Accounting & Taxation
Vol. 6, No. 2, 2014, pp. 49-57
ISSN: 1944-592X (print)
ISSN: 2157-0175 (online)

IBFR
www.theIBFR.org

FINANCIAL MANAGEMENT IN THE FAMILY AND NON-FAMILY SME´S IN THE TEXTILE INDUSTRY IN MEXICO

Martha Isabel Bojorquez Zapata, Universidad Autonoma de Yucatan
Antonio Emmanuel Perez Brito, Universidad Autonoma de Yucatan
Jorge Humberto Basulto Triay, Universidad Autonoma de Yucatan

ABSTRACT

In this paper, we analyze differences in financial management practices between family and non-family Small and Medium Enterprises (SMEs) in the textile industry. We hypothesize that family SMEs use different sources of funding for new investments, tend to have less debt, are more profitable and use less financial and accounting information for decision making than non-family SMEs. We survey 24 textile SMEs located in Yucatan, Mexico. The results show that family SMEs rely more heavily on internal sources are more profitable and use less accounting and financial information for decision making than non-family SMEs.

JEL: G00

KEYWORDS: Family Business, Financial Management, Textile Industry

INTRODUCTION

According to the 2004 Economic Census (INEGI, 2004) there were approximately 2.84 million enterprises in Mexico of which 99.7% were SMEs. These SME's were responsible for a 42% share of Gross Domestic Product (GDP) and a 64% share of employment. SMEs have great potential to contribute to future economic growth and employment. However, the 2010 Economic Census (INEGI, 2010) reported the contribution of SMEs to GDP declined from 42% to 34.7% but increased its employment share from 64% to 72%.

A report by the Universidad Autónoma de Yucatan (UADY, 2011), realizes the cordage industry crisis has caused a decrease in the importance of manufacturing in Yucatan´s economy. The industry was responsible for 25% of Yucatan GDP in 1975, when it still had some weight shredder and cordage industry dedicated to the production of sisal twine. Contribution to GDP fell to 17% in 1980, 16 % in 1985 and 14.2% in 2010. In 35 years the importance of the textile industry in the global economic structure has been halved.

The importance of the textile and clothing industry in Yucatán is due to its ability to create jobs and foster the development of small, medium and micro entrepreneurs. In 2008, the textile and clothing subsector represented 10.7% of the total number of manufacturing firms and 24% of employment in the industry. Moreover, this subsector awarded 29.8% of total remuneration in the industry and obtained 5% of total gross production. The garment industry is identified not only as one of the strongest sectors linked to small and medium industries but as an informal and temporary employment industry (INEGI, 2011).

Several empirical studies have shown important differences in management between family and non-family firms (Daily and Dollinger, 1993, Gallo, Tapies and Cappuyns, 2004, Laitinen, 2008). In particular, the

financial management of family businesses is influenced by the objectives that families have in their companies impacting their competitiveness and survival in the market.

Previous studies analyzed profitability (Carney and Gedalovic, 2002, Anderson and Reeb, 2003) and the financial preferences - *Pecking Order* (Myers and Majluf, 1984). The accounting information, as a financial management tool, is essential for the manager and his management team in order to make the right decisions on different policy areas. Several studies indicate that family businesses tend to use accounting and financial information for decision-making less than non-family businesses (Ho and Wong, 2001, Gallo, Tapies and Cappuyns, 2004, Collis and Farvis, 2002).

The aim of this paper is to analyze the main differences in financial management between family and non-family SMEs in the textile industry of Yucatan State. We take into consideration variables such as: finance, debt, profitability and use of accounting and financial information, as strategic factors for sustainable competitiveness. We develop a cross-sectional empirical study with a sample of 24 SMEs from the Yucatán's textile industry in 2012.

The rest of the document is organized as follows. The literature review section raises arguments that support concepts of financial management, financial structure, funding sources, debt, profitability and financial and accounting information. Next, we present the methodology, which describes the procedure applied and the sample used. Third, we present the results and finally, we present the main conclusions including the limitations, implications and future research.

LITERATURE REVIEW

Financial Management

Burk and Lehnman (2004) indicate that financial management for small and medium enterprises may be of significant interest since they can afford to stay and grow within the business community. Long term financial management is concerned with planning of ways to make the optimal investment in fixed assets, the company's ability to take the right level of debt, and overall profitability. On the other hand, short-term financial management is concerned with problems related to financing working capital (i.e. looking for sufficient funds to meet short-term payments -financing and operating). Berley and Westhead (1990) argued that maintaining proper financial management is a main factors to achieve competitive success.

