Journal of ENTREPRENEURSHIP, MANAGEMENT and INNOVATION
JEMI

A Quarterly Journal of Nowy Sacz School of Business
– National-Louis University

MANAGERIAL AND FINANCIAL ISSUES OF MEXICAN ENTREPRENEURSHIP

Edited by
Kazimierz Śliwa, Piotr Staliński

Volume 8 Issue 3

2012

Contents

From the Editors

The Volume 8 Issue 3 includes a collection of five reviewed papers which explore managerial and financial issues of Mexican business organizations. The research presented here is the first major outcome of the collaboration that has been recently established between Nowy Sacz School of Business - National Louis University and the School of Business and Economics (Escuela de Negocios y Economia) at Universidad de las Americas Puebla (UDLAP), one of the leading research institutions in Mexico .

The papers illustrate the main research areas of the School of Business and Economics at UDLAP. The first research issue is the financial management of Mexican corporations. In their opening paper Rocío Durán-Vázquez, Arturo Lorenzo-Valdés, and G. Einar Moreno-Quezada investigate a complex relationship among corporate innovation, corporate social responsibility and financial performance. In the second paper Rocío Durán-Vázquez, Arturo Lorenzo-Valdés and Juan Manuel San Martín-Reyna apply the Ohlson's model to study the impact of discretionary accrual information on earnings quality. In the third paper Juan M. San Martin-Reyna and Jorge A. Durán-Encalada study the triad of the ownership structure, growth opportunities and earnings management for Mexican companies.

The second research issue is a family business. Jorge A. Durán-Encalada, Juan M. San Martin-Reyna and Héctor Montiel-Campos present a methodological framework for studying family entrepreneurship.

The third research issue is tourism management. In the final paper Raúl Valdez Muñoz examines the role of hypertext in travel destination choices.

We would like to express our gratitude to the authors - our colleagues from UDLAP for their contributions to this volume. We are also grateful to Dr. Roberto Solano Mendes, Dean of the School of Business and Economics for enthusiasm and support for our initiative. We appreciate the meaningful feedback provided by the reviewers. We would like to thank all involved in the preparation of this volume. We hope that you will enjoy reading it.

Kazimierz Śliwa
Editorial Board, JEMI

Piotr Staliński
Co-Editor in Management, JEMI

Innovation and CSR Impact on Financial Performance of Selected Companies in Mexico

Rocío Durán-Vázquez [*] ***, Arturo Lorenzo-Valdés*** [**]***,***

G. Einar Moreno-Quezada [***]

Abstract

This study analyzes the behavior of the companies in the index of México's Precios y Cotizaciones (IPC), with respect to measures of financial performance and its relationship with the two main approaches of innovation, according to the Bogota and Oslo manuals; assessing their impact on the stock price. The data is used on a quarterly basis from January 2000 to December 2011. It also makes reference to the impact of having the distinction "Socially Responsible Company" (Corporate Social Responsibility), in the Mexican stock market price reaction. Our main interest is to be pioneers in the search for relationships between topics that are currently treated as "alien" (CSR and Innovation) in formal academic publications, but we intuitively know that they are related inside organizations.

Keywords: value of relevance, innovation and financial, distinctive of corporate social responsibility.

Introduction

The current business environment has highlighted the importance of incorporating innovation, both as a guide for surviving in the day to day operation as part of the strategy of long-term positioning. The literature contains evidence that supporting innovation brings about the economic growth of businesses and this is shown in a better financial performance.

** Dra. Rocío Durán-Vázquez, Department of Finance and Accounting, Universidad de las Américas Puebla, Exhacienda Santa Catarina Mártir s/n, rocio.duran@udlap.mx.*

*** Dr. Arturo Lorenzo-Valdés, Department of Finance and Accounting, Universidad de las Américas Puebla, Exhacienda Santa Catarina Mártir s/n, arturo.lorenzo@udlap.mx.*

**** Dr. G.Einar Moreno-Quezada, Department of Finance and Accounting, Universidad de las Américas Puebla, Exhacienda Santa Catarina Mártir s/n, einar.moreno@udlap.mx.*

Internationally criteria on innovation are included in Oslo Manual, where the main points identify what innovation is (in the context of business operations) and measure land concepts and elements to design survey instruments. In Latin America, we have the manual specifically referring to Bogota and Mexico, the National Council for Science and Technology (CONACYT), which has conducted surveys on innovation performance, under the approach of these two manuals (Oslo and Bogota). Particularly in the 2001 survey it was applied in manufacturing and service companies with over 50 employees, by the National Institute of Statistics, Geography and Informatics (INEGI). In this study they highlighted the approach to public companies.

There are different approaches to innovation studies of public companies, regarding the measurement of the number of patents or new brands (about new product or services) or referring to research and development expenses (R&D) or to cost reductions (by implementing new processes of operative' efficiency). In this study we began the analysis with exploratory econometrical tests of the impact on financial statements information, as a proxy, we identify evidence of the impact of innovation in two ways: first, cost reductions (measured by the decrease on operative expenses on the Income Statement), second, new long term investment in terms of new plant or equipment acquisition that support new product or service´ characteristics to offer (measured by the increase on fixed assets on the Balance Sheet). This proxy is a general consideration of the two main characteristics of innovation that we define on Stakeholders of affective management section.

This approach offers the opportunity to document the measurement of innovation, from the published data of the companies listed on the Mexican Stock Exchange (BMV), reflecting the aggressive strategy (identified as increased investment in the long term) and defensive strategy (identified as the efficiency of the current operation), and we analyze whether the market perceives and rewards it or not, (in response to the stock price of public companies). Specifically, the study covers the period 2000 to 2011 with data members IPyC Mexican companies (Index of Prices and Quotations) of the BMV.

Besides, we added a third variable to the analysis: the distinctive of Corporate Social Responsibility (CSR), as an additional recognition of the practices of the public companies, in order to identify if there is an impact of this variable on the share return in the stock market. We decided to add this variable as complement to the exploratory analysis of the study, because we suspect that the companies with the CSR distinctive follow some criteria of innovation implementation and we test the reference of the correlation between the variables under panel data models (in Discussion appears the econometrical results). This idea is supported under the premise that the public companies of Mexico are the biggest ones and usually the leaders of their economic sector activity.

