

## THE FAMILY BUSINESS IN THE SPANISH ECONOMY

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## Abstract

This is a comparative study between family and non-family businesses. A general comparison is followed by another based on the following criteria: sales turnover, number of employees, business activity, and autonomous community. Finally, there are some comments on the family businesses' contribution to the Spanish economy (number of jobs, production and overseas trade).

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## Introduction

Nobody can really doubt the importance of the family business in the economy of a country that favors free enterprise. Both in earlier times and now, a large number of companies come into being as family businesses, and family businesses of varying size exist in most economic sectors.<sup>1</sup>

However, it is rare that databases are available that enable one to study the influence of family businesses on the economy, the problems they must face over time, the types of changes they undergo, etc.

Before building this database, one must first have a definition of what one understands by family business, that is to say, a delineation of the qualities that characterize this type of company and set it apart from other types of companies. Finding a definition for family business that can be used in a detailed study and that is accepted by all the persons involved is no easy task.<sup>2</sup>

At the heart of the question of what makes a family business is the consideration of the values institutionalized, or values in the process of being institutionalized, in the particular company.<sup>3</sup> In other words, the influence of family values in general on a company and the particular values of the family most directly related with it.

Defining, identifying and quantifying the presence of values of this nature is not an easy task.<sup>4</sup> In view of this difficulty, in our analysis of Spanish family businesses, we have used two parameters as our starting point: the "size" of the business, and the extent to which, through share ownership, the family can control it.

With regard to the "size" parameter, a number of preliminary considerations should be made.

- There are men and women who start or continue small businesses, such as a grocery store, van delivery, etc., with the virtually sole aim of sufficiently covering their immediate financial needs, "to get by" and perhaps get a little money from the sale of the business when approaching retirement age but without any intention or ability to develop the business to a large scale, or any clear goal of turning "their business" into a lucrative source of future income for their children and grandchildren. Rather than

family businesses, even though that is often what they are, this type of business should be called a "one-man firm."

- There are families that run a small farm or a craft business often passed down from father to son, typically heavily dependent on their suppliers and customers, with little possibility of change, growth and improvement. Their virtually sole intention is to economically subsist and to be able to pass it on to their children. Rather than family business, even though that is often what they are, this type of business should be called "craft firm."
- There are firms in which all or a large part of the share capital is held by a family, which even retain the family's name, but in which management responsibilities have been allocated on the basis of professional competence and not of family membership. The culture of these companies is thus more akin to that of companies where capital and management are separate. Rather than family business, this type of business should be called "family-owned firm."
- There are firms that start and continue with a clear desire to develop and grow, which are owned by a family and where the power is held by members of that family without there existing any clear distinction between ownership and power at operating level. It is this type of company, together with those formed by partnerships that, if not bound by blood ties, are bound by a mutual and true friendship, that in reality should be called "family firm".<sup>5</sup>

It is not easy to draw dividing lines between these four groups, unless a detailed analysis is performed on a very wide series of individual cases.

In this article we have used the figure of 200 million pesetas in annual sales as the dividing line between "one-man" and "craft" businesses on the one hand and "family" and "family-owned" businesses on the other.

The instillation of family values in the business is related to the possibility of exercising management power in it and, as is well known, in practice, this possibility can come about in a variety of ways.

In this article, to distinguish "family" and "family-owned" businesses from "non-family" businesses, we have used the percentage of shares owned by the company's shareholders as a measure of this possibility.

To summarize, family businesses are considered to be those:

- Whose annual turnover exceeds 200 million pesetas.
- Where 1 or 2 families are the largest shareholders and own more than 10% of the shares.
- Where the shares owned jointly by the three next largest shareholders amount to less than three times the number of shares owned by the family (or families) stated above.

Obviously, it would be a mistake to say that those businesses that do not meet the above conditions are not family businesses. However, it is fairly likely that those who do meet the criteria are family businesses.

## Data Obtainment

The data were obtained in December 1987 by telephone interviews with a sample of 750 companies. These data were contrasted and completed with the information provided by “España 20.000” and by the Censo Oficial de Exportadores (Official Census of Exporters).<sup>6</sup>

The sample was obtained randomly from a universe which is thought to include 80% of Spanish family and non-family businesses with a turnover exceeding 200 million pesetas in 1986.<sup>7</sup> The script of the telephone interview is given in Exhibit 1.

