

A DISTINCTIVE INDUSTRIALIZATION

Cotton in Barcelona, 1728–1832

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CHAPTER I

Introduction

Barcelona is a capital of the north with respect to Spain: rich, industrial, hard-working, a bit cold, pragmatic. In contrast it is the most southerly of the capitals of Europe... the Mediterranean relativizes the harshness of scrupulously capitalist relations of production.

(M. Vázquez Montalbán, *Barcelones* (Barcelona, 1990), p. 37)

This book is a study of the early history of the Spanish cotton industry, in Barcelona. It covers two principal phases in the industry's development: a first, from approximately 1736 to 1783, which was characterized by a concentration above all on calico-printing and a second, from 1783 to 1832, during which there was a gradual expansion in spinning and weaving and a start was made to introducing the cotton machinery which had been invented in England. It is limited, thus, principally to the period generally defined as 'pre-' or 'proto-' industrial; indeed it ends in the year of the foundation of the city's first steam-powered factory, that of Bonaplata, Rull and Vilaregut.¹

The concentration on Barcelona is justified by the fact that the development of the national industry was largely confined to the city during these two first phases. It was only during the second phase, with the expansion firstly of manual spinning and then the progression to dependence on hydraulic and steam-power, that the extent of this predominance began to be reduced with significant diffusion of the industry to other parts of Catalonia. Even then the lack of local mineral resources, and the consequent need to import

¹ First *successful* steam-powered manufacture: there were earlier attempts at use of steam-power which were not persisted with. On these, see below, pp. 264-6. On the Bonaplata mill, see J. Nadal, 'Los Bonaplata: tres generaciones de industriales catalanes en la España del siglo XIX', *Revista de Historia Económica*, 1 (1983), pp. 79-95, and his *El fracaso de la Revolución Industrial en España, 1814-1913* (Barcelona, 1975), p. 198, or the condensed English version of this: 'The Failure of the Industrial Revolution in Spain, 1830-1914', in *The Fontana Economic History of Europe* (London, 1973), IV, pt 2, pp. 609-10.

coal as well as steam engines, led to the continuance of the city's importance as a manufacturing centre. Surveys of the location of cotton spindles in Catalonia carried out in 1850 and 1861 show Barcelona's share to have stood at over a third for both dates and the predominance with respect to steam-power was emphatic: a further survey of 1848 reveals that sixty-six of the eighty-nine Watt engines in use were in mills in Barcelona and its immediately surrounding areas.² The 1860s represented a more definite turning-point with diffusion facilitated by the adoption of the water turbine, which increased the advantage of hydraulic power over steam, and the building of railways, which eased the delivery of coal and other cost-influencing products, including grain, to interior areas of Catalonia.³

AN INDUSTRIAL HISTORY

The study is intended firstly to serve as a general history of the industry. There is a need for such for although considerable research has been carried out on aspects of, and phases in, its development by Catalan historians in recent years, this work has not been collated into a history of the industry as a whole. The gap in the literature in English is even greater.⁴ As a 'general industrial history', it is hoped

² Nadal, *El fracaso*, pp. 198–201. See also R. Grau and M. López, 'Revolució industrial i urbanització. Barcelona en la construcció de la Catalunya moderna (1714–1860)', *L'Avenç*, 88 (1985), pp. 14–31.

³ On this, see E. Camps, 'Migraciones internas y formación del mercado de trabajo en la Cataluña industrial en el siglo XIX' (DPhil thesis, University Institute of Florence, 1990), p. 50, and P. Pascual, *Agricultura i industrialització a la Catalunya del segle XIX* (Barcelona, 1990), pp. 82–130. Coal was needed in interior areas to fuel steam engines which were used to complement hydraulic power whose availability was threatened by drought during the summer months.