Financial Structure

According to Myers and Majluf (1984), financial structure indicates how company assets are financed including both internal and external funding. The hierarchy of financial preferences theory (*Pecking Order*), establishes the existence of ranking in the choice of funding sources. According to this theory, when financing new investments, firms tend to use first internal funds, followed by low-risk corporate bonds or bank loans, to finally and as last resource, issue new shares.

Studies like Holmes and Kent (1991) find that financial managers have an order of preference of funding according to the Pecking Order Theory. They also observe a hierarchy restricted to SMEs, who rely more on short-term debt. Equity capital is the least popular choice because it might either not be available or interesting to the owner due to the fear of losing control of the company. Less profitable companies rely heavily on long-term debt which is more difficult for them to access due to the higher information asymmetries they suffer. The aversion to new equity is related to the fear of losing control of the company by the family especially if forced to issue new equity when it is unable to pay off the debt service or when new investors are joined to be part of the company (Romano, Tanewsky and Smyrnios, 2000, Mishra and

McConaughy, 1999). Moreover, Ward (2001) shows how the failure rate of family businesses, 10%, is usually due to the lack of financial resources.

Romano, Tanewsky and Smyrnios (2000) explain the main source of funding for small family businesses in the early stages of their life cycle is based on the use of loans from family members. McConaughy, Matthews and Fialko (2001) show that financial structures of companies controlled by families tend to have lower debt ratios than non-family companies and Esparza, Garcia-Perez and Durendez (2010) found that family SMEs do not have less debt than non-family SMEs. Based on the arguments above, we propose the following hypotheses:

H_1: There are differences in the sources of funding for new investments between family SMEs and non-family SMEs in the textile industry in Yucatán.

H_2: Family SMEs in the textile industry in Yucatán have less debt than non-family SMEs.

Profitability

Several studies in different countries analyze differences in profitability between family and non-family firms. Agency theory explains that family firms suffer less agency costs because ownership and management are in the hands of the controlling family which has greater profitability as a result (Maury, 2006, Cabrera-Suarez, De Saa-Perez and Garcia, 2001). They emphasize that profitability is a key aspect that companies should consider for long-term survival in competitive markets. They also mention that companies should be more efficient when there is an employment relationship between owners and managers, because of the opportunistic behavior of the manager towards the owner and costs associated with supervision therefore.

Moreover, Carney and Gedajlovic (2002), in a study conducted in Hong Kong with family and non-family firms, notice that family-controlled companies tend to use financial resources more efficiently, tend to be more profitable, have more liquidity and distribute greater dividends than non-family companies.

Kotey (2005), in a study conducted in Australia, found that family businesses have higher profits and net margins, and better utilize assets. In the same line, Anderson and Reeb (2003) and Laitinen (2008) studies conducted in the United States and Finland indicate that family businesses are more profitable than non-family businesses. Esparza, Garcia-Perez and Durendez (2010) find in a study conducted in Mexico, that family SMEs are more profitable than non-family SMEs. Based on the previous analysis, we pose the following hypothesis:

H_3: Family SMEs in the textile industry in Yucatán are more profitable than non-family SMEs.

Accounting and Financial Information

Accounting and financial reporting in family businesses plays an important role in decision-making. Trostel and Nichols (1982) noticed that accounting and financial control is used in family businesses for the primary purpose of minimizing taxes, instead of being employed in strategic decisions making and performance evaluation of the companies.

Jorissen, Laveren, Martens and Reheul (2001), in Belgium, examined the wholesale sector (in total 616 companies, 409 small companies and 207 medium-sized companies). They established that family businesses tend to use less accounting and financial information compared with non-family businesses. Ho and Wong (2001), in a study conducted in the United Arab Emirates (UAE), based on a sample of 95 annual reports published by the UAE listed corporations found that family firms are less transparent when

providing financial information and are more reluctant to voluntarily provide accounting and financial information. Esparza, Garcia-Perez and Duréndez (2010), with a sample of 122 tourist MSMEs from Quintana Roo state (Mexico), found that managers of family businesses use less financial and accounting information for proper decision-making.

From the previous analysis, the following hypothesis is formulated:
H_4: Managers of family SMEs in the textile industry in Yucatán use less financial and accounting information for decision-making than managers of non-family SMEs.