## General Characteristics of the Sample

The general characteristics of the sample are as follows (a):

**Table 1**

Number of businesses by sales turnover

Sales between: (million pesetas)	Number of companies	%	95% confidence limits in % (b)
200-500	325	44	40-47
501-1000	201	27	24-30
1001-5000	184	25	22-28
More than 5000	36	5	3-6
<b>TOTAL</b>	<b>746(c)</b>	<b>100(d)</b>	

**Table 2**

Consolidated sales by company group

Companies with turnover between: (million pesetas)	Consolidated sales (million pesetas)	%	95% confidence limits in %
200-500	122,601	11	9-13
501-1000	149,901	13	11-16
1001-5000	384,490	34	31-38
More than 5000	461,082	41	38-45
<b>TOTAL</b>	<b>1,118,074</b>	<b>100</b>	

- (a) In order to calculate the 95% confidence limits, the percentages obtained were added together and subtracted from the product of 1.96 and the standard deviation, calculated according to the following formula:

$$\sqrt{\frac{p(1-p)}{n}}$$

- (b) Figures in this column (e.g., 40-47) state the minimum and maximum values, with a 95% probability, between which the figures in the previous column (44) would fluctuate if another sample from the same universe of companies was used.
- (c) The number of companies is not 750 due to differences found in the quoted publications.<sup>4</sup>
- (d) The sum exceeds 100 due to rounding off.

**Table 3**

Number of companies by number of employees

Companies with a number of employees lying between:	Number of companies	%	95% confidence limits in %
50 or less	430	58	54-61
51-250	256	34	31-38
251-1000	49	7	5-8
More than 1000	9	1	0.4-2
<b>TOTAL</b>	<b>744</b>	<b>100</b>	

**Table 4**

Total employees by company group

Companies with a number of employees lying between:	Total employees	%	95% confidence limits in %
50 or less	10,687	13	11-16
51-250	29,546	37	33-40
251-1000	21,641	27	24-30
More than 1000	18,277	23	20-26
<b>TOTAL</b>	<b>80,151</b>	<b>100</b>	

**Table 5**

Number of companies by % of exports over sales

% of exports over sales between:	Number of companies	%	95% confidence limits in %
0-1%	545	78	74-81
1-10%	54	8	7-10
10-25%	40	6	4-7
25-50%	30	4	3-5
50-100%	32	5	3-6
<b>TOTAL</b>	<b>701</b>	<b>100</b>	

**Table 6**

Number of companies by type of business activity

Type of business activity	Number of companies	%	95% confidence limits in %
Agriculture	19	3	1-4
Mining	6	1	0.2-2
Construction	32	4	3-6
Manufacturing	325	45	42-49
Transport	33	5	3-6
Wholesale	186	26	23-29
Retail sale	56	8	6-10
Finance	16	2	1-3
Services	44	6	4-8
Miscellaneous	1	0.1	0-0.3
<b>TOTAL</b>	<b>718</b>	<b>100</b>	

**Table 7**

Number of companies by year of establishment

Year of establishment between:	Number of companies	%	95% confidence limits in %
before 1925	42	6	4-7
1926-1950	70	9	7-12
1951-1975	378	51	48-55
after 1975	248	34	30-37
<b>TOTAL</b>	<b>738</b>	<b>100</b>	

**Table 8**

Number of companies by geographical area

Geographical area	Number of companies	%	95% confidence limits in %
Andalusia	53	7	5-8
Aragon	29	4	3-5
Asturias	15	2	1-3
Balearic Islands	8	1	0.3-2
C. La Mancha	15	2	1-3
C. León	25	3	2-4
Canary Islands	22	3	2-4
Cantabria	5	1	0.4-2
Catalonia	219	29	26-32
Basque Country	63	8	6-10
Extremadura	6	1	0.4-2
Galicia	29	4	3-5
La Rioja	11	1	0.2-2
Madrid	169	23	20-26
Murcia	9	1	0.2-2
Navarre	12	2	1-3
Valencia	57	8	6-10
<b>TOTAL</b>	<b>747</b>	<b>100</b>	

## Comparison of Data Between Family Businesses and Non Family Businesses

1. Upon generally comparing the family businesses (FB's) and non family businesses (NFB's) in the sample, the following data are obtained:

Importance of FB's in comparison with NFB's with regard to Sales, Number of Employees and Exports:

**Table 9**

	% of sample	95% confidence limits in %
Total number of FB's	71	68-74
Sales of FB's	61	57-65
Number of employees in FB's	62	59-66
Exports of FB's	59	55-62



