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## The stem family and industrialization in Catalonia (1900–1936)

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### ABSTRACT

The stem family was the predominant family in Catalonia in all social groups. Proto-industrialization took place in a context in which this type of family prevailed. In many areas, the man worked in the fields and women and other family members were engaged in manual spinning. In other cases, they were weavers who also farmed. With the advent of factories, there was a transfer of this well-trained labour supply to the factories. The stem family (consisting of at least two generations, unmarried children, and numerous women) allowed the circulation of domestic work between women within the same family and the consolidation of an abundant labour supply and cheap labour that allowed for the feminization of the textile industry with successive technological changes. Female labour trajectories, therefore, were not affected by marriage or motherhood, because the family had enough older women to deal with the domestic work of young mothers. Hence, the family type, and not the family life cycle is the (independent) variable that best explains the female labour supply.

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The debate over the diffusion of the male-breadwinner model in Spain has been the object of a recent reappraisal, as it has in other parts of Europe.<sup>1</sup> Studies about female labour-force participation – traditionally based on the National Censuses of the Population (*Censos Nacionales de la Poblacion*, or CNP in Spanish) – have maintained that the incorporation of Spanish women into the labour market took place late when compared to other European countries and that this was due to the stubbornness of traditional Catholic values and the lag in economic development. In the last few years, new studies based on local sources – like Municipal Enumerators' Books, worker censuses, and firm records – have questioned this image, showing how it was the result of high rates of under-reporting in the CNP.<sup>2</sup> Yet, these studies have underscored the existence of great inter-regional and local differences in the diffusion of the male-breadwinner model, due to distinct levels and models of economic development. In the face of the traditional hypotheses, they have placed a new emphasis on the impact of demand factors (Borderías, 2012, 2013; Muñoz Abeledo, 2012; Pérez-Fuentes, 2013). In the Catalan case, we have already shown that in areas of textile industrialization – as opposed to what was published in the CNP (10% to 20% female labour-force

participation rates) – the labour-force participation rate of married women was between 35% and 80%, varying in function of the intensity of specialization in cotton industrial production (Borderías, 2012, 2013; Borderías & Ferrer, 2015).

The hypothesis that we propose to explore in this paper is that the stem family, developed over the course of decades of proto-industrial labour, allowed for better adaptation to the factory production system. It provided abundant, cheap, and specialized labour, contributed to alleviating the problems of factory discipline, favoured the practice of female workers from the same family substituting for each other when necessary, and reduced the tensions between production and domestic and family reproduction.<sup>3</sup> Therefore, industrialization – instead of dissolving family bonds – reinforced them.

This hypothesis challenges the classic thesis developed by Hajnal (Hajnal, 1965, 1983) and recently corroborated by other works (De Moor and Van Zanden, 2010) according to which the European marriage pattern in the north of Europe was a consequence of ideological changes regarding Catholic marriage, a specific system of inter-generational transfers, and the development of labour markets. This type of household, based on the freedom to choose one's partner, and the disappearance of the authority of the parents would have several consequences for the economic development of this area (high levels of schooling, investment in the formation of human capital, etc.). Although Jan de Vries (de Vries, 1994) did not argue it directly, the industrious revolution occurred precisely where this household model predominated. In contrast, there was another Europe (that of the south) in which another (supposedly extensive) family type would have not helped in economic development and would explain the backwardness of Southern Europe; according to this hypothesis without a nuclear family, there would not have been industrialization (Anderson, 1988; Medick, 1976; Mendels, 1972).

We do not attempt to challenge this thesis but the idea that only this type of family could stimulate economic development and that other adaptive strategies with similar results could not also have developed. This was the case of Catalonia – the first industrialized region in Spain – where the stem family type coupled with a system of indivisible inheritance predominated.

From our perspective, the solutions adopted by families responded to stimuli that were derived from multiple variables (property structures, wages and rents, access to other resources, etc.) and in function of these, different adaptive strategies were developed. The stem family located in a mountainous rural environment, for example, developed mechanisms for controlling fecundity to avoid overproduction (e.g. high rates of celibacy, delays in the marriage age, placement of children in the Church) and the exhaustion of resources. In this context, it is possible that this type of family did not stimulate economic change and was limited to reproducing the situation over time. However, in other contexts in which access to land is blocked, the younger sons left the home and complemented agricultural activity with industrial activities; and when crops, like grapes, occupied a good deal of their time, they let women dedicate themselves to spinning and weaving. The stem families attempted to place their sons in the best possible situation based on the resources generated by the exploitation of agriculture, but if this was insufficient, the younger sons (or daughters) left the home to find in the market the resources necessary for marriage. In this way, all of the non-heir sons (and daughters) sought out the labour market. Different generations living under the same roof had problems, but it also allowed for a solution to the problem of what

to do with children when they were young. A grandmother or single aunt could care for grandchildren or nieces and nephews while the mother worked and, in this way, contribute to make unnecessary the creation of external institutions.

The principal idea that we will attempt to develop is that the extensive stem family could adapt perfectly well (and even stimulate economic development) and could be an adaptive strategy exactly equal to the nuclear family of Northern Europe – in the same manner that one or another could hamper growth. If the map of Europe is not divided so simplistically (north/south), it will be seen that in Spain, for example, it was in those areas where the stem family predominated (Catalonia and the Basque Country) that economic modernization was produced, whereas, in the rest of Spain (where the nuclear family predominated) the opposite occurred. We could even qualify this: in some parts of Galicia or Asturias, or in the Aragonese Pyrenees, where the households were stem families, economic modernization did not occur, either.

In Catalonia, the single-heir system was the predominant system from medieval times. The inheritor was the first-born son, and he received the family patrimony with the obligation of caring for the parents, and for placing his brothers and sisters in the best situation possible. The daughters left the house upon marriage, and received a dowry as a contribution to the new household. The dowry was the daughter's value in the marriage market, and had the character of economic liquidation of her rights in the family patrimony. The system tended to the social descent of the non-heir children since the family patrimony could not generate the resources necessary to place them all on the same social level as the original family. This social descent was more marked in the male children, as their legitime could not equal the patrimony of the first-born brother. For this reason, they developed strategies to improve their status: '*cabalejar*' or undertake work to accumulate resources; stay single in the original home (permanent celibacy); enter the Church (where they would continue single); or emigrate to the city to undertake a trade apprenticeship. Only in this last case could they create a new household.