DATA AND METHODOLOGY

Sample

This study is based on information provided by the Ministry of Economic Development (SEFOE, 2010) Yucatán delegation on SMEs in the textile industry of Yucatán State (México) in 2012. The population is made of 26 companies in the textile sector SMEs with a minimum of 11 workers and maximum of 250. We determined that the minimum sample size was 24 survey respondents for statistical significance. The size of SMEs is established using stratification criteria published in the official journal of the Federation (DOF, 2009). The formula used to obtain the sample size consists of a random process of interval estimation of a finite population proportion with a probability of occurrence and no occurrence, equal to 50 percent, a population size of 26 companies, and a confidence level of 95%.

Considering the type of phenomenon that we analyze, we employ a quantitative approach, correlational, non-experimental, and cross-sectional statistical analysis using the Mann Whitney U test, the Kolmogorov - Smirnov test for goodness of fit. As a robustness test the data was obtained using Monte Carlo simulation. Following previous studies (Hernandez, Fernandez and Baptista, 2006, Diaz de Rada , 2007), a survey was used to collect data and determine the existence of cause and effect relationships. The selected instrument was a structured questionnaire, in three blocks of 19 questions each, addressed directly to managers of companies. The requests were made through phone calls and email, making a total of 24 applications of which 100 percent were successful. The field work was conducted during the months of March and April 2013 in two cities of Yucatan.

Variables

Family business: following the methodology used in Esparza Garcia-Perez and Durendez (2010), a company is considered family SMEs when more than 50% of the capital is owned by a family or household; or alternatively, at least one representative of the family is in a management position.

Funding: following previous research studies such us AECA (2005), UC (2007) and Esparza, Garcia-Perez and Durendez (2010), funding is a measure of the frequency in the use of funding sources by managers in operating and investment activities as determined through a Likert scale (Likert, 1976), from 1 (never) to 5 (always).

Debt: is defined as the ratio of total liabilities to total net assets. This variable is measured using an interval scale. Research studies conducted by McConaughy, Matthews, and Fialko (2001), López and Sánchez (2007) and Esparza, Garcia-Perez and Durendez (2010) used similar approach in different settings.

Profitability: is defined as the ratio of the company's profit before interests and taxes to net total assets. It measures the effectiveness of the company in the use of capital resources, without differentiating between debt and equity. This ratio relates the benefit to the invested capital, regardless of their financial structure. This variable was measured in an interval scale, used in other studies such as those by Anderson and Reeb

(2003), Lopez and Sanchez (2007) and Esparza, Garcia-Perez and Durendez (2010). The use of accounting and financial information variable was measured using a Likert scale of 1 (low utilization) to 5 (high frequency used), related to the degree of appropriateness of the accounting and financial reporting by managers for decision-making. This measure was used in a similar way by Esparza, Garcia-Perez, and Durendez (2010).

Table 1: Estimated Quantitative Variables (Percentages Estimated Considering only Positive Values)

Variable	Mean	Median	Std	Rank	Minimum Value	Maximum Value
Personal occupied	37.75	17.0	44.106	175.0	5.0	180.0
Age of manager	45.08	45.50	11.092	43.0	27.0	70.0
Percentage of profits	83.0	100.0	34.504	100.0	0.0	100.0
Operating years	17.54	12.0	14.440	58.0	2.0	60
Growth in sales, 2011	11.33	10.5	6.055	15.0	3.0	18.0
Utility, 2011	7.29	3.0	5.542	15.0	3.0	18.0
Debt, 2011	3.0	3.0	0.0	0.0	3.0	3.0

This table provides descriptive statistics the summarize the simple data that was used in the proyect. The average personal occupied was 37.8, the average percentage of profits allocated to reserves was 83.0, the average growth in sales was 11.3 and the average utility was 7.3, all in 2011.

RESULTS AND DISCUSSION

In this section we present the results obtained by the application of statistical techniques and tests.

H_1: There are differences in the sources of funding for new investments between family SMEs and non-family SMEs in the textile industry in Yucatán.

Regarding H1, we only find significant differences between family SMEs and nonfamily SMEs in the case of new investment (p-value = 0.076 in the Mann Whitney U test, p value = 0.073 in the Monte Carlo exact test). The result indicates that for this funding source there are more frequent, significant differences in family businesses (Table 2). It should be noted that we analyzed various funding sources such as shareholders contributions, short-term bank loans, long term leases and other non-bank sources.

