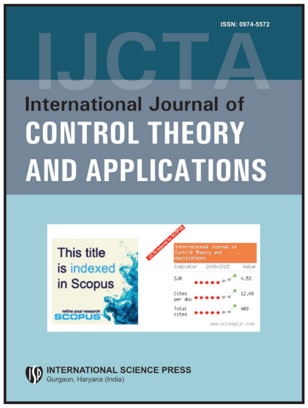


International Journal of Control Theory and Applications

ISSN : 0974-5572

© International Science Press

Volume 9 • Number 44 • 2016

Profile of the Financial Performance of Family Enterprises in the Colombian Graphic Industry

Jaime-Cifuentes Rueda[a], Mercedes Gaitan-Angulo[b], Amelec Viloria[c] and Paula Robayo Acuña[d]

[a]*Ecopetrol, Bogota, Colombia. Email: jaime.cofuentes@ecopetrol.com.co*
[b,d]*Fundación Universitaria Konrad Lorenz, Bogotá, Colombia. Email: [b]mercedes.gaitana@konradlorenz.edu.co, [d]paulav.robayoa@konradlorenz.edu.co*
[c]*Universidad de la Costa, Barranquilla, Colombia. aviloria7@cuc.edu.co*

Abstract: This study presents a comparative analysis of financial results between family firms and non-family companies of the printing industry in Colombia between 2006 and 2014. Three main indicators were used to compare the two types of companies: ROA, ROE and DUPONT. The study is also based on the criterion of definition of family businesses of the Superintendency of Societies - more than 50% of the capital of the company must belong to the family - emphasizing that when the concept of performance is used, reference is made to performance Economic ratio measured by the profitability variable. Finally, the comparison between family firms and non-family firms, being both independent units, do not show significant differences neither during each year in the whole evaluated period, nor in the financial performance through the indicators. However, the results segmented by product type suggest that there are tendencies towards the improvement of performance depending on the type of company.

Keyword: Financial Performance, Family Business, Non-Family Business, Printing Industry and Graphic Communication.

1. INTRODUCTION

Family-owned businesses are an important group of companies for the generation of employment and wealth in Colombia ([1], [2]), this important group of family businesses is faced with changing conditions and financial management is a crucial part of administrative and operational aspects Of the direction for the achievement of the objectives.

The results of the research focus on the financial management of printing companies and graphic communication, in order to account for recent performance in one of the sectors that are being affected by the use and development of The technologies of the information and communication; By its organizational structure of family origin, and by the economic contribution to the country. The results of the research are twofold: on the one hand, to probe and evaluate the financial performance of larger companies, determined by the number of assets, reporting to the Superintendency of Corporations and, on the other hand, to distinguish between The companies that are not family.

Given that in the face of the topic of performance, there are several academic research that explicitly recognize the prevalence of better performance of Family companies around the world, than non-family companies, such as [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13] and [14].

2. METHODOLOGY

For the development of this research, a methodological design is proposed that has a descriptive and analytical scope, through which the hypothesis is sought to verify: The family companies of the Printing and Graphic Industry in Colombia enjoy a better performance, To the profitability, of the non-familiar.

It is important to note that in this research when the term performance is used refers to the economic performance measured by the variable profitability that is the ability of the company to generate results from the appropriate application in the development of the entity's corporate purpose. Constant profitability is an essential variable for sustainability that directly determines its competitive capacity ([15]).

On the other hand, it was considered as a unit of analysis the family and non-family companies that are dedicated to the graphic sector in Colombia, for which it took a sample of 104 companies formally established (with NIT and commercial register), forced to report their states Financial services to the Superintendency of Companies (commercial companies with income equal to or greater than 20,000 minimum monthly legal wages in force before 2014 and 30,000 minimum legal monthly wages in force since 2014) and dedicated to providing printing and graphic communication services, taking into account the period From 2006 to 2014.

As for the sample design, it is a stratified probabilistic sample for printing activity, where within the economic sector is stratified by size of company according to the operational income of 2006. Two strata are obtained: Forced and probabilistic inclusion, the latter obtains a sample by the method of selection of Simple Random Sampling without replacement - MAS -. The reason for taking a stratified probabilistic sample lies in the asymmetry of the population compared to the 2006 operating income ([16]).

$$n(t) = N - \frac{(N-t)c^2Y^2}{c^2Y^2 + (N-t)S^2} \tag{1}$$

where,

N(t) = Corresponds to sample size

T = Number of establishments for forced inclusion

N = Size of the stratum according to the number of establishments

C = Desired coefficient of variation (5%).