The CSR award (identified in Spanish as ESR for "Empresa Socialmente Responsable") has taken 11 years to bestow itself in Mexico. It is awarded annually by the CEMEFI (Mexican Center for Philanthropy, Civil Association, a young group with more than 20 years of existence), in conjunction with AliaRSE (Alliance for Corporate Social Responsibility in Mexico). This badge is awarded in recognition of conscious commitment and consistent enforcement of business rationale, covering both internal and external goals, expectations considering economic, social and environmental impacts of all participants (which are related to the company), in pursuit construction of the common good.

Abreu (2009) emphasized that "[...] in Mexico, Corporate Social Responsibility and philanthropic initiative began, but in the 90's it changed into the reflection that philanthropy is not enough to promote social progress" . And Market (2007) defines Corporate Social Responsibility as "... a working model and organization that brings back to society what the company makes, it is a way of doing business in a sustainable manner."

Theoretically it is considered that this flag provides real and tangible benefits for the company, which can be measured in different ways, based on quantitative and qualitative evidence which is found in studies such as Accenture (2010). This study highlights the quantitative impact, particularly public companies in the stock price three months after obtaining the label.

The highlights that CEMEFI consider about clients is that when they are choosing between two brands of the same quality and price, the issue of social responsibility is the most affected in the purchase decision, according to their studies it represents 41% and is followed by design and innovation (32%) and brand loyalty (26%). What's more, 70% of consumers say they are willing to pay more for a brand that supports CSR causes.

The aim of this study is to conduct an exploratory study of financial accounting variables (of the quarterly financial statements) of the companies comprising the Index of Prices and Quotations (IPyC) of the Mexican Stock Exchange (BMV), seeking to reflect the impact of business innovation efforts (in the light of international manuals Oslo and Bogotá). Additionally we evaluate the impact of having the distinctive of Corporate Social Responsibility (CSR) given by Mexican Center for Philanthropy, AC (CEMEFI), in the stock price. And the relevance of it is to identify the interrelation between the considered variables, measured by the significance on the returns of share price in the stock market. This impact is tested (on the dependent variable of the models) three months later (because we are measuring the change on financial statements), in literature the impact of innovation or the CSR are usually considered on the strategy and position of the company on the market in the long term, but that is another approach. There is a lack of reference in this field, so these results present initial evidence of this kind of quantitative analysis, that's why we performed econometric tests; we are not following a qualitative discussion of it.

Innovation and financial performance

Strategic references of innovation

In Mexico, like in other countries, doing business has particular characteristics. We must remember the line: "You can´t manage what you can´t measure". This message is the base of the theory of performance measurement. As a matter of fact, specialists like David Norton and Robert Kaplan, creators of the "Strategic Maps Model", like to use a special piece of one of the most successful heuristics in the last years to align efforts in the organizations: The Balanced Scorecard (BSC) from Kaplan and Norton, (1996).

But, why is this heuristic so successful? The answer begins when we review the original design of the strategic maps. First, we must remember the original strategic planning process:

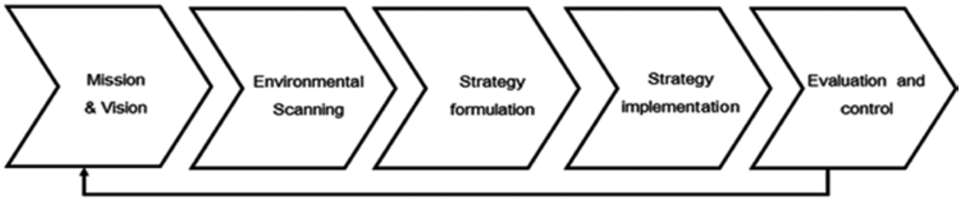

Figure 1. Strategic planning process, according with Kaplan and Norton (1996)

The only way to know if a strategy is the correct one is by executing it. Therefore, we must have a tool which allows us design strategies and evaluate them in a way that we will easily and quickly notice its efficiency. Only in this way, and hence, it will be used as support in decision-making processes to adjust it or modify it partially or totally, as we present in Figure 2.

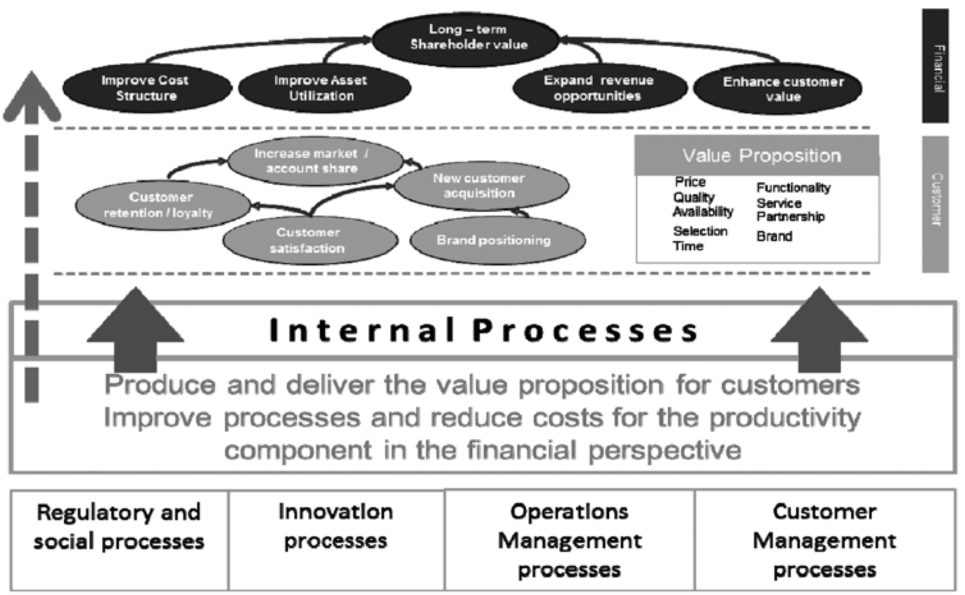

Figure 2. Prepared by the authors, according to literature

Strategic maps are the ones which allow us to design different possible strategies. By using causal relationships among objectives within the Finance, Clients, Processes and Learning perspectives, BSC assigns indicators to each driver within the map to determine if it is, “per se”, moving forward in the first place, and, in the second place, if the desired consequence is being generated.