This system, especially adapted to the better-off farmers, was used by all the social classes, which adapted it to their needs (Ferrer Alòs, 1998, 2003). The small farmers had no property and the sons and daughters had to work on large agricultural operations, or enter into domestic service in a city, or learn a trade to be able to accumulate the resources that would allow him or her to enter into marriage. The absence of property to transfer made it such that the system made little sense. Even so, in the twentieth century – be it for tradition, be it because it resolved the problem of who would care for the parents, or because it would permit the accumulation of resources within the family unit – the logic of the stem family continued as the predominant form, among farmers as well as factory workers.

The fact that non-heir sons abandoned the home when they married or found work in the city meant that – despite the predominant stem logic – truly stem families in a community were about 40% of the total. The majority were nuclear, but we should note that they were nuclear because they could not be stem families, in function of the life cycle. A young heir lived with three generations; an older heir who no longer had his parents lived in a nuclear family until his heir married (Berkner, 1972; Ferrer Alòs, 2008; Torrents, 1998). Even in industrial colonies, the immigrant families could form as nuclear families, but over the years became stem families (Ferrer Alòs, 1996).

In extended households, the strategies available to families allowed for greater diversification than in nuclear families. Perhaps because of this, in the Catalan textile industries the strategies that allowed for a higher supply of female labour were not the same as those in which nuclear families predominated – such that female workers could continue working despite marriage and having children. This was different from that which occurred in other European textile areas in which the nuclear family predominated (Garret, 2007, p. 343; Mckay, 2007, p. 175; Scott & Tilly, 1975).

These strategies are not, of course, disconnected from the external constraints and opportunities offered by the labour markets, but the responses depend largely on family forms, and local or social cultures (Van den Eeckhout, 1993). This hypothesis does not involve the consideration of the family as an absolutely autonomous entity; however, we do not consider that the family was a passive agent in the industrialization process, or a mere sub-product of the production system. Our position accords with conceptualizations that recognize a relative autonomy of the family and of the economy (of production and social reproduction), according to which family behaviours are not autonomous with respect to the economic context, nor do they adapt to it in a mechanical way, outside specific historical family dynamics (Humphries & Rubery, 1984, pp. 331–332 and Wall, 1986, pp. 264–266).

The importance of the role of the stem family stands, also, at another level – as an agent that could favour the industrialization of some areas of inland Catalonia.<sup>4</sup> The textile industrialization of inland Catalonia was located in areas with a long-standing experience of spinning and weaving work developed for proto-industrial networks – work in which all family members participated. At the end of the nineteenth century, the availability of women for work in the new mills was situated, thus, in continuity with the proto-industrial experience and within the context of family economic cultures that involved all family members.<sup>5</sup> The stem family allowed for the formation of an abundant and flexible labour supply in environments where male labour was occupied intensively in agriculture (as in the case of the vineyards), in cattle farming, or in other industrial sectors (such as forges and foundries, manual knitted fabrics, silversmithing, mining, etc.). The experience and abundance of female labour, and its reduced wage costs, were important factors in attracting the placement of textile companies in inland Catalonia, in addition to the additional attraction offered by the use of hydraulic energy in those areas of inland Catalonia located around the Llobregat, Cardener, Ter, and Fresser rivers (Ferrer Alòs, 2011; Nadal, 1991).

Thus, the type and composition of the family is a relevant variable of the supply of female labour by families; and, therefore it must have had weight in the development and significance of the cotton textile sector, contributing decisively to its dynamic nature and competitiveness.

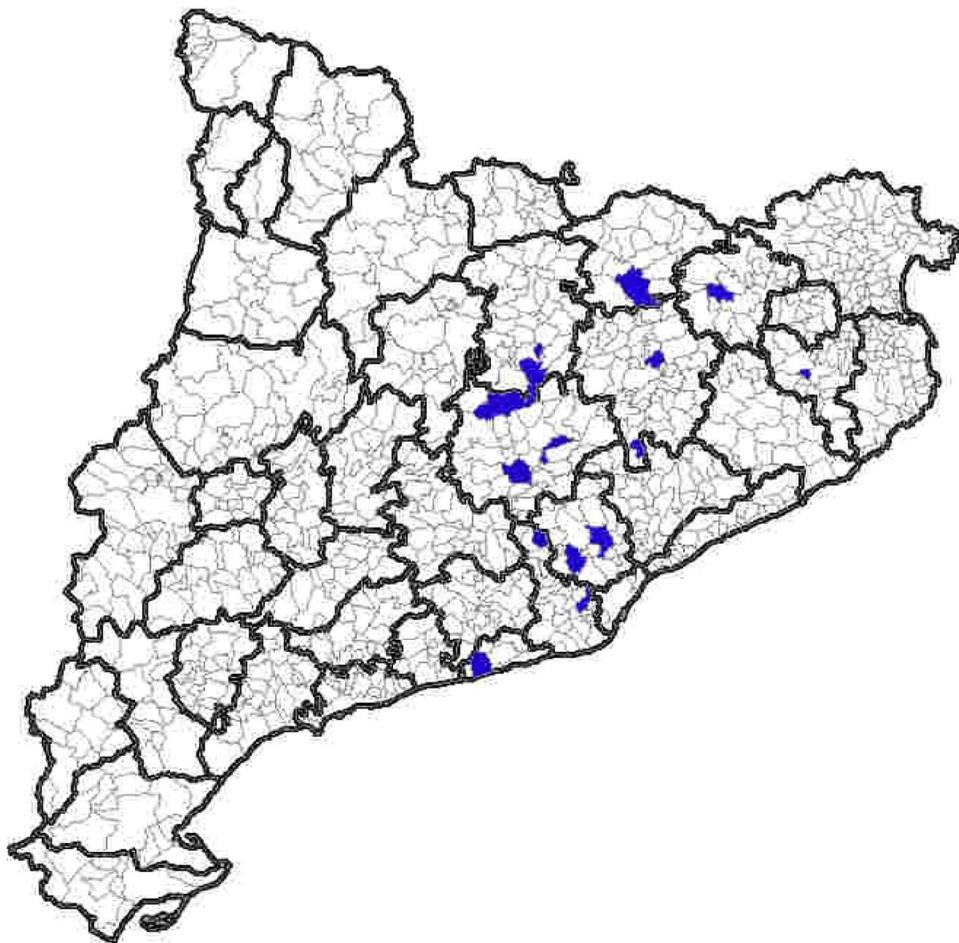
Our study focuses, then, on the analysis of the economic strategies of families and on the way in which these allowed for a relationship between supply and demand that was sufficiently flexible for the formation of very specific and competitive textile labour markets. In the historical context of the predominance of the nuclear family, studies on the determinants of female participation have generally focused on the analysis of the spouse of the head of the household, taking into account as the more relevant explanatory variables the status and occupation of the husband, the number of dependent children, literacy, and education. However, in an area where the predominant family model is the stem family it is necessary to take into account the strategies of all members of the family, which often included different generations of married women.