Y = Total sum of 2009 operating revenues

S2 = Variance of 2009 operating revenues

As expansion factor: It was considered the inverse of the selection probability, which allows to expand the sample data, to obtain the estimate of the parameter in the population.

$$f_h = \frac{N_h}{n_h} \tag{2}$$

where,

N = Number of sample frame establishments in stratum *h*

N = Number of establishments selected in the probabilistic sample in stratum *h*

What led to 104 establishments of the universe of study or sample frame, with a reliability of 95% and an error of 5%, the results obtained will be representative for the largest companies in the sector in Colombia, obligated to report the states Financial statements to the Superintendency of Corporations.

Regarding the analysis of the data collected, it was necessary to take the information reported through the financial statements to the Superintendency of Companies of each of the companies of the Graphic Industry in Colombia. Subsequently organize and rebuild the different financial reports of each of the companies and the sector in general, and thus finally elaborate the profitability indicators on the ROA, ROE and DUPONT to generate the analysis of performance between 2006 and 2014. Then, applied the method of Exploratory Data Analysis (EDA) of TUKEY (1977) [16] which develops a series of graphical and analytical techniques to get a prior knowledge of the data to be analyzed, always from an exploratory perspective.

3. RESULTS

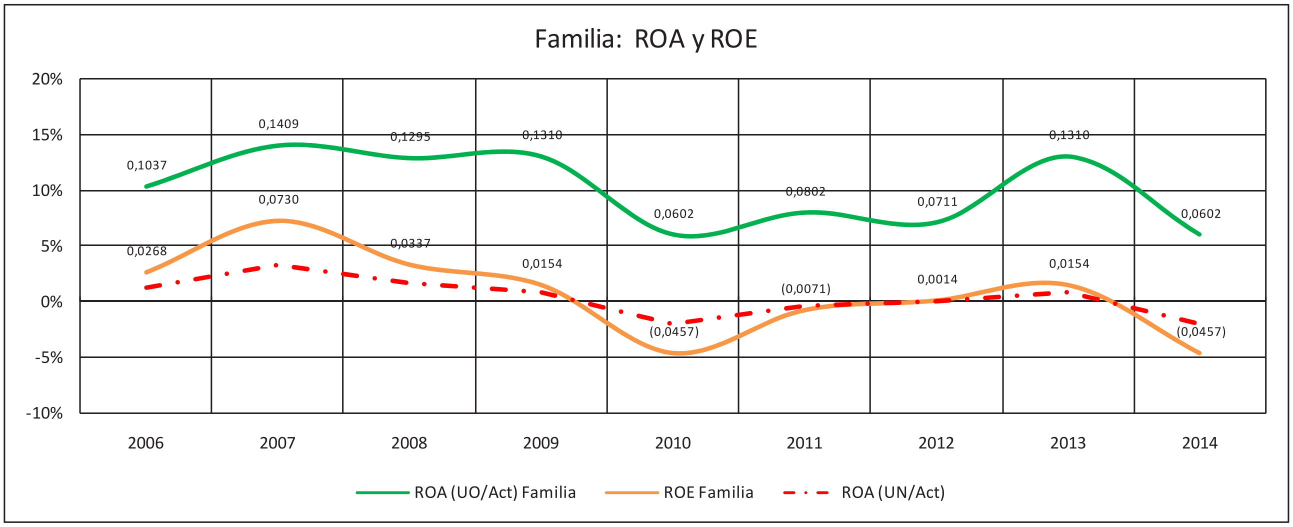
In the first part, we studied the significant statistical differences between Family and Non-Family companies, against the variables of interest that allow us to measure the economic and financial profitability performance, such as the traditional ROA, ROE and DUPONT indicator, with (ROAu = Operational/Active Profit), ROA based on Net Profit (ROAun = Net Profit/Asset), ROE based on Profitability (Net Income/Equity), and the Dupont Indicator based on Operating Margin (Operating Profit/Sales), Asset Rotation (Sales/Asset) and Multiplier of Asset Capital/Equity. Subsequently, a statistical analysis was available, based on the results of the means for each of the companies in the analyzed period.