It is important to point out that within the process perspective; innovation is a very well specified topic. Although we are aware of the existence of many different schools that specialize in this topic and its particularities, our interest is to prove how, even in a model like this, innovation occurs in the foreground. Topics such as research and development opportunities, launching new products, materialization of new projects, number of developed patents and certifications achieved are initiatives that may be included in this topic.

After designing the indicators, goals are established and last, projects are assigned. In this way, we are able to read in just one document how all the organization’s activities are aligned towards financial results in terms of sales and profits.

One of the biggest challenges of BSC is finding the drivers (BSC’s methodology) which are the real causes of the desired consequences in the financial perspective. What process will be a key to generate more sales or profits as a consequence? Which type of training is required to ensure that process? How do we know if the value innovation in which the organization is currently working on will be perceived by the client and will ultimately lead to profit increase?

To address these questions, BSC methodology incorporates the design of tendency and result indicators which are meant to measure the drivers’ progress and to verify the causal relationships between them, as in Iselin and Sands (2008). From training days to hours per client, product mix, even market share, all are indicators built according to each driver.

The indicators must have, among others, four main characteristics so that they truly support us in the strategic tracing, as in Cardinaels and Van Veen-Dirks (2010):

1. Measurable, in a way that it is easy to tract them.
2. Actionable, which is, affected by critical business actions.
3. Practical, that is, they make sense just as they are defined to be used and,
4. Relevant, which means, they reflect drivers’ improvements or worsening.

This empiric way of checking the progress in the strategy lies largely in one of the challenges of using follow-ups for the BSC. The BSC methodology even proposes (and given that in many organizations it is common to find huge lists of Key Performance Indicators) performing a prioritization matrix to keep initially only the KPIs which satisfy the four characteristics previously discussed, as in Yu, Perera and Crowe (2008).

This is where it is very useful to have mathematical models which help us corroborate our qualms about the causal relationships required at the moment of executing a strategy.

Finally, in our country the organizations have developed and implanted different actions in an effort to increase the financial outcomes. In that way, as a part of their strategy, they bet on the fact that the actions are correct. Is this true?

International Manuals of reference

The Oslo Manual, which is aligned with the OECD (Organization for Economic Cooperation and Development), defines four types of innovation: product, process, organizational and marketing. This classification is consistent with the list submitted by Schumpeter (1934), which was the start of this research, focusing on both the analysis of this feature, and the design of surveys to measure precisely to innovation.

And what do we mean by innovation? According to the above classification, innovation implies the introduction of a new or significantly improved product (good or service), improvement of a process, a new marketing method or a new organizational method in the firm's internal practices, the organization of the workplace or external relations.

In this paper we consider only the first two: product (considering the long-term investment in order to be cutting edge) and process (considering the operating efficiency of the company).

The choice of approach to the study of innovation can be based on the "subject" or "object". The subject is about the innovative activities of the company as a whole and the object-based approach involves analysis from specific innovations, for this work we chose the approach of "subject".

Why do companies innovate? To improve performance, either by increasing demand or reducing costs. In terms of corporate strategy innovation in its operational decisions: both in terms of product (providing that good or service and novelty differentiated from the competition) and in regard to processes (searching efficiency operation).

The first aspect requires a long-term investment in either tangible or intangible resources that produce benefits in the short and long term, in terms of production and sale of the product (this is reflected in the amount of investment allocated for it). Companies will therefore be reinvesting in the business, looking to have novelties in the "product (or service)" in the market, translated into strategy involving a differentiating leader.

The second focuses on reducing costs and operating expenses of the company, in terms of a mechanism applying continuous improvement or administrative control (this is reflected in the reduction of operating expenses of the company). Companies will thus improve their business internally in every process; strategy can be translated into a leader in low competitive price or a follower (by reducing internal costs and expenses).

Corporate social responsibility and financial performance

One issue that has recently become more important is the practice of corporate social responsibility; currently companies not only aim at generating profits but also at ensuring that their operations are sustainable economically, socially and environmentally.

Taking into account the extent to which the behavior and expectations of the society change, organizations are still in the middle of the last century when there are early signs of what is now known as corporate social responsibility, however, it was only in the 70's that term began to be used, since in this period investors became aware of the power of money, using it as an instrument of pressure against companies supporting any war or political decision detrimental to a vulnerable group of society or different values and moral principles, achieving through this strategy is concerned and occupation of the damage to the environment of society.

This causes the need for a regulation to this practice, originating in the year 1977 to CEPAA (Council Economic Priorities Accreditation Agency) issuing a voluntary standard: "Social Accountability", in ensuring the ethical production of goods and services with core human rights codes and working conditions, so as to achieve this standard requires companies before entering the ISO 9000 quality standard that promotes continuous improvement in the standard necessary aspects Social Accountability.

Since 2000 investors realize the proven practices of Corporate Social Responsibility, give evidence of quality management and corporate governance.

Taking into account the above we can contextualize CSR as "meet the main goal of the company (as Milton Friedman are economic performance), while considering the social, environmental, and economic impacts of their participants through ethical practice, and promoting the common good.

One should also mention the creation of ISO 26000 in 2010, by the International Organization for Standardization, prepared by ISO / TMB Working Group on Social Responsibility, which is intended to provide guidance to all types of organizations did sustainable development that go beyond legal compliance, drawing on the practice of social responsibility with support systems, policies, organizational structures and existing networks.