**Table 10**

	FB	NFB	Standard deviation (e)	95% confidence limits in % (e)
Average sales (in million ptas.)	1274	2032	335	[-1415,-101]
Average number of employees	90	142	24	[-98,-4]
Sales per employee (in million ptas.)	14.16	14.20		
% of exports over sales	8.17%	9.01%		

These tables show that:

- Sales per employee and exports measured as a percentage of sales are the same in FB's as in NFB's.
  - The size of FB's, measured in terms of annual average sales and average number of employees, is smaller than that of NFB's.
  - This confirms data from other researchers in that FB's are smaller-sized but just as "tough" as NFB's regarding competitiveness and economic performance.<sup>8</sup>
2. Upon comparing FB's and NFB's in the sample divided into groups according to sales turnover, the following data are obtained (f):

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(e) See Exhibit 2.

(f) Exhibit 3 shows the results of the hypothesis tests and the sample values; obtained for the various groups.

**Table 11**

Sales turnover between: (million pesetas)	200-500	501-1000	1001-5000	more than 5000
Number of FB's in %	74	71	69	53
----- 95% confidence limits in %	68-78	65-77	52-82	18-86
Sales of FB's in % over total sales of FB and NFB group	74	71	67	48
----- 95% confidence limits in %	70-78	65-77	54-80	15-81
Number of employees in FB's in % (ditto)	78	58	67	48
----- 95% confidence limits in %	74-82	52-64	54-80	15-81
Exports of FB's in % (ditto)	70	58	56	45
----- 95% confidence limits in %	66-74	51-64	41-70	12-78
Number of businesses in sample	325	201	184	36

**Table 12**

Sales turnover: (million pesetas)	200 - 500		501 - 1000	
	FB	NFB	FB	NFB
Average sales (million pesetas)	374	386	744	750
Sales per employee (million pesetas)	9.64	9.79	13.34	7.57
% exports over sales	5.99%	7.10%	6.83%	6.06%

These tables show that:

- The number of FB's decreases as sales increase.
- In the group from 200 to 500 million pesetas in sales, total sales and sales per employee are similar in both FB's and NFB's, while the percentage of exports over sales is greater than that of NFB's
- In the group with 501 to 1000 million pesetas in sales, total sales and percentage of exports over sales are similar in both FB's and NFB's, while sales per employee are greater than those of NFB's.
- In the groups of companies with 1001 to 5000 million pesetas in sales and over 5000 million pesetas, the small size of the samples makes it unwise to venture any statements.
- However, given that in the total sample FB's are smaller than NFB's, in terms of average annual sales, and in the groups of companies with sales of less than 1000 million pesetas the size of FB's is similar to that of NFB's, it is concluded that in the group comprising all the companies with sales exceeding 1000 million pesetas, FB's are smaller than NFB's.

These points support the generally accepted idea that, up to a certain size, FB's are as efficient, and sometimes even more so, than NFB's in terms of sales per employee and exports.<sup>9</sup>

3. Upon comparing FB's and NFB's in the sample divided into groups according to number of employees, the following data are obtained (f):

**Table 13**

	less than 50	51-250	251-1000	more than 1000
Number of FB's in %	72	71	65	33
95% confidence limits in %	68-76	65-77	51-79	2-64
Sales of FB's in % over total sales of FB and NFB group	73	61	58	31
95% confidence limits in %	69-77	55-67	44-72	0-62
Number of employees in FB's in % (ditto)	73	70	64	40
95% confidence limits in %	69-77	64-76	50-78	7-73
Exports of FB's in % (ditto)	80	60	76	40
95% confidence limits in %	76-84	54-66	64-88	16-65
Number of companies in sample	430	256	49	9

**Table 14**

Number of employees	less than 50		51 - 520	
	FB	NFB	FB	NFB
Average sales (million pesetas)	864	815	1248	1953
Sales per employee (million pesetas)	34.33	32.23	11.3	16.48
% exports over sales	4.48%	3.23%	9.53%	10.39%

These tables show that:

- The number of FB's decreases as the number of employees increases.
- In the group of companies with fewer than 50 employees, total sales, sales per employee and percentage of exports over sales are similar in both FB's and NFB's.
- In the group of companies with between 51 and 250 employees, total sales and sales per employee by FB's are significantly less than those of NFB's.
- In the groups of companies with between 251 and 1000 employee and over 1000 employees, the small size of the samples makes it unwise to venture statements.

These points again highlight the difficulty that FB's in general apparently have in operating labor-intensive businesses,<sup>10</sup> either due to the nature of the value chain<sup>11</sup> of their business or due to the company's strategic orientation towards a greater backwards and forwards vertical integration.