For this study we have selected areas of inland Catalonia with a relatively higher level of specialization in the cotton textile sector – the leading sector of Catalonian industrialization – due to its high demand for female labour: this seems particularly appropriate for analysing the determining factors of female industrial work, taking into account supply and demand.

The results of this study show the interest in analysing – in other labour and cultural environments – the similarities and differences in individual and family responses and the strategies put into play by the families to make the most of the opportunities offered in local labour markets.

## 1. Sources and methodology

Our study was based on municipal sources, fundamentally Municipal Enumerators' Books and Labour Censuses. Our sample is comprised of 16 municipalities characteristic of different economic development models, but in which the textile industry had a very significant weight (See Map 1). We have used nine Municipal Enumerators' Books corresponding to the year 1920, five to the year 1924 and four to the years 1930–1936.



**Map 1.** Catalan municipalities that specialized in the textile industry.

The most useful sources for our study are the Municipal Enumerators' Books because they allow us to analyse people's behaviour within the context of their households. As we already know, Municipal Enumerators' Books did not always record the women's occupations, so their use requires very specific knowledge of the local context in order to first determine their reliability; only four out of 15 (Artés, Salt, Navarles, and Olesa) recorded female occupation, making it unnecessary to resort to other sources. In the other cases, we have been able to correct the under-reporting of the Municipal Enumerators' Books by resorting to the Labour Censuses drawn up by the Local Boards for Social Reform (1919 and 1923). This source includes the age and gender of the workers from the age of 14 years (the legal age for starting work), their profession, company, and sector. Through the nominal record linkage of this source with the corresponding Enumerator's Book, it has been possible to correct the declarations of profession and significantly reduce their concealment of female labour-force participation.<sup>6</sup>

Once the Enumerators' Books were corrected, we selected those families that had at least one member working in the textile industry. Our purpose was to analyse the strategies of families that were directly involved in work in the mills. The population censuses offer a statistical mean of the distinct family and social realities that existed in a population. To enable an analysis of a concrete social sector (in this case, that of textile-sector workers) we have selected those families that had at least one person working in textiles, and whose decisions were affected by the characteristics of factory work. While it may be true that not all of the family members worked in textiles, and their occupations could, likewise, influence the family strategies, this was a highly endogamous sector, in which many family members (and especially the women) tended to work. Women who worked at home, or on the family farm, or in a retail shop, did not face the same difficulties in reconciling productive and reproductive labour roles; therefore, it is likely that their family, marriage, reproductive, or cohabitation strategies could have been different.

## 2. The structure of the local labour market

We are going to look first at the dimensions of the textile industry in these towns, and the number of individuals (men and women) who worked in it, and who, subsequently, make up the population upon which we based our study.

Table 1 offers an image of the working-class population of these localities and their degree of specialization in textile work. Let's look, first of all, at the image that is derived from the Labour Censuses (1911–1924) and, secondly, that derived from the corrected Enumerators' Books.

Data in columns 1 and 2 of Table 1 gather the percentage of working-class men and women employed in textiles according to the data of Labour Censuses. There are municipalities where nearly all the males worked in the textile sector (Navás and Gironella), but in the majority of cases they were employed in other sectors (agriculture, cattle farming, construction, metalwork, silversmithing, etc.). In several localities, the proportion of males occupied in the textile industry was less than half (Olot, 24.1%, Vilanova i la Geltrú, 19.4%). In contrast, in every locality women worked mainly in the textile mills. In the majority of the towns, over 90% of the women registered in the Labour Censuses worked in textile mills. Only Vilanova i la Geltrú is different (even so textile workers represent 67.5%) because in this

**Table 1.** Working population.

Municipality	Labour Census			Enumerators' Books	
	1 % Male textile workers	2 % Female textile workers	3 % Female activity rates	4 % Women working in textiles	5 % Women working in other sectors
Manresa 1920	47.5	93.7	40.9	71.6	28.4
Navas 1920	100	100	46.1	87.7	12.3
Gironella 1920	97.9	100	57.01	93.5	6.5
Olot 1920	24.1	87.8	28.1	49.7	50.3
Manlleu 1920	67.7	98	60.1	98.1	1.9
Ripoll 1920	76.6	100	44.4	84.1	15.9
Rubí 1920	41.8	100	40.7	86.4	13.6
Sabadell 1920	79.7	98.8	41	78.9	21.1
Navarcles 1920			47.4	94.2	5.8
Olesa 1920	76.4	85.1	40.8	80	20
Sant Feliu de Llobregat 1924	51.7	97.6	23.4	75.9	24.1
Colonia Pons (Puigreig) 1924			78.9	95	–
Vilanova 1924	19.4	67.5	32.5	50.6	49.4
Centelles 1924	63.8	99.5	46.5	91.5	8.5
Salt 1930	–	–	53.8	82.7	17.3
Artés 1936	–	–	60.9	84.6	15.4
Manresa 1936	–	–	45.8	73.2	26.8
Navarcles 1936	–	–	74.8	94.4	5.6

Source: Labour Censuses by Local Social Reform Boards (1911, 1919, 1923). Enumerators' Books 1920, 1930, 1936.

locality, the Pirelli factory also employed women. In synthesis, the near-totality of women who worked in these towns did so in the textile sector.

Column 3 shows female labour-force participation rates once they have been corrected.<sup>7</sup> As seen, those rates were quite variable in the different municipalities: in some, the rates were situated at between 60% and 70% (Manlleu, Pons de Puigreig colony, Artés, and Navarcles); in others, the majority, between 40% and 50%; and in some towns, lower percentages.

Can these differences be explained by under-reporting? Or by the characteristics of the labour market in each place? Certainly, the greater presence of commerce, craftsmanship, or wealthier farmers in some localities may have contributed to the decline in the female labour-force participation rate, since these types of activities did not appear in the Labour Censuses, and hardly ever in the Municipal Enumerators' Books. This unequal weight of the textile industry and the existence of other feminine jobs in some cases was not a problem, as the sample chosen in all of the locations only included families in which there was an individual working in this industry. Despite this, the labour-force participation rates are very high and are concentrated in the textile industry.

Columns 4 and 5 show the distribution of women workers in textile and other sectors. In the majority of localities, around 80% of women workers worked in the mills. Domestic service and sewing/dressmaking also had a certain importance, but they were minority employments.