Table 4
Mean and typical error of the performance indicators in the period 2006-2014 for Family and Non-Family Companies

Variable	*TYPE_EMPRESA*	*N*	*Mean*	*Deviation typ.*	*Typical media error*
PROMEDIO_ROA_uoper	Family	63	,116667	,0628105	,0079134
	No family	41	,121951	,0799131	,0124803
PROMEDIO_ROA_uneta	Family	63	,035238	,0574697	,0072405
	No family	41	,035854	,0627286	,0097966
PROMEDIO_ROE_uneta	Family	63	-,055238	,7139686	,0899516
	No family	41	,062683	,1489131	,0232563
PROMEDIO_DUPONT_uoper	Family	63	,479841	,8720360	,1098662
	No family	41	,511951	,7905859	,1234688

Then, in order to minimize the errors and the possible impact of the biases, the average of the quartiles was applied according to TUKEY (1977) [16], thus, (average = first quartile + second quartile)/2, and t-test was applied to the average of the Means previously found. In all cases the significance ($p > 0.05$) of the t-test for independent samples indicates that the null hypothesis is not rejected, then there are no differences between the Family and Non-Family factors, so there is no statistical evidence to reject The null hypothesis and to consider that there are differences in financial performance between family and non-family companies in the Printing and Graphic Industry of Colombia, based on ROA, ROE and DUPONT.

However, as shown in Figure 1, when comparing not only the means but the medians (P50), this presents slightly more marked differences between the two types of companies (family and non-family) for the indicators of Performance in study, which allows us to conclude that the ROA is better the behavior of non-family companies; In terms of ROE, non-Family companies were found to perform better; But when reviewing the Dupont index (based on operating margin) it is evident that there is a higher performance in family companies than non-family firms. Therefore, in order to know the origin of the difference in the behavior of performance, a review was made for the components of this indicator, observing that the Operating Margin is similar in both types of company, but leverage (Active/Heritage) or Capital Multiplier in family enterprises is higher than that of non-family enterprises.



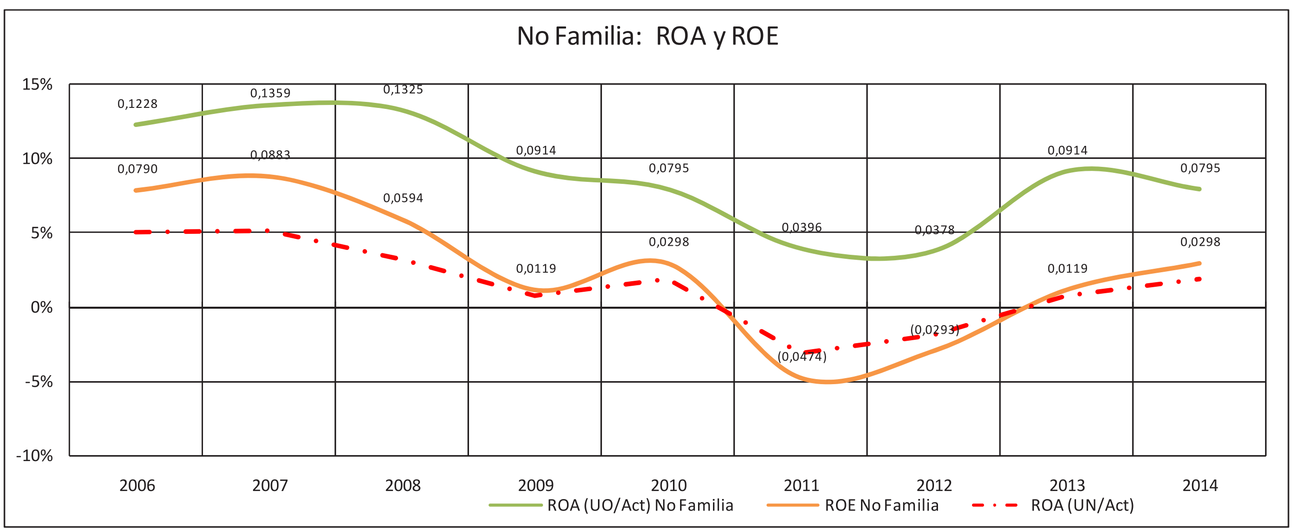


Figure 1: Mean and Average Comparison of the ROA and ROE Indicators

Taking into account the previous results and finding that within the study sector, family and non-family companies considered each one of them as a group, do not present significant differences in their financial performance, a segmentation of The companies by type of product (agendas, labels, packaging, security printers, books and public commercials), for which the hypothesis stated above is contrasted, based on the descriptive analysis starting from the balances by segment of product and group of company (Family and not family).