4. Upon comparing FB's and NFB's in the sample divided into group according to business activity, the following data are obtained (f):

**Table 15**

Types of business activity:	Manufac- turing	Whole- sale	Retail sale	Construc- tion	Services	Trans- port
Total number of companies in the sample	325	186	56	32	44	33
Number of FB's in %	73	73	80	81	64	67
95% confidence limits in %	68-78	66-80	69-91	67-95	49-79	51-73
Sales of FB's in % over total sales of FB and NFB group	59	69	73	79	72	48
95% confidence limits in %	53-64	62-76	61-85	65-93	58-86	31-65
Number of employees in FB's in % (ditto)	58	81	77	87	67	45
95% confidence limits in %	52-63	75-87	65-87	75-99	53-81	28-62
Exports of FB's in % (ditto)	56	82	--	--	--	--
95% confidence limits in %	50-61	77-88	--	--	--	--
Number of companies in the sample	325	186	56	32	44	33

**Table 16**

Type of activity	Manufacturing		Wholesale	
	FB	NFB	FB	NFB
Average sales (million pesetas)	1256	2264	1063	1286
Sales per employee (million pesetas)	12.48	11.95	23.99	34.56
% exports over sales	8.41%	9.87%	4.69%	2.29%

These tables show:

- The existence of a greater percentage of FB's in the "Construction" and "Retail" sectors.

5. Upon comparing FB's and NFB's in Catalonia, Madrid and the rest of Spain, the following data are obtained (f):

**Table 17**

Geographical area	Catalonia	Madrid	Spain
Number of FB's in %	71	63	71
95% confidence limits in %	65-77	56-70	68-74
Sales of FB's in % over total sales FB and NFB group	66	36	61
95% confidence limits in % (ditto)	60-72	29-43	57-65
Number of employees in FB's in % (ditto)	59	50	62
95% confidence limits in %	52-66	42-58	59-66
Exports of FB's in % (ditto)	88	46	59
95% confidence limits in %	83-92	38-53	55-62
Total number of companies in the sample	219	169	747

**Table 18**

	Catalonia vs Madrid	Catalonia vs Spain	Madrid vs Spain
% of FB	71%/63%	71%/71%	63%/71%
% sales FB/sales NFB	66%/36%	66%/61%	36%/61%
% emp. FB/emp. NFB	59%/50%	59%/62%	50%/62%
% exp. FB/exp. NFB	88%/49%	88%/59%	49%/59%

These tables show that:

- The number, total sales, number of employees and exports of FB's in Madrid are below the rest of Spain
- The exports of FB's in Catalonia are significantly greater than those of FB's in the rest of Spain.

## Other Comments on Family Business

1. The classification of FB's in the sample according to the percentage of shares held by one or two families is shown in the following table:

**Table 19**

Capital belonging to one or two families	Number of FB's	%	95% confidence interval in %
10% to <1/3	57	11	7-14
1/3 to 50%	134	25	21-30
>50% to <1/3	32	6	3-8
2/3 to <90%	58	11	7-14
>90% to 100%	249	47	42-52
<b>TOTAL</b>	<b>530</b>	<b>100</b>	

The classification of FB's in the sample according to the ratio between the percentage of shares held by one or two families and that held by the next three largest shareholders is shown in the following table:

**Table 20**

% belonging to one or two families divided by % belonging to the next three shareholders	Number of FB's	%	95% confidence interval in %
0.34 to 1	164	31	27-35
>1 to 1.5	26	5	3-7
>1.5	341	64	60-68
<b>TOTAL</b>	<b>531</b>	<b>100</b>	

Upon grouping FB's according to the percentage of share capital held by one or two families and their sales turnover, the following data are obtained:

**Table 21**

% of capital belonging to one or two families	Sales turnover (million pesetas)			
	200-500	501-1000	1001-5000	more than 5000
10% to <1/3				
Number of companies	27	10	18	2
% of total	8%	7%	14%	11%
1/3 to 50%				
Number of companies	68	37	24	5
% of total	21%	26%	19%	26%
> 50% to 2/3				
Number of companies	15	8	9	0
% of total	5%	6%	7%	0
> 2/3 to <90%				
Number of companies	25	19	12	2
% of total	33%	48%	50%	53%
> 90% to 100%				
Number of companies	106	69	64	10
% of total	33%	48%	50%	53%
TOTAL				
Number of companies	201	143	127	19



