, 2006: 6). This was the crucial moment when Ibiza's society embraced tourism as a lifeline. The choice was made possible because of the prior accumulation of financial, human and social capital generated by the agricultural and commercial sectors.

It is commonly pointed out that the two tell-tale signs of the penetration of capitalism in agriculture are the predominance of wage labor and the integration of agricultural producers in the market (Carlson, 2018: 706). Ibiza amply met the second criterion at the turn of the twentieth century, but the first criterion never arose, even though there is no doubt that the island's farmers had not only become integrated into the commercial networks of capitalism, but also were perfectly aware of the fact.

In Ibiza, the introduction of capitalist modes does not appear to have been forced on them either by big landowners or by the emergence of an intermediate social class with enough power to impose market integration on dependent farmers (Moreno, 2018: 756; Torras, 1998: 62). A commercial sensibility emerged in Ibiza of its own accord, helped by the appearance of an intermediate social class that was not dominant in this case, but rather symbiotic: the merchants who, it must not be forgotten, had no direct power over the land.

While it is difficult to assess its importance, the wide extent of household textile manufacturing, which offers a clear example of a putting-out system, also played a notable role. The cottage cotton industry not only generated substantial income, but also spread discipline and labor rationalization among members of the rural population and, as had earlier happened in Catalonia, taught them how to harness market mechanisms for their own benefit (Kocka, 2018: 83; Torras, 1998: 84).

By the start of the 1930s, the exhaustion of the prevailing agricultural export model was already apparent. The island's agriculture, merchant navy and commerce were no longer able to absorb new injections of capital, and industry had shown its inability to spearhead a new phase of growth. This was the moment for genuinely innovative entrepreneurs who were able to invest in tourism, a business that differed radically from any other business previously undertaken on the island, but one in whose development they became fully committed.

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