⁴ The principal published works in Spanish on the industry for the period covered by this book (in addition to those cited in nn. 1–3 above) are as follows: J. Carrera Pujal, *Historia política y económica de Cataluña* (4 vols., Barcelona, 1946–7), iv, pp. 133–65, and *La economía de Cataluña en el siglo XIX* (4 vols., Barcelona, 1961), ii, pp. 197–332; F. Torrella Niubó, *El moderno resurgir textil de Barcelona (siglos XVIII y XIX)* (Barcelona, 1961); V. Vázquez de Prada, 'Las fábricas de indianas y estampados de Barcelona en el siglo XVIII', *Third International Conference of Economic History* (Paris, 1965), v, pp. 277–91, and 'Un modelo de empresa catalana de estampados en el siglo XVIII; la firma Francisco Ribas', *Primer Congrés d'Història Moderna de Catalunya* (Barcelona, 1984) 1, pp. 635–42; P. Molas Ribalta, *Los gremios barceloneses del siglo XVIII* (Madrid, 1970), pp. 519–38; A. Duran Sanpere, *Barcelona i la seva història* (3 vols., Barcelona, 1972–5), ii, pp. 291–309; R. Grau and M. López, 'Empresari i capitalista a la manufactura catalana del segle XVIII. Introducció a l'estudi de les fàbriques d'indianes', *Recerques*, 4 (1974), pp. 19–57; C. Martínez Shaw, 'Los orígenes de la industria algodonera catalana y el comercio colonial', in J. Nadal and G. Tortella (eds.), *Agricultura, comercio colonial y crecimiento económico en la España contemporánea* (Barcelona, 1974), pp. 243–94; R. Alier, 'La fábrica d'indianes de la familia Canals', *Recerques*, 4 (1974), pp. 59–91; R. Fernández, 'La burguesía barcelonesa en el siglo XVIII: la familia Glòria', in

that the book will be of service to students of economic history interested in issues such as entrepreneurship, the organization of production, technological change and diffusion, investment practices, capital accumulation, the relationship of industrial change to state policy, the character of markets and the relationship of industrial growth to expansion in trade. The book should also make it possible to incorporate the Catalan example into those few attempts which have been made to adopt a comparative approach to European industrialization. In particular it will contribute to completing the type of comparison in terms of factors of production carried out by Stanley Chapman and Serge Chassagne,⁵ and it is hoped, too, that it will make it possible to situate the Catalan example with respect to the contrasting, textile industrialization paradigms posited by Maurice Lévy Leboyer – the ‘downstream’ pattern, dominated by the basic manufacturing processes, the British case, and the ‘upstream’, led by the finishing (printing) ones, that of the French.⁶

P. Tedde (ed.), *La economía española al final del Antiguo Régimen*, II, *Manufacturas* (Barcelona, 1982), pp. 3–131; A. Sánchez, ‘Los orígenes sociales de los fabricantes de indianas. La familia Rull’, *Primer Congrés d’Història Moderna de Catalunya* (Barcelona, 1984), I, pp. 779–88, and ‘L’estructura comercial d’una fàbrica d’indianes barcelonina: Joan Rull i Cia (1790–1821)’, *Recerques*, 22 (1989), pp. 9–24; J. M. Delgado, ‘La industria algodonera catalana (1776–96) y el mercado americano. Una reconsideración’, *Manuscrits, Revista d’Història Moderna*, 7 (1988), pp. 103–16; J. Fontana, *Aribau i la indústria cotonera a Catalunya* (Barcelona, 1963); M. Izard, *Industrialización y obrerismo* (Barcelona, 1973); J. Vicens Vives, *Industrials i polítics del segle XIX* (Barcelona, 1958), pp. 45–79; M. Izard, *La revolución industrial en España. Expansión de la industria algodonera catalana, 1832–1861* (photocopied edition, Mérida, 1969). There exists, too, important unpublished work: above all that of A. Sánchez, ‘Los fabricantes de indianas de Barcelona a finales del siglo XVIII y principios del XIX: la familia Rull’ (Tesis de licenciatura, Barcelona, 1981), ‘Los fabricantes de algodón de Barcelona, 1772–1839’ (3 vols., DPhil thesis, Barcelona 1987), and ‘La era de la manufactura algodonera en Barcelona, 1736–1839’ (photocopied text now to be published in *Estudios de Historia Social*). The literature in English is limited to J. C. La Force, *The Development of the Spanish Textile Industry* (Berkeley, CA, 1965), pp. 14–19, 133–44; R. Herr, *The Eighteenth Century Revolution in Spain* (Princeton, NJ, 1973), pp. 137–42, and short sections of general studies on Spanish and European industrialization.