Upon grouping FB's according to the percentage of share capital held by one or two families and the number of employees, the following data are obtained:

**Table 22**

% of capital belonging to one or two families	Number of employees			
	<50	51-250	251-1000	more than 1000
10% to <1/3				
Number of companies	27	35	5	0
% of total	9%	14%	16%	0%
1/3 to 50%				
Number of companies	84	40	9	0
% of total	27%	22%	28%	0%
>50% to 2/3				
Number of companies	18	12	2	0
% of total	6%	7%	6%	0%
>2/3 to <90%				
Number of companies	41	16	1	0
% of total	13%	9%	3%	0%
>90% to 100%				
Number of companies	141	90	15	4
% of total	45%	49%	47%	100%
TOTAL				
Number of companies	311	183	32	4

These tables show that:

- The percentage of shares held by one or two families in FB's in the sample does not seem to show any tendency to decrease as the size of the company increases.
- In general, it is observed that FB's in the sample tend to maintain more than 90% of the share capital in the hands of one or two families. Among the other four alternatives of ownership analyzed, FB's in the sample tend to prefer holding between 1/3 and 50%.

Both points corroborate the idea that the owners of FB's prefer to hold a controlling interest, which would enable them to run the company with "full powers," or at least, with "very extensive powers;" by this means, they avoid having to justify their management positions solely on the basis of their personal professional ability, which could be challenged by the other shareholders in the company's statutory governing bodies.

This preference may have significant repercussions on any growth process requiring a considerable increase in equity capital.

2. Upon classifying FB's according to the number of generations the family has held power from the time the business started operating to the study date, the following data are obtained:

**Table 23**

Number of generations	Number of companies	%	95% confidence limits in %
1	397	75	71-79
2	87	16	13-19
3	41	8	6-10
4	6	1	0.1-1.9
<b>TOTAL</b>	<b>531</b>	<b>100%</b>	

**Table 24**

Years of establishment	Number of generations that have held power				
	1	2	3	4	Total
<b>Until 1925</b>					
Number of companies	0	2	15	5	22
% of total	0%	2%	37%	83%	
<b>1926-1950</b>					
Number of companies	12	26	20	1	59
% of total	3%	30%	49%	17%	
<b>1951-1975</b>					
Number of companies	213	45	6	0	264
% of total	54%	52%	15%	0%	
<b>After 1975</b>					
Number of companies	172	14	0	0	186
% of total	43%	16%	0%	0%	
<b>TOTAL</b>					
Number of companies	397	87	41	6	531

The data show that:

- 25% of FB's in the sample have survived one generation change, and 9% two or more generation changes.

- The vast majority of Spanish FB's are run by their founders. Given the FB's incorporation dates, in the next few years many of them will have to face the problem of making the transition to the next generation.

In the sample, only 10 FB's became NFB's. The dates they became NFB's are shown below:

**Table 25**

Company	Year of establishment	Year became NFB	Duration in years as FB
1	1917	1936	19
2	1925	1975	50
3	1931	1988	57
4	1962	1972	10
5	1965	1986	21
6	1967	1986	19
7	1970	1983	13
8	1972	1980	8
9	1974	1976	2
10	1975	1977	2

In general, it is observed that comparatively few companies cease to be FB's during the period covered by the study (g).

The problem of the survival of FB's, on which the database is unable to provide any further information, is however one of the most worrying, as research indicates that only a small percentage of FB's will survive.

This short-lived nature is often related to the changeover from one generation to the next, and it has been stated that, as FB's do not have growth as one of their prime goals, the changeover from one generation to the next is a "good opportunity" for "discontinuing" the company. Another significant factor is the tax burden imposed on the transmission of the FB to the next generation and its adverse effect both on growth and survival.<sup>13</sup>

## Final Comments

On the basis of the information obtained from the sample of 750 businesses, there is no doubt about the significance and efficacy of the FB's role in the Spanish economy. This statement is corroborated by the following facts:

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(g) It is seen in the sample that a significant number of FB's succeeded in making the transition from one generation to the next. However, as no data are available on the FB's that closed down, it is not possible to make any statements as to the difficulty or ease with which this transition was made.

1. A highly significant number of jobs in Spain are generated by FB's; in fact:

FB's accounted for 59-66% (with a confidence level of 95%) of the total number of jobs provided by Spanish companies with sales over 200 million pesetas.

Furthermore, as the percentage of FB's is greater in the groups of companies with lower sales turnovers, the FB's are likely to account for between 75% and 90% of the total number of jobs provided by companies with sales below 200 million pesetas (e.g., "one-man" and "craft" in this document).