To implement this policy it is essential to know that the participants related to the organization and society are stakeholders, promote effective involvement in them, based on good faith and true dialogue, a different reason for the independent judgment of each party. Similarly, mention is made of seven principles which will enable the company to meet sustainable development, which is the primary goal of a socially responsible organization. These are:

1. Accountability: what the organization must answer about their decisions and activities.
2. Transparency: an organization should disclose clear, accurate and timely information to enable stakeholders to evaluate the impact that the decisions and activities of this produce on their interests.

3. Ethical behavior: involving values and commitment for people, animals and environment.
4. Respect the interests of stakeholders: consideration and response to the interests of stakeholders.
5. Respect for the law: no individual or organization is above the law.
6. Respect for international norms of behavior. An organization should strive to meet minimum international standards of behavior.
7. Respect for human rights: by recognizing its importance and universality.

Once the organization is aware of the importance of social responsibility for itself and its environment, you must first go through an internal process of understanding, beginning with:

- Diligence. Comprehensive and proactive process carried out to identify the negative impacts of decisions and activities within an organization, in order to prevent and mitigate such impacts.
- Relevance. Is about to review all the key activities in order to identify which issues are relevant.
- Importance. Is the decision of which issues are the most significant, and most important to the organization, taking into account the extent of impact on stakeholders and sustainable development.

Having completed the above steps, it is appropriate to draw on the success of the organization that has influence on the ownership and governance, the economic, the legal authority / policy and public opinion, grounded on factors such as physical proximity, scope, the duration and strength of the relationship by promoting awareness about social responsibility and socially responsible behavior.

Because of this, several countries have created organizations to encourage their exercise, speaking in the national context,CEMEFI (Mexican Center for Philanthropy AC) was created in 1988. It is a private, nonprofit, founded as a civil partnership, and it is the main body responsible for corporate social responsibility in Mexico, using tools such as CSR and Recognition Best Practices in CSR (corporate social responsibility), some of its objectives are to promote and coordinate the philanthropic participation, engaged and socially responsible citizens, social organizations and enterprises to achieve a more equitable, fair and prosperous society, and have effective tools and mechanisms of linkage, and join alliances between philanthropic sector actors and other sectors in order to achieve a more equitable society.

Currently there are some concerns on the issue of social responsibility, as whether the practice of it in a company influences its financial performance, some people mentioned that their exercise in an organization brings benefits such as attracting and retaining talented workforce, improved competitiveness and market positioning, the interest of investors and thus access to capital.

That is why in this paper we apply an econometric model to analyze the relationship between socially responsible companies in Mexico and its financial performance.

Since 1971 there have been multiple studies aimed at finding the relationship between corporate social responsibility and financial performance, obtaining various results: positive correlation between these two variables, others report a negative correlation, while some conclude that they are not statistically significant.

Brine, Brown and Hackett (2007), in the Australian context, took a sample of 277 companies for the year 2005, using as a measure of social responsibility sustainability statements, and gave a value of 1 to those organizations that practiced, and 0 otherwise, while accounting performance measurement took into account the return on assets, return on equity and return on sales, thus concluding their work that did not find a statistically significant relationship between responsibility Corporate social and financial performance.

Tsoutsoura (2004) analyzed 422 companies covering a period from 1996 to 2000, considering The Domini 400 Social Index (DSI 400) as the indicator to measure social responsibility, taking the value of 1 if the economic entity was included in the DSI 400, and 0 if it was not, whereas employment, financial performance, return on assets, return on equity and return on sales, reported results in a statistically significant positive relationship between corporate social responsibility and financial performance of the company.

Moreover Saavedra (2011) makes a collection of different research on this topic as well as the results obtained. She analyzes results that show a positive relationship between corporate social responsibility and economic performance of enterprises other that no relationship between these two variables, or even a negative relationship. Accordingly, Saavedra mentioned that the relationship between CSR and financial performance is not yet defined but are more numerous studies have proven that there is a positive relationship between CSR and profitability.

Frame of reference

Key features of the Mexican Stock Exchange

The Mexican Stock Exchange, S.A.B. de CV is a financial institution that operates by grant from the Ministry of Finance, in accordance with the Securities Market Act, in addition to observing the principles established in the Code of Best Corporate Practices issued by the Business Council and the Code of Ethics professional Community at Mexican Stock Exchange.

Currently (2012), 124 active companies are listed. The CPI (Index of Prices and Quotations) is the main indicator of the Mexican Stock Exchange, the performance expressed in terms of changes in the stock market price of a balanced sample, weighted and representative of all shares traded on the Stock Securities and serves as the underlying financial products.

The serial number of shares comprising the sample Price Index (IPC) is 35 series, which may vary during the period covered by corporate activity.

The sample used in the calculation is made of the stocks in the different sectors of the economy and is presented in Table 1:

Table 1. List of stocks included in Mexican Stock Index at May 2012

Stock company				
Alfa	Elektra Gpo	GMexico	Kimberly Clark Mex	Soriana Organizacio
Ara Consorcio	Fomento Econ Mex	GModelo	Liverpool Puerto de	Televisa Gpo
Bimbo	Geo Corporacion	Gruma	Mexichem	TV Azteca
Cemex	GFBanorte	Ica Soc Controlad	Penoles Industrias	Wal Mart de Mexico

And Table 2 shows the companies belonging to the BMV with distinctive CSR (and who meet the criteria of the models in this study):

Table 2. CSR information from CEMEFI´ website

Company/Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Sum
Alfa	1	0	0	0	0	0	0	0	0	0	0	**1**
ARA	0	0	0	0	0	1	1	1	0	1	1	**5**
Bimbo	1	1	1	1	1	1	1	1	1	1	1	**11**
CEMEX	0	0	0	1	1	1	1	1	1	1	1	**8**
CocaCola FEMSA	0	0	0	0	0	1	1	1	1	1	1	**6**
GEO	0	0	0	0	0	1	1	1	1	1	1	**6**
GMODELO	0	0	0	1	1	1	1	1	1	1	1	**8**
ICA	0	0	0	0	0	0	0	0	0	1	1	**2**
MEXICHEM	0	0	0	0	0	0	0	1	1	1		**3**
Peñoles	0	1	1	1	1	1	1	1	1	1	1	**10**
Walmart	1	1	1	1	1	1	1	1	1	1	1	**11**

Methodology

We are applying the criteria of Collins, Maydew and Weiss (1997) methodology by considering the independent variables using historical data published in financial reports and consider the lagged independent variable at a time (in a quarter after the date of each independent variable).

