



# Diversification of Family Business Groups and Board Control

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## Purpose of the paper

... assuming corporate diversification as a strategy for creating value for shareholders ...

- To understand the diversification strategy of family firms
  - Which is the diversification pattern of a set of family business groups (FBG) ?
  - Which internal governance forces drive to related or unrelated diversification?
  - How large and diverse is the set of firm's administrators in diversified FBG?
  - Does the diversification strategy affect the board openness to administrators outside the family?

## Define a family firm

- Firm owned along time by a family –*controlled* by a family
- *Managed* by members of the family
- Usual criteria defining family firms include
  - The control of a firm by a family
    - percentage of voting power
    - percentage of share ownership
    - effective management of the firm by family members
    - number of family members having board seats
  - The history of a firm related to a family
    - involvement of multiple generations
    - institutional values of the firm identified with the family
    - etc.

## Our “economic agent” is the family business group

- We want to analyze the economic behavior of a *family business group* (FBG from now on), i.e. the group of firms owned by (or under control of) a family
  - It can be organized as a conglomerate, as a unique firm, etc.
  - We are not interested in the behavior of particular firms within the FBG.

## Corporate finance

- Standard issue, not particular of FBG: financing may require to give up control
  - May restrict group growth
- The family has a large stake of its wealth in the FBG
  - Is there an incentive to hedge financial risk diversifying the lines of business of the FBG?

## Efficiency-based reasons for diversification (+)

1. To achieve economies of scale and scope:
  - full use of a common technology to many products,
  - specific managerial skills –say, in information systems or finance- that may be useful in seemingly unrelated businesses (resources and capabilities developed by a FBG)
2. Minimizing transaction costs in the presence of specialized assets
3. Internal capital market when firms may be unable to finance profitable projects from external sources:
  - Due to asymmetric information problems, investors may be reluctant to provide capital.
  - External finance consumes resources in monitoring

## related – unrelated diversification

- Economies of scale and transaction costs (first two reasons) may justify related diversification;
- Financial reason (the third one) may explain unrelated diversification
- In FBG, diversify to hedge risk –most of the family wealth is in the FBG- they can not properly diversify their portfolio outside the FBG

## Costs of diversification (-)

Increase in complexity that may affect its organization:

1. The need to incorporate capabilities from outside the family (professional managers, partnerships)
2. Influence costs
3. Difficulties in creating control systems that reward managers on the basis of their division profits
4. Internal capital markets may not work well if managers over-invest, lobby for having investments in their divisions, etc.

## Empirical evidence on diversification

- The “diversification discount” of conglomerate firms in the stock market relative to single-segment firms. But:
  - Campa and Kedia, *J. Finance*, 2002, the discount may arise endogenously
  - Maksimovic and Phillips, *J. Finance*, 2002, conglomerate firms are less productive than single-segment firms but exhibit growth across industry segments consistent with optimal behavior
- Hence, diversification may arise because firms do not have the same investment opportunities

## Diversification in FBG endogenous

- The family is directly involved in the corporate diversification strategy (in contrast with publicly held firms)
  - Don't expect a particular line of business or segment unless it creates value for the family
  - The success of a family in business is interpreted as evidence that the family has developed capabilities that are useful in some lines of business

## Diversification in FBG: our research question

- Do we expect to see more board members outside the family in more diversified FBG?
  - The family needs to incorporate capabilities from outside
- or...
- Do we expect FBG diversification processes with a close group of board members with family ties?
  - The family diversifies avoiding any potential agency problem
  - Only strong personal relationships guarantee “controlled” diversification

## Sample and description (i)

- Data set of FBG: all 50 Balearic families registered members of the ABEF (Associació Balear d'Empreses Familiars, 48) or the IEF (Instituto de la Empresa Familiar, 4) at the end of 2004
- Quantitative information from SABI database
  - In particular, use of the Spanish "Two-surnames" system to trace the family role in the FBG looking at the names of board members
- Qualitative information directly from members of the ABEF through the Càtedra Banca March de l'Empresa Familiar

## Sample description (ii)

- We identify 556 firms pertaining to the members of the Association with at least 60 m. € of asset values
- We classify the sample into three groups according to the total asset values of a FBG
- We identify segments or lines of business using the NACE classification of activities

## Measuring diversification

- Unweighted measures
- Number of different NACE codes
- Weighted measures
- 1-Herfindahl:
- Entropy diversification Index
  - Related
  - Unrelated

## Measuring diversification

$P_i$  is the proportion of FBG assets in industry  $i$ .