### **3. The stem family in Catalan industrialization: the intensification of the labour supply**

The family system in Catalonia was based on the sole-heir system, in which the eldest son inherited the family patrimony, resided at the family home, and had to take care of his

**Table 2.** Structure of the households in Catalonia (eighteenth to nineteenth centuries).

	Number of municipalities in the sample	One	Non-family	Nuclear	Extended	Complex
Eighteenth century	5	1.9	0.4	61.3	21.6	14.9
Nineteenth century	26	6.3	1.5	64.8	15.1	12.3

Source: Ferrer (2008).

parents. This led to the dominant family type being the stem family, in which grandparents, parents, and children lived together, with the siblings of some of the generations if they remained single. When the younger sons left home, they could create a new household which, in the first phase, would be nuclear, but in the subsequent generation would reproduce the stem family type (Ferrer Alòs, 2008)<sup>8</sup>

Did industrialization cause the multiplication of nuclear families and the progressive undermining of stem and extended families in Catalonia as occurred in the north of Europe? As we have already put forward, our hypothesis is – to the contrary – that the existence of the stem family favoured industrialization, based on the cotton industry, in which women were the fundamental labour force and that this type of family survived precisely for this reason.

We do not have data for the whole of Catalonia, even though the predominance of the stem model is well known (Ferrer Alòs, 2008). Table 2 shows the aggregate results of household structure in a sample of Catalanian municipalities. As we can see, the stem family was the usual practice. In all five municipalities sampled for the eighteenth century, 36.5% of families were extended and complex; in the nineteenth century (with a sample of 26 villages), the percentage was still 27.4%. In both periods, nuclear families represented between 61% and 65%.<sup>9</sup> These families were nuclear at that moment because, from a biological point of view, they could not be still stem families; however, that is what they ended up being throughout the family life cycle (Berkner, 1972; Ferrer Alòs, 2008; Torrents, 1992). We have also calculated the typology of all the households of the municipalities used in this study from 1920 to 1936. In 1920, nuclear families accounted for 68.1% and extended families for 24.53%; in 1924, the respective figures were 60.2% and 34.72%; and, in 1936, they were 66% and 25.73%. In Table 3, we show the results for textile families with similar percentages, although in this case, complex families were more frequent. In 1920, extended and complex families – which indicate precisely the typical practice in Catalonia – represented 29.8% of the total; in 1924, they represented 35.9%, and in the aggregated Enumerators' Books of 1930–1936, 30.4%. Working in the factories did not lead to any changes in family typology; the families continued reproducing the family model that was characteristic of rural Catalonia. Moreover, there were practically no people living alone or households without any family structure (between 1 and 3% of the total).

**Table 3.** Structure of the household in textile families.

Number of Municipalities in the sample	Year	One	Non-family	Nuclear	Extended	Complex	Indeterminate	
								All
9	1920	1.1	1.5	67.3	16.5	13.3	0.3	1.796
4	1924	0.6	2.2	61.3	16.4	19.5	0	323
4	1930–1936	2.3	2.3	65	17.5	12.9	0.1	2.564

Source: Municipal Enumerators' Books.

**Table 4.** Kinship relations in textile households.

	% male	% female
Head of the family	55	8.4
Spouse	0.1	38.8
Son/daughter	34.2	34.6
Brother/sister	1.8	3.3
Son-in-law/daughter-in-law	2.2	4.7
Ascendant	1.8	4.9
Other kin	2.9	3.8
Lodgers	1.7	1
Domestic service	0.2	0.4
Institutions	0	0
Unknown	0	0.1
Total	100	100

Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS).

Our preliminary conclusion is that apart from exceptional local situations, families with workers in the textile industry were not very different from the general norm, which was living in stem families formed by three generations of individuals and collateral relatives who remained single or were waiting for the opportunity to leave home. The nuclear family was not their behaviour pattern: the high percentage in the table reflects the households in the first phase of the family cycle.

If the structure of households with individuals working in the textile industry was characterized by the predominance of the stem family, the relationships between individuals should reflect this situation. In the case of males, some 55% were heads of the household, while 34.2% were sons; these were followed by siblings, sons-in-law, ascendants, and other relatives who were key in configuring the stem family (8.7% of the total). Few women were heads of the household (8.4%), while 38.8% were wives, 34.6% were daughters and 16.7% had a family relationship with the stem family (daughters-in-law married to the sole heir, mother of the head of household, sisters who were perhaps single, etc.). See Table 4.

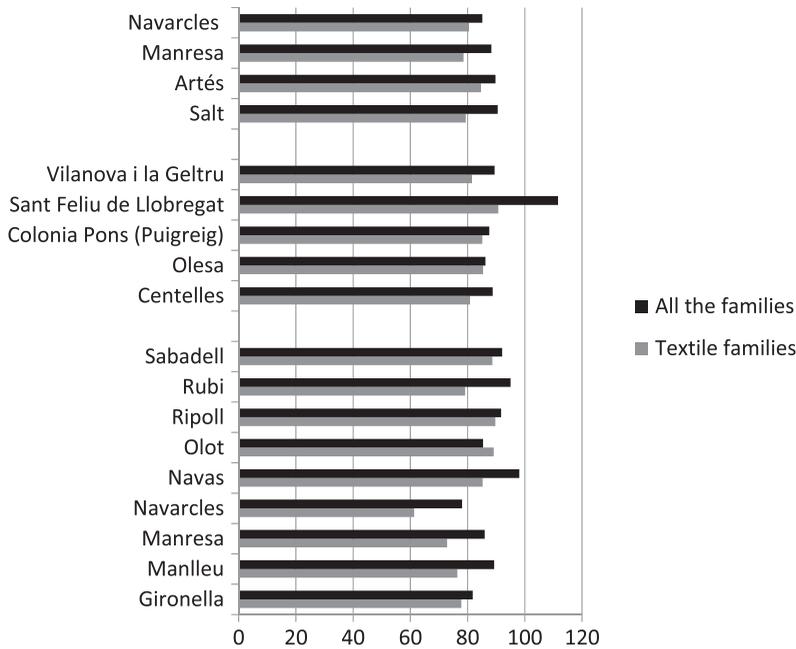
The predominance of the stem family and the high female labour participation rates in textiles explain why these families were made up mainly of women. That is what we want to show in Table 5 through the sex ratio.<sup>10</sup> We have calculated separately the sex ratios for the entire population aged between 14 and 64 years and of the textile families to be able to establish their possible specificities.