Initially, a look was taken at the evolution of the sector of the years 2006 and 2014 by product segment and its share against the income of the same. Figure 2 shows that the evolution of the sector by product has undergone some changes, the most evident being the decrease in the books segment (-2%), public trade (-2%) and agendas (-3%), Segment of labels is maintained, and an increase in the segments of security printers (+ 2%) and packaging (+ 2%).

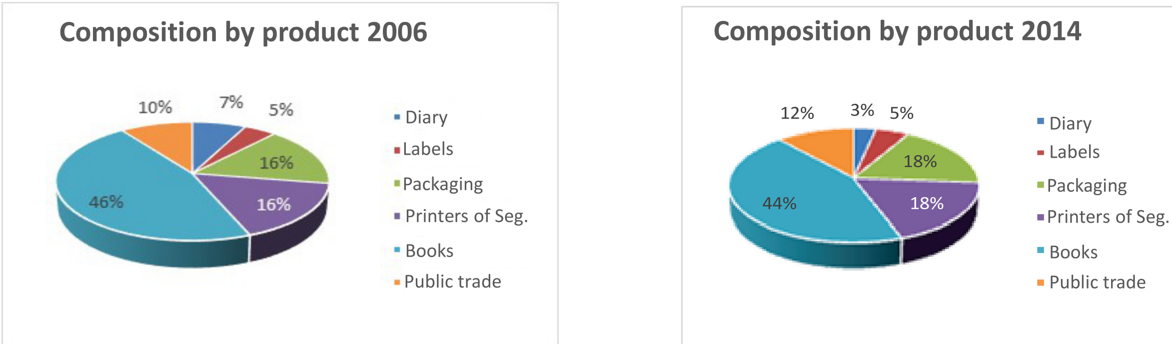


Figure 2. Product evolution years 2006 to 2014

In the same analysis, in relation to the type of company (family and non-family), it can be seen in Figure 3 that in family enterprises, the share of books has decreased by 3%, compared to products such as security forms Cattle participation.

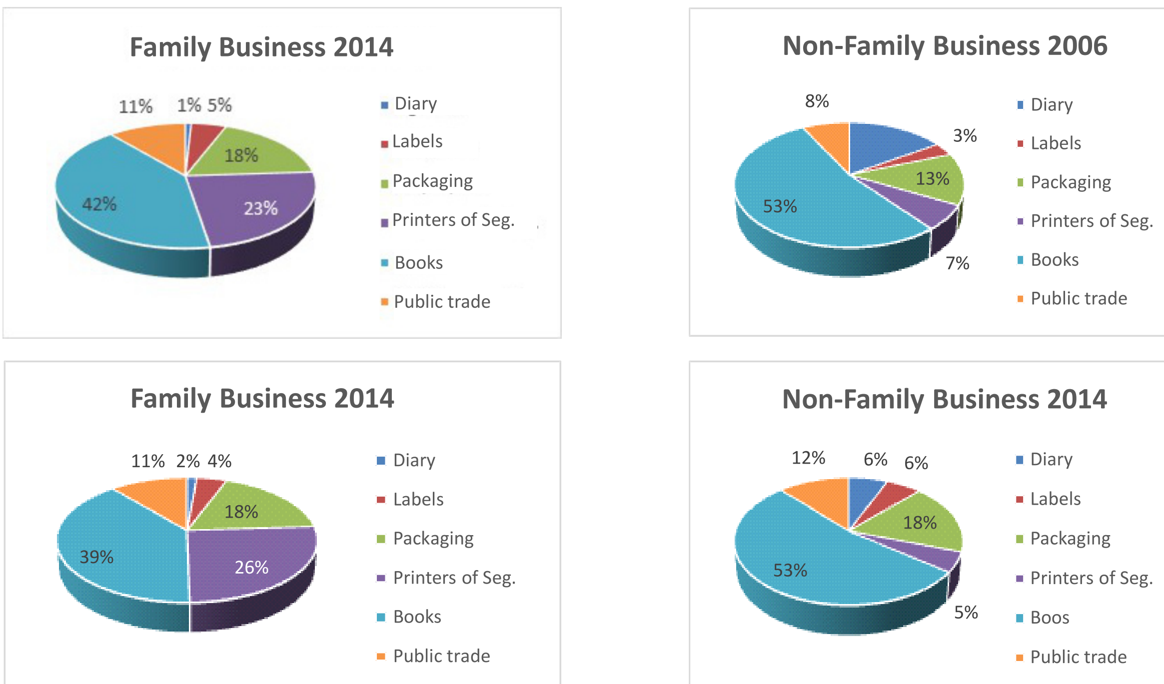


Figure 3: Evolution by type of product in family and non-family companies years 2006 and 2014

In non-family companies, it can be seen that the book product maintains participation throughout the analyzed period, but products like agendas show a downward trend from a share of 16% in 2006 to 6% in the year 2014; The product of Labels has had a growth in its participation from 3% in 2006 to 6% in 2014, as is the case with Packing, which increases its share from 13% in 2006 to an 18% share in the year 2014.