$P_{ij}$  the proportion of firm's assets in the group  $i$  (NACE 3 digits) within the industry  $j$  (NACE *one digit*) code.

$$\text{Herfindahl Index } H = \sum_{i=1}^n P_i^2$$

Entropy measure:

$$\text{Total Diversification } D_T = \sum_{j=1}^m \sum_{i=1}^n \left[ P_{ij} \times \ln\left(\frac{1}{P_{ij}}\right) \right] \text{ for a } P_{ij} \neq 0$$

## Descriptive statistics of the 50 FBG in the sample

<b>variable</b>	<b>mean</b>	<b>sd</b>	<b>median</b>	<b>min</b>	<b>max</b>
Number of firms	11	12	6,5	1	47
Assets	283.771	674.958	41.919	1.329	3.401.847
Income	212.968	556.599	29.243	1.525	2.994.838
Workers	1.464	3.683	195	5	17.092
Firm's age	18	5,3	18	5	34
Family generation	2,2	0,65	2	2	4

## Board composition and family participation by size

### Panel A. Board composition

Size (Asset terciles)	Number of Board Members	Number of different people at level		
		Name + two surnames	two surnames	one of both surnames
Small	10,69	7,13	4,81	3,88
Medium	24,18	11,12	8,65	6,59
Large	93,59	35,29	30,29	19,53
Total	43,46	18,06	14,78	10,12

### Panel B. Board members proportions

Size (Asset terciles)	Non Repeating People	Without Brother Family Ties	Without "Cousin" Family Ties
	Small	0,74	0,51
Medium	0,46	0,38	0,30
Large	0,44	0,39	0,29
Total	0,55	0,43	0,34

## Family board participation by diversification intensity

- Board structure and Board proportions for several levels of FBG diversification measured by the number of different NACE codes at various digit levels .
- Panel A accounts for number of people on board non repeating along firms in the group and without family ties
- Panel B accounts for the proportions of the Panel A numbers related to FBG sum of board sizes.
- Data that refers to board composition comes from SABI database for the year 2004

Panel A. Number of different people						
	Non Repeating People	Without Brother Family Ties	Without "Cous in" Family Ties	Non Repeating People	Without Brother Family Ties	Without "Cous in" Family Ties
Total	18,06	14,78	10,12	18,06	14,78	10,12
	A1. Total Diversification Terciles			A4. Number of NACE One Digit		
Low	17,00	14,44	10,44	7,00	5,19	3,97
Medium	10,94	8,71	6,56	10,77	8,15	6,12
High	26,18	21,18	13,38	31,00	26,19	17,29
	A2. Related Diversification Terciles			A5. Number of NACE Two Digit Codes		
Low	7,06	5,88	4,66	4,27	3,00	2,27
Medium	21,71	18,29	12,50	12,32	9,53	7,37
High	24,76	19,65	12,88	31,10	26,25	17,05
	A3. Unrelated Diversification Terciles			A6. Number of NACE Three Digit Codes		
Low	15,13	12,88	9,47	6,75	4,50	3,44
Medium	13,65	10,76	7,24	12,80	10,07	7,07
High	25,24	20,59	13,62	24,33	20,44	13,80

Panel B. Board members proportions						
	Non Repeating People	Without Brother Family Ties	Without "Cous in" Family Ties	Non Repeating People	Without Brother Family Ties	Without "Cous in" Family Ties
Total	0,55	0,43	0,33	0,55	0,43	0,33
	B1. Total Diversification Terciles			B4. Number of NACE One Digit		
Low	0,59	0,43	0,36	0,71	0,52	0,43
Medium	0,55	0,45	0,37	0,50	0,39	0,31
High	0,45	0,35	0,29	0,45	0,37	0,26
	B2. Related Diversification Terciles			B5. Number of NACE Two Digit Codes		
Low	0,60	0,43	0,38	0,76	0,54	0,46
Medium	0,54	0,46	0,37	0,54	0,43	0,34
High	0,45	0,34	0,28	0,44	0,37	0,25
	B3. Unrelated Diversification Terciles			B6. Number of NACE Three Digit Codes		
Low	0,60	0,45	0,38	0,79	0,50	0,42
Medium	0,55	0,43	0,35	0,60	0,48	0,37
High	0,45	0,35	0,29	0,45	0,37	0,27