Table 5 is complemented by Figure 1, in which we have represented the sex ratio of total population as well as of textile families. The results are very clear: with certain exceptions, there are more working women than men, especially if we only take into account the families with members working in the textile industry. In these families the rates are in fact very high across all age groups. In some towns they are under 80%, and in the majority, between 80%

**Table 5.** Sex ratio (1920–1936).

Year	Municipalities	Total population	Textile families
1920	9	87.11	80.23
1924	5	95.34	83.99
1936	4	88.79	80.08

Source: Municipal Enumerators' Books and Labour Censuses of the Local Social Reform Board (JLRS). The data correspond to textile working-class households.



**Figure 1.** Sex ratio in the total population and in textile families. Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS).

**Table 6.** Permanent celibacy and marital age 1920–1936.

Year	Celibacy males	Celibacy females	Age of marriage males	Age of marriage females
1920	35.21	71.05	27.92	27.31
1924	47.38	116.36	26.82	24.35
1930–1936	38.04	113.96	26.97	25.76

Source: Municipal Enumerators' Books. The data correspond to textile working-class families. Permanent celibacy is in %.

and 90%. The families that worked in the textile industry were full of women as a consequence of the feminization of the textile industry: the manufacturers sought female workers, and families with many females went to work there. If there were so many women, did that have any repercussions on the permanent celibacy of the women who worked at the factory?

Our data would disprove the idea that working-class families practised early marriage with a high frequency. Here, the opposite seems to be true. The families that earned their living from the textile industry married their sons and daughters when they were relatively old, after they had spent many years working at the mill or factory, and had thus contributed to the family economy. Permanent celibacy was lower in men (varying between 35.2 and 47.4 per 1000); in women, it is very significant (between 71.05 in 1920 and 113.96 in 1936). Age at first marriage was situated between 27 and 28 years for men, and for women, it was between 27.3 years in 1920 and 25.76 in 1936 (Table 6).<sup>11</sup> Consequently, we have to suppose that in these households there were many 'tietes' (aunts) and 'unclus' (uncles) (i.e. the single sisters and brothers of the father or mother) who may have worked and contributed not

only with their wages, but also with some of the domestic work; that is, their presence favoured the greater labour intensity of all of the members of the family.

How can this high celibacy rate of women, and the high age of marriage be explained? It can be analysed from a conjunctural or from a structural point of view. In Igualada, a proto-industrial area analysed by July Marfany (2006), the marriage age was lower and permanent celibacy rate was higher. In Central Catalonia, at the beginning of the nineteenth century, textile workers married at a younger age than did other social groups (Ferrer Alòs, 1992), from which we deduce that these variables are related to the socio-economic context. In Navarcles, for example, the marriage age of young men rose from 26.3 years in 1857 to 28.1 years in 1936. For women, the marriage age was 23–24 years in 1857 and 25 in 1936. Permanent celibacy rates passed from 32 per 1000 in 1857, to 78.5 in 1920, to 151.5 in 1936 (Ferrer Alòs, 1989). These variations lead us to explain the delay in marrying and the high permanent celibacy rate as a strategy for accumulating the income of all the members of a household and for having access to greater resources at the moment of finally entering into marriage. In this case, we believe that this should not be understood as a structural phenomenon.<sup>12</sup>

We can conclude by saying that in the families in which at least one member worked in the textile industry, working men were farmers, factory workers or, above all, worked in other professions, whereas, women – if they were daughters, sisters, other relatives, or ‘daughters-in-law’ – worked mainly in the textile mills. Being an ascendant (mother of the sole heir) implied not working (87.7%) as did being head of the household (63.6%).

High rates of celibacy, advanced age at marriage, extended families, and families full of women are excellent indicators of this very intensive dedication to work. However, we need to look in greater depth to find out about the internal functioning of these families.

#### **4. Female labour-force participation from the household perspective**

In contexts where the nuclear family predominates, analyses of the determinants of female labour-force participation rates have focused on the wife of the head of the household taking into account, primarily, variables such as: age; the husband’s occupation; the women’s education; the number of children and their ages; and the active-to-non-active ratio. However, in Catalonia – given the predominance of the stem family, and, consequently, the presence of more than a married woman with children in the household – it is necessary to differentiate between married women of different generations and ages, and their kinship relations, to be able to capture the complexity and dynamics of employment strategies during the family life cycle. We propose to explore, first, the profile of the female textile workers (according to age, civil status, and the number of children), the ratio between active and non-active members, and the composition of the family.

##### **4.1. Sex, age, and civil status**

In Figures 2 and 3, we analyse the labour-force participation rate (by age) of men and women in 1920 and 1936. As could be expected, men worked from the age of 14 years reaching participation rates that approached 100%; however, only around 25% did so in textile factories, reaching the maximum point at around 30–34 years, and then slowly declining. The majority of men worked in farming or in non-textile industrial sectors, which gradually



**Figure 2.** Activity rates of men and women according to age, 1920. Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.



**Figure 3.** Activity rates of men and women according to age, 1936. Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.

appeared over the course of the twentieth century. In 1936, the percentage of men working in factories falls significantly (the high point stands between the age of 15 and 19 years) to gradually decline and end up at around 20%.

Women, in contrast, worked mainly in the textile industry, reaching participation rates above 80%; in 1920 up to the age of 30 years the percentage was 85%, going down after

**Table 7.** Labour-force participation rates according to civil status (1920 and 1936).

	Single	Married	Widowed
1920			
Males	27.9	27.3	21.4
Females	86.3	55.4	32.8
1936			
Males	29.6	27.3	21.4
Females	80.7	66	44.9

Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.

this age even though at the age of 40 years the percentage was over 50%, only after this age they gradually retired. In 1936, the participation rates increased and they retired from the factory at a later age: at 54 years, some 45.8% of the women were still working in the factories. As the age at first marriage was around 25 years, it is clear that many of the women continued working when they got married; or, to put it another way, neither marrying nor having children were reasons to stop working. They would do so for other reasons.

Table 7 covers labour-force participation rates in the textile sector by civil status. The results indicate that men who entered the factory remained there throughout their lives, regardless of their civil status, whereas among women a significant reduction took place. More than 80% of single women worked in the mills, a percentage that progressively declined with marriage. Although the percentage was lower, between 55% and 66% of married women worked. As we will show in the next section this reduction had less to do with marriage or the existence of dependent children than with age and with the position in the household.