⁵ S. D. Chapman and S. Chassagne, *European Textile Printers in the Eighteenth Century* (London, 1981).

⁶ M. Lévy Leboyer, *Les Banques européennes et l’industrialisation internationale dans la première moitié du XIXe siècle* (Paris, 1964). See also his ‘Le processus d’industrialisation: le cas de l’Angleterre et de la France’, *Revue Historique*, 239 (1968), pp. 281–98.

FROM 'COMMERCIAL' TO 'INDUSTRIAL' CAPITALISM

Dobb and Vilar

The book also relates to some of the major conceptual issues which have arisen in the course of interpreting the process of Europe's economic and social development. Firstly, it should serve to throw light on the debate concerning the movement from a stage of 'commercial' to one of 'industrial capitalism' which apparently coincides in the Catalan case with the period covered by the book. The question has its source, of course, in *Capital* in which Marx distinguishes two possible routes for the change – 'a really revolutionary way' in which 'The producer becomes a merchant and capitalist in contradiction to the agricultural natural economy and the guild encircled handicrafts of the medieval town industry' or one in which 'the merchant takes possession in a direct way of production' and which though it 'serves historically as a mode of transition nevertheless ... cannot by itself do much for the overthrow of the old mode of production, but rather preserves it or uses it as its premise'.⁷ The more general reference point, however, is Maurice Dobb's *Studies in the Development of Capitalism* which represents the principal interpretation of the Marxist viewpoint. Dobb's approach is imaginative, eclectic and based on wide historical knowledge – later criticisms of either narrowness, or of having given too much weight to one rather than another of the principal mechanisms whereby the transition was achieved, seem misplaced.⁸

Aware that Marx's second 'way', as Marx himself suspected, had more often represented a cul-de-sac than securing a successful passage to industrial capitalism, a first of Dobb's emphases was on the particular circumstances in the English case which caused a broadening of the involvement in investment in industry so that middling social groups as well as members of the commercial and landed elite became involved. He attributed this largely to the seventeenth-century political changes which led to a decline in the monopolies and restrictive practices which had previously restricted commercial opportunities. A second, and the principal, emphasis was

⁷ Cited by M. Dobb, *Studies in the Development of Capitalism* (revised edn, London, 1963), p. 123.

⁸ E.g. R. Brenner, 'Dobb on the Transition from Feudalism to Capitalism', *Cambridge Journal of Economics*, 2 (1978), pp. 121–40, argues that Dobb overemphasizes external causes (commerce, towns, political changes) in his explanation.

on the process of 'capital accumulation'. By this Dobb meant a 'primitive' accumulation of capital in the Marxist sense – in other words one which preceded, and made possible, the structural shift to a type of economy in which capital accumulation was regular and automatic. Although, again, he was wide-ranging in his identification of causes of the development – he considered the effects of trade and inflation, with its possibly discriminatory effects on groups with different extents and types of property and indebtedness, amongst others – he attached particular importance to those types of accumulation which involved deprivation of one individual by another (such as that of land) and which, thus, had the additional effect of contributing to that other necessary factor of production for a capitalist system, a 'free' (in terms of possessing nothing and thus being dependent on the labour market: the 'freedom' was that of the employer) labour force: 'It had to be enrichment in ways which involved dispossession of persons several times more numerous than those enriched', he wrote.⁹