2. With regard to production, although the database does not provide any information on the economic value added by the companies, it is logical to conclude that initially there are no significant differences between FB's and NFB's, as annual sales per person are similar in both cases.

The information obtained even justifies the conclusion that, in the group of companies with a lower number of employees, FB's are more efficient than NFB's as the annual sales per person are higher.

3. With regard to overseas trade, no significant differences are observed between FB's and NFB's, as the percentage is similar in both cases.

However, the data lead one to think that FB's have greater difficulty in exceeding a certain size, in terms of sales and number of employees, than NFB's, as the proportion of FB's in comparison with NFB's decreases as the size of the companies increases. These difficulties are associated with:

- The financing of growth due to the insufficiency of the resources generated, due to difficulties in obtaining permanent resources from outside parties, the excessive risk of venturing personal capital in just one business, etc.
- The organization's development and professional level. The people, management systems, controlling bodies, institutionalization of values, etc.
- Power struggles and especially the problem of succession.
- The tax burden on the transmission of ownership, when it reaches significant proportions, leads to the company ceasing to be a FB, either by selling its assets to other companies or by offering its share capital to outside shareholders.

Encouraging the birth of FB's and their initial growth is an obvious way of increasing the supply of jobs. Assisting in the obtainment of permanent financial sources and studying ways of solving its organizational growth problems is an obvious way of creating the possibility for effective long-term growth.

However, both aspects will be incomplete without a reduction of the tax burden on the transmission of ownership to the next generations in the family.

## Exhibit 1

### Script of the Telephone Interview

1. Are 10% or more of the company's shares held by 1 or 2 families?

Yes \_\_\_\_

What % do they hold? Percentage (1) = \_\_\_\_

No \_\_\_\_

2. What percentage of shares is held by the next 3 largest shareholders?

Percentage (2) = \_\_\_\_ %      Percentage (1)/Percentage (2) = \_\_\_\_

3. If at present the percentage stated in (1) is equal or less than 10% and the ratio stated in (2) is equal or less than 0.33, but previously the situation was otherwise:

In which year did the change occur? \_\_\_\_

4. Number of family generations that have held power in the family business since the time it started trading until today:

Number of generations \_\_\_\_

5. Sales turnover in 1986: \_\_\_\_

6. Exports in 1986: \_\_\_\_

7. Number of employees in 1986: \_\_\_\_

8. Year established: \_\_\_\_

9. Business activity: \_\_\_\_

## Exhibit 2

Analysis methods for the various variables

### Annual sales:

A hypothesis test for testing differences in means has been carried out, assuming that the sales variable for both FB's and NFB's followed a Normal Law. The different mean hypothesis test involves finding the confidence limits of the difference in means. If this does not include zero, the null hypothesis cannot be accepted and they can be stated with the confidence with which the interval has been calculated that the means are different and therefore one group of companies has a higher average sales turnover than the other.

If it is accepted that the sales of each group of companies follow a normal law:

$$\text{SALESFB} \sim N(m_1, s_1) \quad \text{SALESNFB} \sim N(m_2, s_2),$$

the means will follow a normal law:

$$\text{MEAN (SALESFB)} \sim N\left(m_1, \frac{S_1}{\sqrt{n_1}}\right) \quad \text{MEAN (SALESNFB)} \sim N\left(m_2, \frac{S_2}{\sqrt{n_2}}\right)$$

and the difference in means will follow a normal law

$$\text{MEAN (SALESFB)} - \text{MEAN (SALESNFB)} \sim N\left(m_1 - m_2, \sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}\right)$$

### Sales per employee and percentage of exports over sales:

The aim was to ascertain which of the two groups, within the various segmentation criteria, has the higher sales per employee. The variable used was the ratio between total sales and total number of employees.

It was also intended to identify whether FB's export more or less of their sales turnover than NFB's, in relation to the various criteria used. Therefore, the variable studied was the ratio between total exports and total sales by FB's and NFB's.

These variables do not necessarily have to correspond to any specific statistical distribution and, as only one observation is available for each population, no hypothetical tests can be performed to identify whether their behavior can be assimilated in a particular statistical distribution. Thus, the comparison is made using the sample values obtained.