The conclusion is that the majority of women worked in the factories, whereas only some of the men did. Textile work was complemented (in many cases) by the husband or sons working as farmers or in another occupation. Moreover, the majority of single women worked in the textile industry; although the percentage declined when they got married, the rate continued to be very high (between 55% and 66%) and varied depending on age, and the composition of the family – number of the members and their gender, age and civil status. This is what we will analyse next.

#### ***4.2. The who, when, and why of leaving the mill to take care of the household: comparing the domestic workload of the active and non-active***

As we have shown, families that had individuals working in the textile sector made the largest number of family members possible work. To look at this in greater depth and to better understand the logic of these households, we have analysed the relationship between active members and the total members of the household. The results of this analysis are shown in Table 8. Column 3 of this table shows the percentage of active members (per household). As can be observed, the tendency was for the majority of members – of an economically active age – to work: when three people lived in the home, the percentage of active members stands at 70.3%, and the majority of women continued working (independent of the fact that, in this phase, their children were very small). As the number of people per household increased, this percentage was reduced – due to the fact that the number of members under the age of 14 increased. When many individuals were working, there was a tendency for one woman to be released from employment (very possibly, to take care of running the family and the household, as the data in columns 2 and 4 seem to indicate). Whatever the size of

the family, the active members settled at around 55–60% of the total members of the family when it has more than five members. In sum, all the individuals worked when they reached the age to do so.

In column 2 ('Housewives'), the point is observed when a woman leaves work to take care of running the household and family, which in the Municipal Enumerators' Books is registered as 'her sex', 'her work' or 'her house'. When the ratio is at or below '1', this indicates that there is one woman declaring 'her sex' per household; and if it is above '1', there is more than one. Thus we can confirm that until the family is formed by six to seven members, the ratio 1 is not reached. Until the household reaches that size, even though there may be small children, the women tend to work. With three members in the household, the index stands between 0.3 and 0.39 and with four between 0.51 and 0.58. Thus, when the household had few members and some of the children were small, the woman did not stop working, but in some cases it was inevitable due to the fragility of the family unit. When the children got older and could work, it seems that one of the women stopped working.

Column 4 reflects the proportion of active members for each woman registered as 'her sex'. The data show a certain stability regardless of the size of the households; in other words, in the year 1920, this was situated between 3.4 and 4.9, which would indicate that there was a woman whose occupation was recorded as 'her sex' for every four or five active members. The families, then, 'liberated' a woman from working in the factory when the number of active members reached four. Children were not, therefore, the variable that made women stay at home.

The results in column 4 of Table 8 show that the families put to work all those people who were in conditions to work and only 'liberated' a woman to take care of running the family and household when there were four individuals working.

**Table 8.** Active and non-active members according to household size (1920 and 1936).

Individuals per household	1 Number of active members per household	2 Housewives	3 Active members per household (%)	4 Active members/housewife
<b>1920</b>				
1	1	0	100	
2	1.62	0.33	80.8	4.9
3	2.11	0.39	70.3	5.4
4	2.57	0.58	64.3	4.4
5	3.1	0.74	62	4.2
6	3.49	0.95	58.2	3.7
7	4.06	1.03	58	3.9
8	4.71	1.11	58.9	4.2
9	4.81	1.41	53.6	3.4
10	5.53	1.18	55.3	4.7
11	6	1.71	54.5	3.5
<b>1936</b>				
1	1	0	100	
2	1.7	0.22	84.9	7.7
3	2.21	0.3	73.7	7.4
4	2.6	0.51	65.0	5.1
5	3.03	0.67	60.6	4.5
6	3.59	0.78	59.9	4.6
7	4.04	0.98	57.7	4.1
8	4.46	1.06	55.7	4.2
9	4.65	1.38	51.7	3.4
10	5	1.43	53.8	3.5

Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.

**Table 9.** Labour-force participation, 1920.

Number of non-active members in the household	Active members per household	Active members per household working in textile factories	Women recorded as 'her sex' in each household
0	2.84	1.73	0.68
1	2.83	1.7	0.61
2	2.8	1.74	0.6
3	2.79	1.62	0.79
4	2.83	1.69	0.56
5	2.63	1.56	1.06
6	2.33	1	1
Total	2.82	1.71	0.65

Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.

We want to look into this a little more deeply. Up to this point, we have seen that women worked even when they had small children; and that, in any case, the family did not do without the women's employment until the number of household members reached six. Table 9 converts the number of non-active members into an independent variable (not counting as non-active those women who declare 'her sex'); that is, these were mainly the young children of these households.

Data in Table 9 show that it was important to ensure a certain number of labour-force participants (around 2.8 per household), of which an important part were connected with working at the mills (1.7 per household). The column of 'her sex' women (housewives) per household indicates that until the figure of five labour-force participants was reached, there was no woman devoted exclusively to housework. However, this woman was not necessarily the youngest wife and mother of the dependent children; to the contrary, it could be the grandmother or a collateral relative. The non-active members were not a conditioning factor in women leaving work, either.

It cannot escape our notice that – despite there being 30–40% of households with individuals working in the textile sector – there were no women under the heading 'her sex' (housework) in the rest of households: this occurred when there were a certain number of labour-force participants. What were the characteristics of these women who stayed at home? Were they the mothers or other women from the family who were occupied with housework and caring for the children and the elderly?

In order to answer these questions we are going to look first at which point the number of children determined the work of women; and, then, at who were the women who did not go to the factory but rather took care of the housework. The results of this analysis are shown in Table 10. The results are very interesting because it was mainly age that caused women

**Table 10.** Female labour-force participation rate by age, and number of children under 14 years of age, 1920.

Age of the mother	Number of children			
	0	1	2	3 or more
	%	%	%	%
Less than 25	90.8	86.5	88.0	84.9
26–35	90.4	82.6	77.7	71.2
36–45	62.5	61.5	56.9	45.6
46–55	32.7	36.0	20.0	23.1

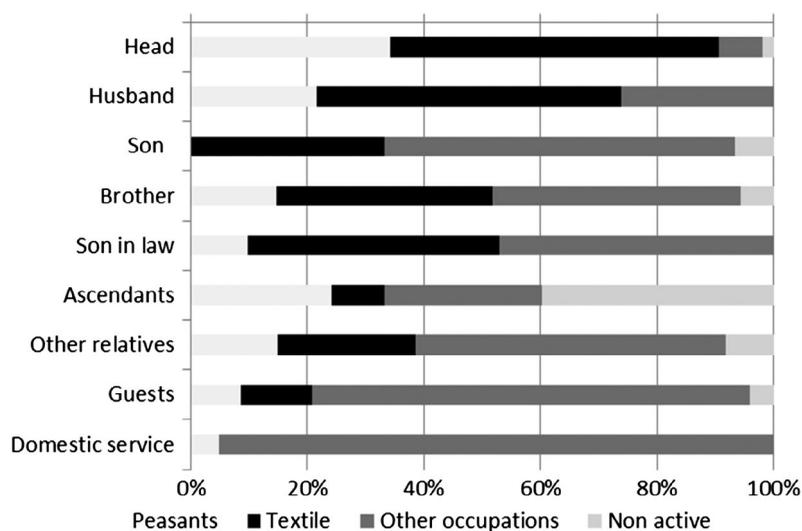
Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile families.