The framework for discussing the issue in the Catalan case is Pierre Vilar's brilliant study *La Catalogne dans l'Espagne moderne*. The source of the early emergence of industrial capitalism in the Catalan region, and the problems to which this precocity gave rise in a national context in which traditional modes of production dominated both quantitatively and with respect to the holding of political power, represent the unifying themes of the work.¹⁰ For Vilar, Dobb's interpretation is too oriented towards the English example. Influenced himself by the work of the Annales school, and particularly by that of Ernest Labrousse with its emphasis on economic, demographic and social change over the long term¹¹ – to which Dobb, of course, could barely have had access – he states at the opening of the second volume of the three-volume work that 'It appears clearer and clearer today that the creative power of the eighteenth century – which assured the definitive triumph of capitalist over feudal society – did not only manifest itself in the England

⁹ Dobb *Studies in Capitalism*, pp. 123–254.

¹⁰ P. Vilar, *La Catalogne dans l'Espagne moderne. Recherches sur les fondements économiques des structures nationales* (3 vols., Paris, 1962). See, for instance, I, p. 154: 'The development of capitalism reserves these sorts of surprises. It is, by essence, an unequal development. It has installed in Spain, between the country as a whole and its industrialized regions, a sort of relationship of backward country to economically advanced country, of colony to metropolis, with the rancour which that supposes. But here the colonized are the majority. And they have the state! It is the origin of the split.'

¹¹ *Ibid.*, I, pp. 16–20, on this influence.

of the Industrial Revolution and in the France of the political revolution, but in the whole of Europe and its American annexes.¹²

He sets the question of the source of this 'creative power' in the Catalan region within a Malthusian framework: the limiting factor on the development of commercial capitalism, he argues, was low agricultural productivity; this occasioned diminishing marginal returns in any period of economic expansion as rising food and raw material prices penalized commercial and industrial investment whilst privileging incomes drawn from the sector of the economy most committed to the old structures – agriculture. This low agricultural productivity, though, as we shall see, he attributes primarily to the manner in which the pre-industrial economy was organized. The eighteenth-century Catalan expansion, he demonstrates, was particularly powerful, largely because it began from such a low starting-point, but it, too, soon showed signs of being vulnerable to the action of this iron, Malthusian law: by the mid-1750s rates of population growth began to decline as densities returned to high levels and consequent restrictions in labour supply some twenty years later threatened advance in the most 'progressive' sectors of the economy. On this occasion, however, the difficulties, rather than representing the prelude for economic regression, evoked an innovative response: the declining profit margins in the commercial and agricultural sectors gave rise to a large-scale transfer of capital to industry, removing, thus, the principal restrictions to continuous economic progress.

Vilar's explanation of how this had come about is consistent with Dobb's interpretation. There had been a change in 'modes of production', and in particular a great growth in the size of markets, a concentration of wealth and an increase in the 'freedom' of labour, permitting its rapid deployment from the agricultural to the industrial sector. A large-scale switch to industrial investment had thus become for the first time a possibility. The causes of these changes, according to Vilar, were on the one hand certain structural characteristics of the Catalan economy and society – in particular the practice of primogeniture, and the resultant satisfactory size of Catalan land-holdings and disincentive to holding labour on the land, and the area's varied climatic and soil resources, which encouraged specialization and the growth of market production – and on the other the unprecedented extent of the eighteenth-century

¹² *Ibid.*, II, p. 9.

demographic and commercial expansion which led to a maximization of the possibilities of change which these structural characteristics permitted.¹³

Common ground in Dobb's and Vilar's interpretations is the argument that it was only when the high profits which characterized 'commercial capitalism' were eroded by competition that investment on another basis was resorted to. 'Compared with the glories of spoiling the Levant or the Indies or lending to princes', Dobb writes, 'industrial capital was doomed to occupy the place of a dowerless and unlovely younger sister',¹⁴ and Vilar emphasizes the decline in profit margins in the second half of the eighteenth century in Catalonia and the resultant 'patient or passionate search by businessmen for new types of investment outlet: colonial expeditions, industrial investments... the exploitation of a massive labour force'.¹⁵