Table 2: Mann Whitney U Test and Monte Carlo Accurate Test for Different Financial Policies between Family and Non-Family SMEs

			New Investments	Debt	Economic Performance	Financial Performance	Use of Accounting and Financial Reporting
Mann-Whitney U test			6.5	15.0	4.0	6.5	3.0
Wilcoxon W test			9.5	18	257	259.5	256
Z			-1.776	-0.928	-2.001	-1.719	-2.06
Sig. asymptotic (bilateral)			0.076 (*)	0.353	0.045(**)	0.086(*)	0.039(**)
Sig. Exact [2*(Sig. unilateral)]			0.116	0.522(*)	0.065(*)	0.116(*)	0.043(*)
Sig. Monte Carlo (bilateral)	Sig.		0.073(*)	0.561	0.054(**)	0.093(*)	0.023(**)
	CI at 95%	Lower limit	0.067	0.551	0.05	0.087	0.02
		Upper limit	0.078	0.57	0.058	0.098	0.026
Sig. Monte Carlo (unilateral)	Sigma		0.073	0.491	0.054	0.093	0.023
	CI at 95%	Lower limit	0.067	0.481	0.05	0.087	0.02
		Upper limit	0.078	0.5	0.058	0.098	0.026

*This table shows the results of Mann Whitney U test and Monte Carlo accurate test. P-values are in parentheses. ***, ** and ** indicate significance at the 1, 5 and 10 percent levels respectively.*

H_2: Family SMEs in the textile industry in Yucatán have less debt than non-family SMEs.

Regarding H_2, we found no significant differences in the levels of debt used by family and non-family SMEs (p-value = 0.353 in the Mann Whitney U test, p value = 0.561 in the Monte Carlo exact test). It should be noted that according to information provided by companies, none exceed 5% in their debt ratios during the reference year (Table 2). The results corroborate previous studies such as those obtained by Esparza, Garcia-Perez and Durendez (2010). These results vary from those obtained by McConaughy et al. (2001), which found that family firms have less debt than non-family firms. These results lead to reject the hypothesis H_2.

H_3: Family SMEs in the textile industry in Yucatán are more profitable than non-family SMEs.

Regarding H_3, significant differences were found with regard to the economic and financial returns (in the first case, p-value = 0.045 in the Mann Whitney U test, p value = 0.054 in the Monte Carlo exact test, and in the second case, p-value = 0.086 in the Mann Whitney U test, p value = 0.093 in the Monte Carlo exact test). According to the mean values observed in both cases non-family SMEs tend to be more profitable than family SMEs (Table 2). These results differ from those obtained by Kotey (2005), Laitinen (2008) and Esparza, Garcia-Perez and Durendez (2010). Therefore, the third hypothesis is rejected.

H_4: Managers of family SMEs in the textile industry in Yucatán use less financial and accounting information for decision-making than managers of non-family SMEs.

Finally, with respect to H4, concerning the use of accounting and financial information, significant differences were found in the level of financial and accounting information use for decision-making (p-value = 0.039 in the Mann Whitney U test, p value = 0.023 in the Monte Carlo exact test). The results show the level of information use by non-family SMEs is higher. These results demonstrate that family firms hardly use these sources of information for decision-making, which means the fourth hypothesis can be accepted (Table 2). Thus, managers of family SMEs use far less financial and accounting information for proper decision-making than managers of non-family SMEs. These results corroborate those obtained by Trostel and Nichols (1982) Jorissen et al. (2001) and Esparza, Garcia-Perez and Durendez (2010).

CONCLUSION

This paper shows differences in financial management practices and performance between family SMEs and non-family SMEs in the textile industry in the state of Yucatan (México). The results show that when funding new investments, family SMEs use internal funding in greater proportion than non-family SMEs following *the Pecking Order Theory* prediction. These companies do not use bank financing due to either the high costs to access it, the lack of Mexican banking system development or the fear of losing control of the company in the case of being forced to acquire a new equity to pay off the debt (Romano, Tanewski and Smyrnios, 2000, Mishra and McConaughy, 1999). However, it should be noticed that family SMEs has a debt level similar to non-family SMEs (Esparza, Garcia-Perez and Durendez, 2010). We also find evidence that family SMEs show lower profitability than non-family SMEs. This conclusion does not match *agency theory*, which indicates that family SMEs suffer less agency costs because ownership and management are in the family´s hands, resulting in greater efficiency in performance (Maury, 2006). Also, results show that managers of family SMEs use far less financial and accounting information for decision making than managers non-family SMEs (Jorissen et al., 2001; Esparza, Garcia-Perez and Durendez, 2010).