to retire from work in the factory, and – to a lesser extent – the number of children. This matches the previous results of our work (Borderías, 2013). Up to 35 years of age, more than 70% of women worked. This shows the point of greatest fragility in the nuclear-type families that had many small children: it was probably one of the critical stages in the family life cycle until the children started work. From the age of 36 years, some of the women started to abandon the mill; even so, the labour-force participation rates were very high. It is possible that at this age, there would have already been children who were working, which would put the number of active members at that point where the family could consider the possibility of one woman leaving the factory.

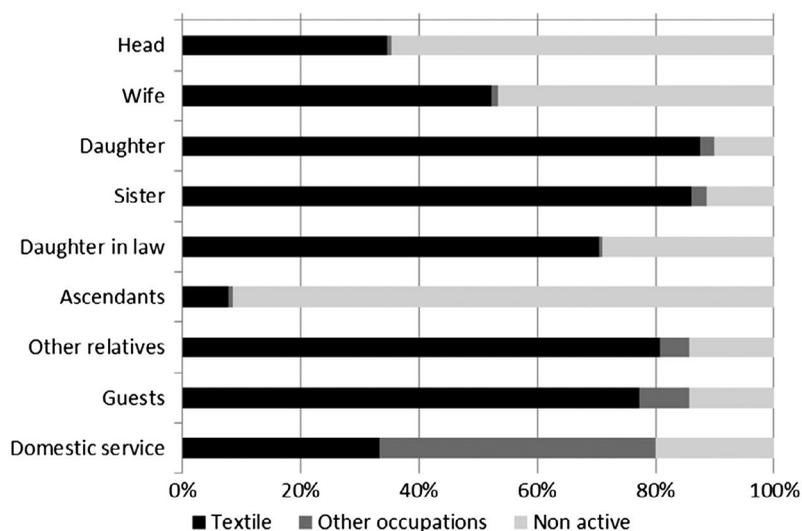
From the age of 36 years onwards, in some families withdrawal from the factory began and this continued over the course of the following years, regardless of whether there were young children in the household or not. As we have seen above, what was important for the household was for it to have a certain number of economically active members working; once this number was reached, the possibility of one woman not working was considered. Children were not an obstacle for this strategy, which would become more deeply entrenched in subsequent years. In the year 1936, labour-force participation rates for women (by age) had increased, regardless of the number of children. In complex families, for example, women aged 36 to 45 years presented a labour-force participation rate of 73.56% when they had no active member aged below 14 years; 81.4% when they had one member aged below 14 years; 72.06% when they had two members and 57.44% when they had three or more. These are significantly higher rates than those found in the year 1920.

Let us examine, now, whether the relationship and position within the family (head of household, mother of the sole heir, etc.) implied working in the factory or devoting oneself to running the household. In Figures 4 and 5, we analyse the labour-force participation and occupation of men and women according to their position in the family. Figure 4 shows that there was a high percentage of peasant farmers (some 27.6% of the heads of household) and that their profession is reproduced in sons-in-law and in ascendants (the grandparents of the heads of households). Some 41.7% of the heads of households worked in the textile industry: but, if the man was a husband (66.7%), brother (40%) or son-in-law (35%), work in the textile industry was more intensive. The majority of men (45.7%) worked in other trades, but sons and brothers did so in a higher percentage. The data indicated that there was transmission of the official occupation (for example the trade of farmer was transmitted from father to son) but that brothers and sons-in-law were not as closely linked: it was here that movement towards other professions took place.

While such diversity could exist among men, this was not the case among women (Figure 5). Being the head of the family – which was related in the immense majority of cases to widowhood – meant dedication to housework, which in the Enumerators' Books was declared as 'her sex' (63.6%); whereas only one-third worked in the textile sector. But if the woman was the wife of the head of the family, work in the textile sector increased to 52.1%; if she was a daughter or sister, it increased to 86.2% of those working in the mills and if she was the daughter-in-law, to 69.9%. Women who worked in other professions were very few (1.9%) and staying at home was related with being head of the household (63.6%), the wife (46.4%), or, especially, if one was the father or mother of the heir (ascendant), which represented 87.7% of cases. It is deduced, therefore, that when a family decided that a woman would stop working this usually affected the grandmother and the wife of the heir. It was unlikely to affect sisters or other collateral relatives.



**Figure 4.** Male occupation and kinship in textile families, 1920. Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.



**Figure 5.** Female occupation and kinship in textile families, 1920. Source: Municipal Enumerators' Books and Labour Censuses of the Local Boards for Social Reform (JLRS). The data correspond to textile working-class families.

We can conclude by saying that in the textile families, working men were farmers, factory workers, or, above all, were working in other professions; while women, if they were daughters, sisters, other relatives, or 'daughters-in-law', worked mainly in the textile mills. Being an ascendant (mother of the sole heir) implied not working (87.7%), as did being the head of the household (63.6%).

In sum, the options at hand among these households were more numerous than in nuclear families, as there were more members who were potential labour-force participants. Complex households gave more possibilities to women for them to be able to choose. If there were collateral relatives working, it was highly probable that it was the wife of the heir who left the factory to take up housework. Women who did stop working were more often older women (grandmothers) who could also be heads of household because they were widows or the wife of the sole heir if the younger children were working.

## 5. Conclusions

Conventional historiography has identified the nuclear family as the specific form of industrial societies. Extended families are rather interpreted as a residual family form or as the result of an adaptive strategy in transitional processes – as migrations – or extreme poverty situations. The data we have presented in this article about Catalanian industrialization show a completely different perspective.

As we have shown in the eighteenth and nineteenth centuries, the predominant type of the family in Catalonia was the stem family, as it was for the textile families. Statistics reflect that there were a lot of nuclear families, but this is explained by the fact that they were in the first phase of family formation. When families emigrated to textile areas, they adopted the same pattern of co-residence. This was the traditional family organization and it was in this context that the Catalanian textile industry was developed. In these areas, the stem family was not an adaptive strategy facing concrete difficulties. Quite the opposite: it was the consuetudinary form that allowed for an intensification of feminine labour supply.