Because the study is under cross-sectional criteria and over time, differences were taken into variables to be stationary series and do not have spurious regressions.

Research Hypothesis

First hypothesis: finding significance in both financial accounting variables selected to assess impact on the stock price (one quarter after the publication of information).

Second hypothesis: finding significance of CRS in the stock price (one quarter after the publication of information).

Models used in each scenario

The model to be considered for the first hypothesis is:

$$\Delta P_{it+1} = \alpha_{0it} + \alpha_{1it}\Delta OE_{it} + \alpha_{2it}\Delta FA_{it} + \varepsilon_{it} \quad (1)$$

where:
ΔP_{it+1}: Change in price per share of firm i three months after each quarter of the period t,
ΔOE_{it}: Change in operating expenses (previous year) of firm i in the period quarter t,
ΔFA_{it}: Change in fixed assets (previous year) of firm i in the period quarterly t, and
ε_{it}: Other relevant information of firm i in the quarterly period t, being orthogonal to Change in Change in operating expenses and fixed assets.

Then we add the effect of considering the distinctive of Corporate Social Responsibility, in order to identify if it has or not impact on the market. For the model considered for the second hypothesis is:

$$\Delta P_{it+1} = \alpha_{0it} + \alpha_{1it}\Delta OE_{it} + \alpha_{2it}\Delta FA_{it} + \alpha_{3it}\Delta CSR_{it} + \varepsilon_{it} \quad (2)$$

where:
ΔP_{it+1}: Change in price per share of firm i three months after each quarter of the period t,
ΔOE_{it}: Change in operating expenses (previous year) of firm i in the period quarter t,
ΔFA_{it}: Change in fixed assets (previous year) of firm i in the period quarterly t,
ΔCSR_{it}: Presence or no (1 or 1) of the distinctive of Corporate Social Responsibility of firm i in the period quarterly t, and
ε_{it}: Other relevant information of firm i in the quarterly period t, being orthogonal to Change in Change in operating expenses and fixed assets.

Characteristics of the Database

The study period data concerning financial and accounting information and share prices, is separated into two sections:

First block: (first hypothesis)

From the first quarter of 2000 to the third quarter of 2011 (being 47 quarterly periods). The purchasing power of the accounting and financial information (from the database Economatica in May 2012) is with the currency denomination of constant Mexican pesos at April, 30th, 2012. The financial accounting variables are used at the end of each quarterly period and the share price used in the next quarter of the accounting data.

Second block: (first hypothesis)

From 2000 to 2011 (11 annual periods).The purchasing power of the accounting and financial information (from the database Economatica in May 2012) is with the currency denomination of constant Mexican pesos at April 30th, 2012. The financial accounting variables are used at the end of each quarterly period, the distinction of being recognized as a socially responsible company is treated as dummy (1 = if it has the distinctive and 0 = if you do not) and the stock price is used in the next quarter of the accounting data.

Definition of Variables

The independent variables are two financial statements taken from the consolidated financial statements and a category (dummy):

1 - "Change in operating expenses" in the Income Statement as a measure of efficiency by controlling the internal processes of the company, meaning be efficient if reduced from the previous year.

2 - "Change in the amount of Fixed Assets" Balance Sheet, as a measure of investment in the long run (only in the company belonging to the financial sector are detailed the caption "Machinery and equipment" for this purpose, since the other items were different, by increasing the amount from the previous year are dedicating resources to grow in the long term investment (both tangible and intangible items).

3 - dummy variable refers to whether or not it has the badge awarded by CEMEFI: CSR (annual distinctive), as a strategic reference of innovation revised in section 2.

The dependent variable is the price per share. By this concept, we used the closing price of the Mexican Stock Exchange, one quarter after the close of each of the study periods of independent variables.

The companies that meet the characteristics of the variables required, under each hypothesis tested are 20 stocks for the first hypothesis, it is presented in Table 3:

Table 3. Companies that meet the criteria of model 1 of the study also identifies the sector to which they belong. Data from Economatica

Company Name	Economic Sector	Company Name	Economic Sector
Alfa	Basic & Fab Metal	Gruma	Food & Beverage
Ara Consorce	Construction	Ica Soc Controlad	Construction
Bimbo	Food & Beverage	Kimberly Clark Mex	Pulp & Paper
Cemex	Nonmetallic Min	Liverpool Puerto de	Trade
Elektra Gpo	Trade	Mexichem	Chemical
Fomento Econ Mex	Food & Beverage	Penoles Industrias	Mining
Geo Corporacion	Construction	Soriana Organization	Trade
GFBanorte	Finance and Insurance	Televisa Gpo	Other
GMexico	Mining	TV Azteca	Other
GModelo	Food & Beverage	Wal Mart de Mexico	Trade

And 11 companies for the second hypothesis, is presented in Table 4:

Table 4. Companies that meet the criteria of model 2 study also identify the sector to which they belong. Data taken from Economatica

Company Name	Economic Sector	Company Name	Economic Sector
Alfa	Basic & Fab Metal	GModelo	Food & Beverage
Ara Consorce	Construction	Ica Soc Controlad	Construction
Bimbo	Food & Beverage	Mexichem	Chemical
Cemex	Nonmetallic Min	Penoles Industrias	Mining
Fomento Econ Mex	Food & Beverage	Wal Mart de Mexico	Trade
Geo Corporacion	Construction		

Characteristics of the econometric variables

For the first model, the econometric analysis was performed by EGLS panel data, fixed station considered effective and defined SUR (considering each company as seemingly unrelated equation).

For the second model, we performed the econometric analysis of panel data least squares (leaving the 3 independent variables), after being weighted by each station (leaving the 3 independent variables) and finally evaluating only the independent variable of CSR.