### Exhibit 3

Results of the hypothesis tests

#### a. Segmentation by annual sales:

The results of the equal mean hypothesis tests carried out in the companies with sales between 300 and 500 million pesetas (325 companies) are shown in the following table:

**Table 26**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	374	386	12	[-34,12]
Sales/employee	9.64	9.79		
% exports/sales	5.99%	7.10%		

The results of the hypothesis tests for the group of companies with sales between 501 and 1000 million pesetas are shown in the following table:

**Table 27**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	744	750	180	[-57,45]
Sales/employee	13.34	7.57		
% exports/sales	6.83%	6.06%		

#### b. Segmentation by number of employees

The results of the hypothesis test carried out for companies with a number of employees between 0 and 50 (530 companies) are shown in the following table:

**Table 28**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	864	815	180	[-304,403]
Sales/employee	34.33	32.23		
% exports/sales	4.48%	3.23%		

### Exhibit 3 (continued)

The results of the hypothesis tests carried out for companies with a number lit" employees between 51 and 250 (256 companies) are shown in the following table:

**Table 29**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	1248	1953	398	[-1325M-13]
Sales/employee	11.3	16.48		
% exports/sales	9.53%	10.39%		

#### c. Segmentation by business activity

The results of the hypothesis test carried out for manufacturing companies are shown in the following table:

**Table 30**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	1256	2264	610	[-2013,-4] (1)
Sales/employee	12.48	11.95		
% exports/sales	8.41%	9.87%		

The results of the hypothesis tests carried out for wholesale companies (186 companies) are shown in the following table:

**Table 31**

	MEAN		STANDARD DEVIATION	CONFIDENCE LIMITS
	FB	NFB		
Mean sales	1063	1286	316	[-843.397]
Sales/employee	23.99	34.56		
% exports/sales	4.69%	2.29%		

#### d. Segmentation by geographical area

The hypothesis tests carried out to ascertain whether the various parameters analyzed are equal or different in Catalonia, Madrid and Spain are shown in the following tables:



### Exhibit 3 (continued)

Table 32

<u>Catalonia-Madrid</u>	Catalonia	Madrid	Standard deviation	Confidence limits
Number of FB's in %	71%	63%	4.3%	[0.77%,15%]
Sales of FB's as % of total sales	66%	36%	4.9%	[20.4%,39.6%]
Number of employees in FB's as % of total employees	59%	50%	5.1%	[0.6%,17.4%] (1)
% total exports of total sales of all FB's	88%	49%	4.8%	[32.4%, 51,6%]

(1) These limits have been calculated with a confidence of 90%.

Table 33

<u>Catalonia-Spain</u>	Catalonia	Spain	Standard deviation	Confidence limits
Number of FB's in %	71%	71%	3.6%	[-7.1%,7.1%]
Sales of FB's as % of total sales	66%	61%	3.7%	[-2.2%,12.2%]
Number of employees in FB's as % of total employees	59%	62%	3.8%	[-10.3%,4.4%]
% total exports of total sales of all FB's	88%	59%	2.8%	[32.4%,51.6%]

Table 34

<u>Madrid-Spain</u>	Spain	Madrid	Standard deviation	Confidence limits
Number of FB's in %	71%	63%	4.1%	[-16.0%, -.03%]
Sales of FB's as % of total sales	61%	36%	4.1%	[-33%, -17%]
Number of employees in FB's as % of total employees	62%	50%	4.2%	[-20.3%, -3.69%]
% total exports of total sales of all FB's	59%	49%	4.2%	[20.6%,37.3%]

## Ednotes

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<sup>1</sup>Statistics like the following provide a clear indication of the influence of the family business on the economy:

- Of the *Fortune 500*:
  - 20% are family owned
  - In 90 close relatives hold management posts

Donnelley, Robert, "The Family Business," *Harvard Business Review*, December 1973.
- 40% of the largest public corporations in the United States are family controlled.

Davis, Peter, "Family Business: Perspectives of Change," *The Wharton Annual*, Fall 1983.
- Of the one million companies registered in the United States, 980.000 are family businesses.

Davis, Peter, "Adaptation, Survival and Growth of the Family Business: An integrated perspective," *Human Relations*, Vol. 34, No 4, 1980.
- 95% of American companies are family-owned.

Dyer, W. Gibb, "Cultural Change in Family Firms," *The Jossey-Bass Management Series*, 1986.
- Approximately 14.5 million of the 15 million businesses existing in the United States are controlled by one family.

Beckhard, Richard, "Managing Continuity in the Family Owned Business," *Organizational Dynamics*, Summer 1983.
- Family businesses produce:
  - 50% of the U.S. GNP
  - 40% of the U.S. GNP

Dyer, W. Gibb, "Cultural Change in Family Firms," *The Jossey-Bass Management Series*, 1986.