These families had plenty of women, and they tended to marry very late (between 25 and 26 years of age); this favoured a high rate of permanent celibacy. We have also found that women did not leave the mill when they got married or had children, and this was increasing during the twentieth century. So the question we have tried to answer is: Who assumed the reproductive work?

We have found that when a family had four members employed (either men or women), a woman was dedicated to the domestic work. However, households with a lesser number of active members adopted different solutions; even so, the tendency was to maintain this proportion (4 to 1). Thus, the case was, for example, that when the head of the household, two children, and the daughter-in-law were employed, the spouse of the head of the family (in this case the grandmother) stayed at home (other possibilities apart). The stem family was an ideal type for organizing employment and for resolving the tensions between productive and reproductive work. Most women maintained their jobs until a relatively old age because there was another woman at home, and she could leave the mill once the children had joined the labour market, provided that the described ratio between active and non-active members remained.

Industrialization did not determine the type of the family. Historical traditions and local structures were perfectly able to adapt to the new economy, and the stem family proved to be perfectly suitable to optimize the labour force. It probably better allowed for the accumulation of resources for the family and their members. This seems to have been the case in Catalonia.

## Notes

1. Theories and empirical research and debates on the male-breadwinner model (Horrell & Humphries, 1995; Scott & Tilly, 1975) have been recently renewed on alternative sources and methods (Garret, 2007; Humphries & Sarasúa, 2012; McKay, 2007; Saito, 2007; Shaw-Taylor, 2007; Van Nederveen Meerkerk & Schmidt, 2012). In Spain see Gálvez (2000); Muñoz Abeledo (2012), Pérez-Fuentes (2013); Borderías (2012, 2013).
2. The problem of under-registration of female activity is common to National Censuses of Populations in other countries (Higgs, 1987; Horrell & Humphries, 1995; Humphries & Sarasúa, 2012; Nyberg, 1994).
3. In some Catalanian areas of urban industrialization, such as Sabadell (Camps Cura, 1995), Vilassar (Llonch, 1993), Esparraguera (Nicolau, 1983), older women workers already retired from the same company, or neighbours, played an important role in the care of the children of young mothers. Even without co-residence in the same household, it was frequent for generations of the same family or collateral relatives to be neighbours, which also favoured this exchange of services (Borderías, 1993). In England in areas with a predominance of nuclear families, the important role played by older workers to sustain the work of younger mothers with children has also been noted (Anderson, 2007, p. 203; Hewitt, 1958, pp. 128–132). In other countries, the dedication of teenage daughters to the care of younger siblings has been pointed out (Duprée, 2007, pp. 138–163; Mason, Vinovskis, & Hareven, 1978, p. 202). In Catalonia, nurseries created by companies came late and were an exception. Municipal nurseries were not developed until well into the twentieth century.
4. On the role of the family as an agent for social change, see Medick: 'If one considers the producing family of the rural-industrial lower classes from this point of view, it appears as the essential agent in the growth of emergent capitalism. The family functioned objectively as an internal engine of growth in the process of proto-industrial expansion precisely because subjectively it remained tied to the norms and rules of behaviour of the traditional familial subsistence economy' (Medick, 1976, pp. 296–297).
5. For Mosk, the characteristics of the agrarian and proto-industrial production systems are the most relevant, although not the only, factor behind the stem family type: 'In my opinion, the demand for labour is one of the most important determinants of household structure in Japan because it has strongly affected fertility and hence the natural rate of increase (thereby indirectly shaping household structure) in addition to directly shaping household composition through the outflow of family members to external locales where there are employment opportunities' (Mosk, 1995, p. 108).
6. The Labour Census covers the workers who were employed by others, but not those who are self-employed or the casual work that existed in a town. The Enumerators' Books usually cover 100% of male activity and very little female activity, except that which implies residency (such as that of a maid or servant). The correction allows, above all, for the rate of female activity to be improved in places where the work is wage-based, as occurred in the textile industry. The results of the correction of the Enumerators' Books of inhabitants based on the data of the Labour Censuses were published in Borderías (2012, 2013). We use the corrected database that emerged from that exercise. This correction has not been performed on the Enumerators' Books of 1936 produced by the Catalanian Government, which are of excellent quality and cover wage-work in a highly detailed manner.
7. Information about female occupation in the Enumerators' Books has been partially corrected through nominal cross-reference with information contained in the Labour Censuses which list only women working in manufacturing.
8. In the twentieth century many of the traditional family norms were in the process of being dissolved (such as for example that of the sole heir being the first male son) but it was habitual practice that one of the sons (it did not have to be the first-born) took charge of the house with the obligation of caring for his parents.
9. We use the methodology developed by Laslett (Laslett, 1972, 1983; Laslett & Wall, 1972). When the percentages of nuclear families stand below 70%, and the extended and the complex

families stand at around 30%, even though the majority of the households consist of a nuclear family, the logic of the life cycle is the stem logic. Families are nuclear because they cannot be stem families demographically. In the family cycle there are certain times when the family has a nuclear structure (when the grandparents have died and the new heir remains with small children), but is waiting to be converted into a stem family. The data for Catalonia in these Enumerators' Books coincide with the data that we have for the eighteenth or nineteenth centuries (Ferrer Alòs, 2008) and with those for other zones with similar family systems.

10. This ratio indicates which gender is predominant in the population. The total number of men is calculated over the total number of women and it gives a rate over 100 (when there are more men) or it gives a rate under 100 (when there are more women).
11. We have used the method of L. Henry (Henry, 1983) to calculate permanent celibacy (people still single at the age of 50 years) and the marriage ages given in the Enumerators' Books. Celibacy rates are given as per-1000.
12. It would be necessary further to analyse wages and attempt to understand whether factory work was a result of poverty or a strategy for accumulating resources and better attaining goods and services. Investigations into the relationship between wages and female labour in different countries have shown that the relationship is far from linear. In different European textile areas, characterized by high female labour demand, high rates of female labour-force participation coexisted with high male wages (Borderías, 2004; Horrell & Humphries, 1995; Van den Eeckhout, 1993 and Van den Eeckhout and Schmidt, 2012). It is also necessary to take into account cultural factors, as shown by some studies on the homes of craft workers in which low income among heads of families coincided with low rates of labour-force participation among their wives (Horrell and Humphries, 1995; Van den Eeckhout, 1993).

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