4. CONCLUSIONES

Faced with the hypothesis: In Colombia, family companies in the printing and graphic arts sectors enjoy a better performance compared to the profitability of non-family members, it can be concluded that when looking at family firms versus non-family firms Each as independent units in the total period evaluated, as well as year to year from 2006 to 2014, there were no significant differences in financial performance measured through ROA, ROE and Dupont index; And only a slight tendency towards a better financial performance of the non-family companies through the ROA, ROE and Dupont Index is observed when comparing this two groups through the means year to year in the evaluated period.

REFERENCES

[1] DANÍES, R. (2005). Sociedades de Familia en Colombia Año 2005. Bogotá, D.C.: Superintendencia de Sociedades. Bogotá: Superintendencia de Sociedades.

[2] ANDIGRAF. (2015). Informe de sostenibilidad 2013. Industria Editorial y de la Comunicación Gráfica. Bogotá, D.C.: Andigraf.

[3] DAILY, C., & DOLLINGER, M. (1993). Alternative methodologies for identifyng family – versus nonfamily – managed business. Journal of Small Business Management, 31(2), 79 - 90.

[4] WESTHEAD, P., & COWLING, M. (1997). Performance contrasts between family and non-family unquoted companies in the UK. International Journal of Entrepreneurial Behavior and Research, 3(1), 30 - 52.

[5] GALLO, M., TÁPIES, J., & CAPPUYNS, K. (2004). Comparison of family and nonfamily business: financial logic and personal preferentes. Family Business Review, 17(4), 303 - 318.

[6] DURÉNDEZ, A., & GARCÍA, D. (2005). Diferencias económico-financieras entre las empresas familiares y las no familiares. Revista de Contabilidad y Dirección, 2, 241 - 265.

[7] DYER, G. J. (2006). Examining the "family effect" on firm performance. Family Business Review.(19), 253-273.

[8] SMITH, M. (2007). “Real” managerial differences between family and non-family firms. International Journal of Entrepreneurial Behaviour & Research, 13(5), 278 - 295.

[9] LÓPEZ, J., & Sánchez, S. (2007). Financial Structure of the Family Business: Evidence From a Group of Small Spanish Firms. Family Business Review, 269 - 287.

[10] WU, Z., CHUA, J., & CHRISMAN, J. (2007). Effects of family ownership and management on small business equity financing. Journal of Business Venturing, 22, 875 - 895.

[11] ALLOUCHE, J., AMANN, B., JAUSSAUD, J., & KURASHINA, T. (2008 йил Diciembre). The impact of Family control on the performance and financial characteristics of Family versus Nonfamily Businesses in Japan: A matched-pair investigation. Family Business Review, 21(4), 315-329.

[12] LAITINEN, E. (2008). Value drivers in Finnish family-owned firms: profitability, growth and risk. International Journal Accounting and Finance, 1(1), 1 - 41.

[13] Amelec Jesus Viloria Silva (2015), "Design of a Model of Evaluation of Productivity for Microfinance Institutions" .Adv Sci Lett ISSN: 1936-6612 ed: American Scientific Publishers. v.21 fasc.5 p.1529 – 1533.

[14] Navarro Stefanell, Franklin; Ramos Barrios, Liliana Milena. El control interno en los procesos de producción de la industria litográfica en Barranquilla. Equidad y Desarrollo, [S.l.], n. 25, p. 245-267, jan. 2016. ISSN 2389-8844. Disponible en: <https://revistas.lasalle.edu.co/index.php/ed/article/view/3473/2951>. Fecha de acceso: 10 mar. 2017 doi:http://dx.doi.org/10.19052/ed.3473.

[15] GOTO, T. (2015). El éxito de la longevidad en las Empresas Familiares de Japón. Construcción del Legado Familiar a través de los secretos del Lejano Oriente y Europa. Bogotá, D.C.: Mundo Gerencial. Consultoría y Entrenamiento de Negocios.

[16] TUKEY, J. (1977). Exploratory Data Analysis. Massachussets: Addison - Wesley.