## Regression analysis

- Regression analysis of FBG diversification measured by the entropy value and number of NACE activities.
- Total diversification is the sum of related and unrelated diversification.
- The explanatory variables are the family generation running the firm, the average size of firms and the openness of the board of directors.
- This openness is measured through three variables.
  - Board diversity accounts for the proportion of non repeating people on board related to FBG board size.
  - Non Brothers diversity refers to the proportion of people without brothers family ties related to FBG board size.
  - Non Cousins diversity refers to the proportion of people without “cousin” family ties (one of two surnames) related to FBG board size..

## Does board structure explains diversification?

$$Diversification = \alpha + \beta_1 \text{Board Characteristics} + \beta_j \text{Control Variables} + e_j$$

What happens if Board Characteristics are partly determined by Diversification as well?

(simultaneous equations)

Problem if Board Characteristics and error term are correlated. Then our estimates will be biased

Instrumental variables estimation...

Instruments: number of firms by FBG, group total income, average board size  
to avoid the overidentification ...

## People on Board Diversity

People on Board Diversity						
Dependent Variable	Total Diversification	Related Diversification	Unrelated Diversification	Number NACE one digit	Number NACE two digits	Number NACE three digits
Board Diversity	-3.180***	-1.880**	-1.300*	-7.750***	-17.174***	-29.171***
Mean Firm Asset	-4.912	-2.124	-2.789	1.14	-0.241	5.226
Family Generation	0.289	0.168	0.121	0.397	1.442	2.362
Constant	1.899***	0.907**	0.993**	5.969***	9.697***	15.038***
F- test	4.901	3.999	2.341	4.608	5.147	6.047
R2	0.234	0.287	0.020	0.162	0.270	0.335
Wu-Hausman	21.241	24.104	2.913	12.934	30.041	107.922

## Non Brothers Diversity

Non Brothers Diversity						
Dependent Variable	Total Diversification	Related Diversification	Unrelated Diversification	Number NACE one digit	Number NACE two digits	Number NACE three digits
Brothers Diversity	-4.308**	-2.547**	-1.761**	-10.499**	-23.265***	-39.516***
Mean Firm Asset	-1.202	0.07	-1.272	10.181	19.792	39.253
Family Generation	0.21	0.121	0.089	0.205	1.016	1.639
Constant	2.089***	1.019**	1.070**	6.433***	10.724***	16.781***
F- test	4.018	3.865	1.951	3.755	4.549	5.237
R2	0.301	0.297	0.155	0.255	0.307	0.363
Wu-Hausman	25.692	23.691	5.136	16.360	32.654	116.955

## Non Cousins Diversity

Non Cousins Diversity						
Dependent Variable	Total Diversification	Related Diversification	Unrelated Diversification	Number NACE one digit	Number NACE two digits	Number NACE three digits
Cousins Diversity	-5.049**	-2.985**	-2.064*	-12.304**	-27.265**	-46.311**
Mean Firm Asset	-0.447	0.516	-0.963	12.021	23.87	46.179
Family Generation	0.051	0.027	0.024	-0.183	0.156	0.178
Constant	2.378***	1.189**	1.188**	7.135***	12.280***	19.425**
F- test	3.393	3.220	1.824	3.288	3.743	4.216
R2	0.342	0.341	0.192	0.298	0.351	0.395
Wu-Hausman	26.758	25.234	5.168	16.830	34.676	121.562

## conclusion (i)

- Diversification is inversely related with the degree of board openness
- The larger the related diversification, the less open is the board of directors of FBG to members outside the family
- Result becomes weaker explaining unrelated diversification

## conclusion (ii)

the effect of avoiding agency costs introducing large proportions of board members outside the family core dominates the alternative explanation of incorporation of new capabilities in case of diversification of FBG, specially for related diversification