Empirical Results

First hypothesis

Table 5 presents the results of the first model, which were found to be significant independent variables:

- Change in operating expenses, with the coefficient sign, as expected. Because if they decrease operating expenses, they were expected to have positive effect on the share price and that's what happened, so the coefficient is negative.
- Change in fixed assets, with a sign on the coefficient, as expected. Given that an increase in investment is expected to have positive effect on the share price.

Table 5. Significance of the variables considered in model 1, * significant at 5%

Variable	Coefficient	p-value
C	45.07855	0 *
GO	-0.039444	0 *
AF	0.0000644	0 *

Of the two factors, the only significant operating expenses, taking evidence of operational process efficiency (over the previous year).

Second hypothesis

In Tables 6 and 7 presents the results of the second model, under a panel data analysis where we found that the only significant independent variable was the presence of the Badge of CSR signed in the coefficient, as expected. How long has this flag been expected to have positive effect on the share price. Table 6 is considering a panel data model under OLS and Table 7 is considering a weighted cross under EGEL:

Table 6. Analysis of panel data, significance of the variables considered in the model 2, * significant at 5%

Variable	Coefficient	p-value	
GO	0.147728	0.5642	
AF	0.000469	0.8203	
CSR	60.32731	0	*

Table 7. Analysis of panel data with cross weighting, significance of the variables considered in the model 2, * significant at 5%

Variable	Coefficient	p-value	
GO	0.077452	0.2364	
AF	3.99E-05	0.9352	
CSR	42.37642	0	*

Conclusions

In this paper we analyzed the exploratory significance of independent variables (related to the two approaches to measuring innovation with financial performance), in light of the criteria of the Manual of Oslo and Bogota, in an analysis of 47 periods quarterly, from 2000 to 2011.

Also, we added to the initial model (1), as the independent variable distinctive presence of CSR (model 2), that is a strategic reference of innovation revised in section 2, and was found to be significant in the impact of share price three months later. This variable is important because of the growing interest in the company to have business with this flag, which also rewards the stock market in terms of the 11 stocks studied from 2001 to 2011.

These results provided empirical evidence of the interrelation of CSR on the stock market returns of the selected companies analyzed on this study. And we also found relevance in financial statements of general changes of innovation practices, though we measured the econometrical significance (under panel data analysis) in short term (three months after), these results represent a proxy of the reaction of the market to this kind of financial decisions of strategic patterns of medium or long impact.

We considered this study as the beginning of a line of studies on the impact of financial variables (investment related innovation made public enterprises), including the distinctive CSR (as part of strategy to customers, as with the stock market), in addition to leading to have this awareness in the performance of the stocks. The contribution of this exploratory analysis is that it provided a quantitative reference of the relation of the considered variables, for selected companies of Mexico, of the effect measure of innovation and CSR impact on the stock market.

End Notes:

[1] The Oslo Manual is a guide to the application and interpretation of data on innovation, supported by the OECD (Organization of Economic Co-operation Development).

[2] Manual de Bogotá focuses on implementing the Oslo Manual in the Latin American reality, supported by the OAS (Organization of American States).

References

Abreu, J. (2009). Preliminary report of research on Corporate Social responsibility, explained by the Neuroeconomics: Daena model. Revista Daena. *International Journal of Good Conscience*, 4 (1), 87-115.

Accenture (2010). A reliable proposal, how to win credibility with the consumer through sustainability and competitive advantage. *Business Management Magazine, September*, 36-40.

Brine, M.; Brown, R. and Hackett, G. (2007). Corporate Social Responsibility and Financial Performance in the Australian Context. *Economic Round-up*, Autumn, 47-58.

Cajiga C. (2010). The concept of Corporate Social responsibility. (Spanish). Center Mexican philanthropy. *Recovered from http://www.cemefi.org/esr/pdf* in February 2012.

Cadinaels, E. and Van Veen-Dirks, P. (2010). Financial versus non-financial information: the impact of information organization and presentation in a balanced scorecard. Accounting, *Organizations and Society*, 35 (6), 565-578.

Carroll, A. (1991). The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Business Horizons*.

Collins, D. W., Maydew, E. L., Weiss, I. S. (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics*, 24, 39-67.

CONACYT-INEGI (2001). Survey on innovation. *Web reference in INEGI*.

Chavarria, M. (2009). Corporate social responsibility (CSR) and communication: the agenda of the large Mexican companies. *Sign and thought*, 28 (55), 201-217.

Iselin, E. Mía, L. Sands, J. (2008). The effects of the balanced scorecard on performance: the impact of the alignment of the strategic goals and performance reporting. *Journal of General Management*, 33, 71-85.

Kaplan, R.S., Norton D. (1996). *Translating strategy into action: The Balanced Scorecard*, Cambridge, MA: Harvard Business School Press.

Neely, A. (2002). *Business Performance Measurement - Theory and Practice*, Cambridge University Press, Cambridge. 304-318.

OECD (1997). Proposed Guidelines for Collecting and Interpreting Technological Innovation Data, "Oslo Manual", Eurostat.

RICYT / OAS / CYTED COLCIENCIAS / OCYT (2001). Standardization of indicators of technological innovation in Latin America and the Caribbean, "*Manual of Bogota*".

Salgado Mercado, P., & García Hernández, P. (2007). Social responsibility in companies in the Valley of Toluca (Mexico). An exploratory study. *Estudios Gerenciales*, 23 (102), 119-135.

Saavedra, M. L. (2011). La Responsabilidad Social Empresarial y las finanzas, *Cuadernos de Administración*, 27 (46), 39-54.

Schumpeter, E.B. (1938). English Prices and Public Finance, *Review of Economic Statistics*, 20, 21-37.

Tsoutsoura, M. (2004). Corporate social responsibility and financial performance, *Working paper series of Berkley University*, 1-21. Permanent link: http://escholarship.org /uc/item/111799p2

Yu, L. Perera, S and Crowe, S. (2008). Effectiveness of the balanced scorecard: the impact of strategy and causal links, *Journal of Applied Management Accounting Research*, 6, 37-55.