Bekchard, Richard, "Managing Continuity in the Family Owned Business," *Organizational Dynamics*, Summer 1983.

They account for 40% of wages and salaries paid in the United States.
- 42% of the United States work force is employed in family businesses.

As can be seen, some of the data are contradictory due to differing criteria as to the companies that can be considered family businesses.

<sup>2</sup> Among the definitions that have been given for the Family Business are the following:

- "Most of the shares are held by one family and at least two members of the family are involved in the company's management."
- Rosenblat, P.C., de Mick, L., Anderson, R.M., and Johnson, P. A., "The family in business," *Jossey-Bass*, 1985, San Francisco.
- "It is a Family Business when the owning family influences the decision taking process and the way the company is run."
- Donnelley, R.G., "The family business", *Harvard Business Review*, 1964, 42 (4), pp. 93-105.
- "A company in which the members of one family have legal control un the ownership of the company."
- Lansberg, I., "Family business as an emerging field," *Family Business Review*, Spring 1988.
- "A company in which two or members of a family influence the company's management through the rights conferred by their ownership of said company."
- Stempler, G., "A study of succession in family owned businesses," PhD thesis, School of Government and Business Administration, George Washington University, 1988.
- "There are three types of Family Business: Traditional, conflictive and entrepreneurial."
- Levinson, H., "Consulting with family business," *Organizational Dynamics*, Summer 1983.
- "It is a Family Business if members of two different generations work in it."
- Barach, J., "Keeping the family in the firm."

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<sup>3</sup> Institutionalization of values being understood as defined by Selznick, Philip, "Leadership in Administration: A Sociological Interpretation," Harper & Row, New York, 1957.

<sup>4</sup> The following literature can be consulted on this point:

- Von Rintelen, Fritz Joachim, "Values in European Thought," Eunsä, 1972.
- Parsons, Talcott and Shils, "Toward a General Theory of Action," Harvard University Press, 1951.

<sup>5</sup> Gallo, M.A. "Las Empresas Familiares," Enciclopedia de Dirección y Administración de la Empresa, Editorial Orbis, 1985.

<sup>6</sup> Fomento de la Producción, "España 2000," 1987, INFE, "Censo Oficial de Exportadores 1986," 1987.

<sup>7</sup> Dun & Bradstreet, S.L. (Madrid) have assisted in the study providing the universe of companies, selecting the sample and carrying out the telephone interviews.

<sup>8</sup> Ward, J., "The impact of private ownership on marketing strategy and performance: A first look at the PIMS database," International Council for Small Business, 1983, Washington.

When working with the PIMS database, the author found that the FB's tended to:

- Prefer "follower" strategies to "differentiator" strategies.
- Be more common in fragmented, less capital-intensive industries that required lower expenditure on customer services.
- Be orientated towards regional or customer group market niches.

<sup>9</sup> For more information on this aspect of exports, see Luostarinen, Reijo, "Internationalization of the firm," Acta Academiae Oeconomicae Helsingiensis, The Helsinki School of Economics, 1980.

<sup>10</sup> For more information on business segmentation, consult Hax, A.C. and Majluf, N.C., "Strategic Management: An Integrative Perspective," Prentice-Hall, Inc., 1984.

<sup>11</sup> Value chain being understood as defined by Kogut, B., "Normative Observations on the International Value-Added Chain and Strategic Groups," *Journal of International Business Studies*, Fall 1984.

<sup>12</sup> In this regard, data such as the following are significant:

- The average life expectancy of FB's in the United States is 24 years. Alcornop, B., "Success and Survival in the Family Owned Business," New York, MacGraw-Hill, 1982.
- Only 30% of FB's in the United States survive to the second generation and 15% to the third generation. Dyer, W.G. (Op. cit.)
- Working with a database of 1000 Belgian companies with fewer than 100 employees and of which 76% were FB's, Donckells, R. found that 68% had never considered the problem of succession. "Succession Problems in Family Firms: Some Theoretical Considerations and Empirical Evidence for Belgium," Small Business Research Institute, UFSAL, Brussels, 1988.
- Of a sample of 200 FB's in the Chicago area, only 13% were still held by the same family 60 years after incorporation. Ward, J., "The Special Role of Strategic Planning for Family Business," *Family Business Review*, Summer 1988.

<sup>13</sup> Gallo, M.A. and Rial, C.S., "Tax and the Family Business: Positive effect on the Transmission of Family Businesses," Technical Note DGN-376, IESE.