This book's contribution

It is not the intention to challenge Vilar's interpretation. On the contrary, a principal of the book's purposes is simply to play a part in what is effectively developing into a collective activity, that of filling the gap occasioned by Vilar's failure to complete a fourth, industrial volume for his study.¹⁶ This purpose assumes a respect for Vilar's characterization of the Catalan growth process, but, in its fulfilment, in addition to presenting material which will effectively do no more than document developments which are anticipated by Vilar, I shall also be concentrating on two phases in Catalan industrial development to which he gave less attention and whose characteristics, it is hoped, will contribute to refining his case.

The first of these is an industrial expansion in Barcelona in the 1740s. Vilar, as we have just noted, focusses principally on the period of industrial expansion between 1770 and 1790 when, it is true, it was at its most rapid, but this earlier growth was substantial – a near quadrupling in the size of the cotton industry was achieved – and is significant insofar as a principal cause for it was the first major participation of merchant capital in industrial investment. In my

¹³ *Ibid.*, II–III, *passim*. The argument is summarized at the following points: II, pp. 555–81; III, pp. 9–12 and 559–66.

¹⁴ Dobb, *Studies in Capitalism*, p. 160.

¹⁵ Vilar, *La Catalogne*, III, p. 562.

¹⁶ That one was originally intended is clear. At the end of III (p. 569), though, Vilar is vague about his future intentions. He refers to 'The phenomenon of Catalan industrialization' as 'too important to be treated as just an appendix of volume III, and too slight, despite everything, in the limits of the eighteenth century, to justify a whole volume to itself'.

fourth chapter I will focus on this episode and test Marxist explanations for the development – in terms of rising demand and crisis in other trades inducing a transfer of resources to industry – against others in terms of state policy and supply considerations (the availability of calico-printing skills). The second of the phases is that situated between the interruption of the expansion of the eighteenth century as a consequence of the War of Independence of 1808–14 and the renewed acceleration in industrial production of the mid-1830s. It represents the more serious gap in Vilar's work insofar as its existence makes it impossible to assess the extent of permanence of those changes in modes of production which he identified. Was the changed attitude to industrial investment a permanent one? In this case he has identified the turning-point in the area's economic and social history. Or did the crises of the end of the century force a return to the traditional diffidence of commercial capital to industrial outlets? In this case the change observed is not of such great significance: the turning-point was a potential one only. Vilar does consider this period in his short article 'La Catalunya industrial: reflexions sobre una arrencada i sobre un destí' but, in the absence of the necessary data, he is forced to adopt guesswork in answering these questions – he notes scattered evidence for continued industrial production, hypothesizes that the severity of the crisis in commerce may have been greater than in industry and thus actually have favoured industrial growth, and reiterates his previous emphasis on the importance of the changes in modes of production as another cause for industrial continuity: 'Catalonia had become used to producing not for subsistence but to sell.'¹⁷ In chapter 8 an attempt will be made at providing a stronger empirical basis for interpreting these years.

'PROTO-INDUSTRIALIZATION'

Catalonia and the debate

The same types of issue which preoccupied both Dobb and Vilar are of concern to historians today but the vocabulary which they use in their analysis has altered slightly and there have been some substantive changes in interpretations. In particular, studies of the

¹⁷ P. Vilar, 'La Catalunya industrial: reflexions sobre una arrencada i sobre un destí', *Recerques*, 3 (1974), pp. 7–22. Exists also in a French version in F. Crouzet, R. Gascon and P. Léon (eds.), *L'Industrialisation en Europe au XIXe siècle. Cartographie et typologie* (Paris, 1972).