Abstract (in Polish)

Praca analizuje zachowanie firm umieszczonych w México's Precios y Cotizaciones (IPC) biorąc pod uwagę wskaźniki finansowe i ich związek z dwoma głównymi podejściami do innowacji; analizie poddany jest wpływ podejść do innowacji na ceny akcji. Badanie oparte jest o dane kwartalne z okresu styczeń 2000 do grudzień 2011. Praca odnosi się do wpływu jaki wywiera adnotacja „Firma społecznie odpowiedzialna" (ang. Corporate Social Responsibility - CSR) na reakcję akcji. Intencją autorów jest podjęcie pionierskich badań nad zależnościami zachodzącymi pomiędzy CSR i Innowacyjnością - kwestiami, które w literaturze naukowej traktowane są jako niepowiązane, choć intuicja sugeruje związki zachodzące pomiędzy tymi zagadnieniami.

Słowa klucowe: firma społecznie odpowiedzialna, innowacyjność, akcje.

Relevance of Discretionary Accruals Information (DAI) in Ohlson model: the case of Mexico

Rocío Durán-Vázquez*, Arturo Lorenzo-Valdés**,

Juan Manuel San Martín-Reyna*

Abstract

This study applied the modified Jones´ model (1991) for selected companies of Mexico. This model aims to assess the impact of Discretionary Accrual Information (DAI) on financial reporting statements, in order to identify the value relevance of "earnings quality". We applied methodological criteria of Chung et al (2005) and Mukit & Iskandar (2009). We analyzed financial information of the 35 stock included in the Index of Prices and Quotations (IPC) of the Mexican Stock Exchange (BMV) for the period 2000 to 2011. 19 companies met the specifications of the model, for 48 quarters of information. The analysis was done in three parts: first, an analysis of the modified Jones´ model under panel data considerations by using fixed effects and adjustments of performing autocorrelation of order 1; second, a correlation analysis between the residuals of the modified Jones´ model and the return of stock price in 3 annual closings years of study: 2007, 2008 and 2009; and third, we incorporated this variable (DAI) in the Ohlson model (of the financial and corporate accounting literature) and we tested it with panel data analysis, under fixed effects, throughout the study period.

Keywords: financial markets, Jones and Ohlson Models, econometric estimation.

Introduction

What do we mean by "earnings quality"? We identify a "high quality earnings" when they faithfully represent the characteristics of the fundamental processes of the company, and they are relevant for decision making (under managerial point of view).

* *Dra. Rocío Durán-Vázquez, Department of Finance and Accouting, Universidad de las Américas Puebla, Ex-hacienda Santa Catarina Martir S/N, Cholula, Puebla, México, rocio.duran@udlap.mx.*

** *Dr. Arturo Lorenzo-Valdés, Department of Finance and Accouting, Universidad de las Américas Puebla, Ex-hacienda Santa Catarina Martir S/N, Cholula, Puebla, México, arturo.lorenzo@udlap.mx.*

*** *Dr. Juan Manuel SanMartin-Reyna, Department of Business Management, Universidad de las Américas Puebla, Ex-hacienda Santa Catarina Martir S/N, Cholula, Puebla, México, juanm.sanmartin@udlap.mx.*

Of course, the term "earnings quality" is meaningless without specifying the context of decision making.

This concept was popularized by Lev (1989) when he incorporated the term "quality" as a descriptive characteristic of the profits (profit or loss of business, involving both gains and losses). And as it is linked to the utility (relevance) in decision-making, it has taken different paths of research, as highlighted Schelling (1978). In this paper we identify the “quality of earnings” as the ones with less "discretionary accrual information". Specifically, we define Discretionary Accrued Information (DAI) as the difference between the Total Accrued Information (TAI) of the companies, minus No Discretionary Accrued (NDA) portion.

And what does “Total Accrued Information” (TAI) consider? TAI is the difference between operating income (profit or loss, under accrual basis of accounting) minus the flow generated from operations. And the “No Discretionary Accrued” portion is the corresponding adjustments and estimates of the financial information that are clarified in the accounting policies of the items of working capital, financing and investment. This definition is consistent with the literature, starting from DeAngelo (1986), Healy (1985) and McNichols and Wilson (1988). The main interest of this is because the “Discretionary Accrual Information” (DAI) represents opportunistic practice that can be carried out for more management gains direct benefit from them, including impairment of the company. As highlighted Castrillo and San Martin (2008), this behavior implies downside to shareholders and can be identified as a "technique for handling finances."

Jones (1991) proposed to calculate this "variable" and measured with a statistical or non-existent behavior, using the residuals of the model that bears her name. It allows the calculation of discretionary accrual information as a measure to identify the existence of accounting manipulation in terms of the detriment of the quality of earnings presented in financial reports.

That is why the focus of the study is to identify the "discretionary portion" for evidence of the existence of information manipulation for decision making at the management level of enterprises. And the purpose besides it is to test the value relevance of the “discretionary portion” on the stock market, when it is evaluated as an additional variable to the model of Ohlson (which brings value relevance of financial information in the price).

The approach of the analysis began with the measure of this issue of discretionary accrual information, using the modified Jones´ model (1991), then we tested its relevance by adding this variable in a model of corporate finance literature: the Ohlson model (1994), which has been applied to the Mexican data, as presented in Duran, Lorenzo and Valencia (2007) using panel data analysis with fixed effects finding the relevance of the model with Mexican data; and in Lorenzo and Duran (2010) using co-integration test finding balance in the long term of the Mexican variables (meaning that the Ohlson model has value relevance in Mexican´ companies, as in development countries).

Literature review

Accrual Financial Information

There are several studies that identify approaches and impact on the calculation of the "discretionary accrual information", especially given the responsibility and decision of the board in this regard.