Our study is unique, because these results have important practical implications. Family and non-family SME´s in the textile industry in Yucatán State do not perform financial management effectively and efficiently. There is room for improvement to increase the value of the companies and its competitiveness and survival of these firms. A more competitive textile sector will lead to economic improvement in the

region, sustainable human development and social, economic and environmental integration that involves creating economic value in a way that also creates a value for society.

It is important to mention the difficulty of employers to provide corporate information, the geographical representativeness for being a regional study and the lack of economic databases of the companies studied. We suggest that future research related to sector specific issues could be investigated such as sales growth and implementation of management control systems linked to competitiveness and family management through quantitative and qualitative studies. There are currently few studies related to these matters that specifically address Mexican firms.

This study helps further enhance the research literature related to family businesses in general and family businesses in Mexico in particular. Moreover, it should help Mexican authorities develop public policies that foster competitiveness in these enterprises to create better living conditions for owners and employees and to support economic growth. Regarding higher education institutions, the obtained results should be used to update the study programs and to offer training courses in financial management for managers of SMEs.

REFERENCES

AECA. (2005). *Estrategia e Innovación de la Pyme Industrial en España. Estudios Empíricos*. España. AECA.

Anderson, R. & Reeb, D. (2003). Founding Family Ownership and Firm Performance: Evidence from the S&P 500. *The Journal of Finance*, vol. 58 (3), June, p.1301-1328.

Berley, S. & Westhead, P. (1990). Growth and Perfomance Contrasts between Types of Small Firms. *Strategic Management Journal*, vol. 11(7), December, p. 535-557

Burk, J. and Lehnman, R. (2004). *Financing Your Small Business*. Estados Unidos. Sphinx Publishing.

Cabrera-Suárez, K., De Saa-Pérez, P. & García, D. (2001). "The Succession Process from a Resource and Knowledge based view of the Family Firm. *Family Business Review*, vol. 14(1), March, p. 187-219.

Carney, M. & Gedajlovic, E. (2002). The Coupling of Ownership and Control and the Allocation of Financial Resources: Evidence from Hong Kong. *Journal of Management Studies*, vol. 39(1), December, p.123-146.

Collis, F. & Farvis, R. (2002). Financial Information and Management of Small Private Companies. *Journal of Small Business and Enterprise Development*, vol. 9(2), March, p. 100-110.

Daily, C. & M. Dollinger (1993). Alternative Methodologies for Identifyng Family versus Nonfamily Mnaged Business. *Journal of Small Business Management*, vol. 31(2), June, p. 79-90.

Diario Oficial de la Federación. (2009). *Acuerdo por las que se establece la Estratificación de las micro, pequeñas y medianas empresas.* Retrieved January 6, 2014, from the Diario Oficial de la Federacion website: http://dof.gob.mx/nota_detalle.php?codigo=5096849&fecha=30/06/2009

Díaz de Rada, V. (2007). Tipos de encuestas considerando la dimensión temporal. *Papers-Revista de Sociología,* vol. 86(5), July, p.131- 145.

Esparza, J., García-Pérez, D. & Duréndez, G. (2010). Diferencias de Gestión Familiar entre Empresas Familiares y no Familiares del Sector Turístico Mexicano. *Actualidad Contable*, vol. 20(10), January-June, p. 29-48

Gallo, M., Tápies, J. & Cappuyns, K. (2004). Comparison of Family and Nonfamily Business: Financial Logic and Personal Preferents. *Family Business Review*, vol. 17(4), December, p. 303-318.

Hernández, R., Fernández, C. and Baptista, P. (2006), *Metodología de la Investigación*. México: Editorial Mc Graw Hill.

Ho, S. & Wong, K. (2001). A study of the Relationship between Corporate Governance Structures and the Extent of Voluntary Disclosure. *Journal of International Accounting, auditing and Taxation*, vol.10(35), November, p. 139-156.

Holmes, S. & Kent, P. (1991). An empirical analysis of the financial structure of small and large Australian manufacturing Enterprise. *Journal of small Business finance,* vol.2 (26), December, p. 141-154.