type of which this book is an example would tend, now, to be grouped within the category of what is called 'proto-industrialization'. Proto-industrialization consists, as the title of one of the principal books on it reveals, in industrialization before 'industrialization'.¹⁸ Its study has been given priority by the belief that it represented a particularly important stimulus to those changes in modes of production on which, we have noted, both Dobb and Vilar concentrate. It is not the only new line of research relating to the rise of capitalism. A parallel debate has been going on which was initiated by an article of Robert Brenner in which a comparative approach was used to identify the variables which permitted or restrained the emergence of a capitalist system in agriculture in different countries.¹⁹ The two approaches are not mutually incompatible but do involve differences of emphasis. Whereas Brenner sees development as being an endogenous process which took place within the European agricultural system, students of 'proto-industrialization' would appear to be giving greater priority to changes coming from outside – trade-induced industrial development, which took the form in particular of the spread of industry in the countryside, which represented a catalyst for agricultural and other changes. The giving of particular emphasis to industrial development in the emergence of industrialization is justified by a belief that 'proto-industry' had certain characteristics – the contribution which it made to breaking traditional demographic restraints, the accumulation of capital to which it gave rise, the growth in merchant and technical skills which it encouraged and the growing need to centralize production to which it gave rise – which if they did not make industrialization proper inevitable at least made it more likely.

The source of the proto-industrialization debate was an article written in 1972 by Franklin Mendels in which he generalized from the findings of his research on demographic and industrial developments in Flanders.²⁰ There have been various contributors to the debate in the Catalan context. Josep Maria Muñoz has shown in his work on Sabadell and Terrassa that the successful nineteenth-century industrializations of these two wool centres was anticipated

¹⁸ P. Kriedte, H. Medick and J. Schlumbohm, *Industrialization before Industrialization* (Cambridge, 1981).

¹⁹ R. Brenner, 'Agrarian Class Structure and Economic Development in Pre-Industrial Europe', *Past and Present*, 70 (1976), pp. 30–75.

²⁰ F. F. Mendels, 'Proto-Industrialization: First Stage of the Industrialization Process', *Journal of Economic History*, 32 (1972), pp. 241–61.

by eighteenth-century 'pre-industrial' growth characterized by the emergence of a dynamic entrepreneurial class, the erosion of guild restrictions, a growth in scale of production, accumulation of capital, a diffusion of skills and demographic growth connected to the expansion in textile employment – all *a priori* support for the proto-industrial argument.²¹ By contrast Assumpta Muset has described a contrary experience in the case of the cloth industries of Esparreguera and Olesa de Montserrat. On the one hand, the character of the eighteenth-century development of the industry in these towns conformed to the principal elements in Mendels's model. It was predominantly a rural industry in which industrial work represented by-employment (though there were some full-time participants), production was for distant markets, there were developments in the organization of production and an accumulation of capital, the commercial (though not the production) side of the trade was dominated by merchant capital and the existence of industrial employment stimulated population growth. On the other hand, the growth was not followed by industrialization proper, the two industries experiencing structural problems and decline during the nineteenth century, their contribution to later industrialization being limited to the provision of labour forces for the new textile factories.²²

Mendels's original article did not, of course, predicate an automatic move towards industrialization but it left the question of the circumstances determining the success of the transition vague. Enriqueta Camps's recent thesis on labour migration in Catalonia during the industrialization period contributes to clarifying the issue and makes it possible to locate the apparently contradictory experiences described by Muñoz and Muset within the general process of textile industrialization in Catalonia. Her study demonstrates that during the industrialization period textiles were characterized by high rates of labour mobility as a consequence of technological change and those resultant geographical shifts in industrial location to which reference was made in the first paragraphs of this introduction. The labour force which was drawn to the developing sectors of the industry had its source, predominantly, in areas of proto-industrial activity. Industrialization

²¹ J. M. Muñoz, 'La contribució de la indústria rural a la industrialització: el cas de Sabadell i Terrassa al segle XVIII', *Primer Congrés d'Història Moderna de Catalunya* (Barcelona, 1984), 1, pp. 399–410.

²² A. Muset, 'Protoindústria e indústria dispersa en la Catalunya del segle XVIII: La pañera de Esparreguera y Olesa de Montserrat', *Revista de Historia Económica*, 7 (1989), pp. 45–68.