Instituto Nacional de Estadística y Geografía, INEGI. (2004). *Censos Económicos 2004*. Retrieved December 3, 2013, from the INEGI website: http://www.inegi.org.mx/est/contenidos/proyectos/ccpv/cpv2004/presentacion.asp

Instituto Nacional de Estadística y Geografía. INEGI. (2010). *Censos Económicos 2009.* Retrieved December 3, 2013, from the INEGI website: http://www.inegi.org.mx/est/contenidos/proyectos/ccpv/cpv2010/presentacion.asp

Instituto Nacional de Estadística y Geografía, INEGI. (2011). *Perspectiva Estadística Yucatán 2011.* Retrieved December 3, 2013, from the INEGI website: http://www.inegi.org.mx/est/contenidos/espanol/sistemas/perspectivas/perspectiva-yuc.pdf

Jorissen, A., Laveren, E., Martens, R. & Reheul, A. (2001). Planning and Control Practices in Family Firms versus Non-Family Firms: Empirical Evidence from SMEs in the Wholesale Sector. *Faculty of Applied Economics*, vol.1(12), November, p. 1-32.

Kotey, B. (2005). Goals, Mangement practices and Performance of Family SME´s. *International Journal of Entrepreneurial Behaviour and Research*, vol.11(1), February, p. 3-24.

Laitinen, E. (2008). Value Drivers in Finnish Family Owned Firms: Profitability, Growth and Risk. *International Journal Accounting and Finance*, vol.1(1), September, p. 1-41.

Likert, R. (1976). *Una Técnica para la Medición de Actitudes.* México. Editorial Trillas.

López, J. & Sánchez, S. (2007). Financial Structure of the Family Business: Evidence from a Group of Small Spanish Firms. *Family Business Review*, vol. 20(4), November, p. 269-287.

McConaughy, D., Matthews, C. & Fialko, A. (2001). Founding Family Controlled Firms: Performance, Risk and Value. *Journal of Small Business Management*, vol. 39(1), December, p. 31-49

Maury, B. (2006). Family Ownership and Firm Performance: Empirical evidence from Western European Corporations. *Journal of Corporte Finance*, vol.12(1), January, p. 321-341.

Mishra, C. & McConaughy, D. (1999). Founding Family Control and Capital Structure: The Risk of Loss of Control and the Aversion to Debt. *Entrepreneurship: Theory and Practice*, vol.23(4), February, p. 53-64.

Myers, S. & Majluf, N. (1984). Corporate Financing and Investment Decisions when Firms have information that inversors do not have. *Journal of Financial Economics*, vol.13(2), July, p. 187-221.

Romano, C., Tanewski, G. & Smyrnios, K. (2000). Capital Estructure Decision Making: A Model for Family Business. *Journal of Business Venturing*, vol.16(16), December, p. 285-310.

Secretaría de Fomento Económico del Estado de Yucatán (2010). *Sectores productivos*. Retrieved December 3, 2012, from the SEFOE website: http://www.sefoe.yucatan.gob.mx/esp/yucatan/sectoresproductivosAct.ph

Trostel, A. & Nichols, M. (1982). Privately-held and Publicly-held Companies: A Comparison of Strategic Choices and Management Process. *The Academy of Management Journal*, vol.25(1), March, p. 47-62.

UC. (2007). *Estrategia e Innovación de la Pyme Industrial en la Comunidad de Cantabria: Un Análisis Comparado con España*. España. Universidad de Cantabria

Universidad Autónoma de Yucatán, UADY (2011). *Historia*. Retrieved December 3, 2013, from UADY website: http://www.uady.mx/sitios/mayas/historia/cont_01.html

Ward, J. (2001). Tensión y Fracaso Empresarial. *Universia Business Review*. vol. 26(42), September, p. 38-41.

ACKNOWLEDGMENTS

The authors acknowledge the helpful comments from reviewers.

BIOGRAPHY

Martha Isabel Bojorquez Zapata, PhD., is professor of finance at the Facultad de Contaduria y Administracion of the Universidad Autonoma de Yucatan (mbzapata@uady.mx).

Antonio Emmanuel Perez Brito, Master in Administration, is professor of finance at the Facultad de Contaduria y Administracion of the Universidad Autonoma de Yucatan (antonio.perez@uady.mx).

Jorge Humberto Basulto Triay, Master in Finance, dean of the Facultad de Contaduria y Administracion of the Universidad Autonoma de Yucatan (btriay@uady.mx).