The administration tends to have a "margin" of action in choosing alternative financial information, which is a veil of opportunistically "possible" manipulation on the income statement (generating a different profit or loss according with some managerial objective). That is why the popular perception has it that cash flows should provide more significance of a company's performance, however empirical studies initiated by Dechow (1994) find evidence that the significance of the performance of the company is in information accrual, instead of cash flows (widely accepted by finance literature). We emphasize this point because financial analysts typically have considered aspects estimates accrued income statement as weaken-altering information offered by utilities, which has led to the idea that cash flows could provide more information. Dechow, (1994) referring to the press articles, as published in Chemical Week (May 8, 1991, p. 28), says: "Many financial analysts consider operating cash flow as a better indicator of financial performance of companies net profits as it is less subject to distortion of different accounting practices. " However, profits have econometrically showed greater significance.

Accrual adjustments are made to represent the situation with greater significance and financial performance of companies, fulfilling the criteria of the framework of financial reporting regulations, both nationally and internationally. These accruals are used by seeking to improve the quality of financial reporting accounting, as highlighted Hansen and Noe (1998) and Barth, Cram and Nelson (2001).

Research in this area is complicated because the managers are those with the informational advantage on the use accruals, and analysts have only as the amounts reflected in the annual reports. That is why the study becomes relevant. Jones (1991) began by identifying the formation of total information accrual underlying the financial statements of companies, the breakdown of the items forming “obvious” accruals, performing adjustments to their model, as the approach of Xie, and DaDalt Davison (2003) to target the adjusted working capital as was also identified in Dechow (1994). Since the total information accrual includes discretionary and non-discretionary portions, it is necessary to specify each one, such as highlights Poveda (2001).

For the empirical analysis of this issue, there are approaches in cross-sectional and in time series analysis. The one that is the most used is the cross sectional analysis with the most frequent data under quarterly basis. There is mainly evidence of regressions (cross-sectional analysis) in the majority of studies, precisely because for a time-series analysis it will require numerous observations and it is complicated to conduct it, as well as being the information it is susceptible to structural changes over time. A sample of the comparison between the results of time series and cross sections are the studies by Shvakumar (1996), Subramanyam (1996) and DeFond and Subramanyam (1998), where they found the strength and statistical significance in the regressions, following the this path in mainly literature´ references.

Before the modified model of Jones (1991), Healy (1985) and DeAngelo (1986) were consistent to identify the portion of discretionary accrual information (under the usual accounting considerations).

Since in the literature we find mainly uses cross-sectional, this study explores the significance of the modified model of Jones (1991), under the panel data analysis, assessing the existence of fixed effects, since it has no evidence for Mexican companies.

The importance of accounting accrual accounts is that the information on Balance Sheet shows combination between past and present results of the company (because there are items that are aggregated over time and other are only for the period). And if it highlighted the discretionary part, the next step is to see if it has an impact on market behavior. It is here the importance of this study, because we are joining two main issues of study: one about the "earnings quality" (considering the discretion of managers in financial reporting) and the other, that is concerned with how this information may or may not be directly relevant to explain the stock price of the companies that are listed on the Mexican Stock Exchange. In both parts we are following one of the main objectives of financial reporting empirical research: to find evidence that accounting is relevant for decisions of investors´ valuation.

In the work of Garcia and Gill (2005) we found evidence of 155 Spanish companies which additionally applied a questionnaire to identify the mechanisms that may contribute to good corporate governance practice and applied the Jones´ model to determine the handling of results. It was consistent with the results of Azofra, Castrillo and Del Mar (2006), about the ability of the model to detect manipulation that Jones obtained from Spanish companies. And Aminul, Ali and Ahmad (2011) analyzes the modified Jones model in detecting earnings manipulation between IPOs listed from 1985 to 2005 in the Dhaka Stock Exchange, reaching the conclusion that there was no sufficient data in Bangladesh.

Relevance of financial information in the stock market

There are several studies in this area, since Ball and Brown (1968) we find evidence of the association between the price of shares in the stock market and accounting profits of companies. Within accounting models that evaluate financial and accounting information highlights, the "EBOF reference model", named after the initials of the researchers Edwards, Bell, Ohlson and Feltham, is presented in Ohlson (1994). This model has been used in several magazine articles to evaluate Accountants American companies traded. The variables used in the model to explain the price market value of the company are: the Book Value (Shareholders´ equity in book value) and Earnings (profits or losses for the year).

The Ohlson model is the one with the largest number of research papers in the international accounting literature, with different interpretations emphasizing its utility or reflecting about their structural and methodological constraints. And it means a crucial reference for the market analysis based on financial accounting research, because the financial information was considered and identified as a component of value. And it allows the link of relevance of accrual financial information with the response of the stock market.

In essence this model reflects the value of the company into two main parts: the value of the net investment in it (book value) and the present value of the benefits period (income) that brings together the "net assets" Shareholders' Equity value concept.

Particularly, Ohlson (1995) motivates the adoption of pricing model in studies of value relevance, expressing its value in terms of earnings and book values. The current use of historical data base of stocks, began with Collins-Maydew-Weiss (1997), as highlighted the relevance of their use, reporting its significance within the U.S. market, particularly highlighting three results: First, counter adverse opinions of the professional literature, the combined value-relevance of earnings and shareholders' equity has declined over the past 40 years, in fact it seems to have increased a bit. Second, while the incremental value-relevance of earnings has a declining line, it has been replaced by the increase in the value-relevance of stockholders. Third, much of the change in the value-relevance of earnings to stockholders can be explained by: the increase in the frequency and magnitude of ordinary results in profits, an increase in the frequency of negative earnings, and change in average firm size and intensity of intangibles in companies over time.

Since 1995, the Ohlson model has been extensively tested with data from the United States and various developed countries and a few developing ones. Within the accounting literature, there are few applications that use data from Latin America and even less information using the Mexican stock market. Duran, Lorenzo and Valencia (2007) found relevant value in Ohlson model by panel data analysis for the entire market of Mexico from 1991 to 2003 and Lorenzo and Duran (2010) carried out the first tests of co-integration for all stations listed on the Mexican Stock Exchange, being co-integrated variables for the period 1997-2008, with no difference between the three sectors analyzed. The relevance of the co-integration tests is attached to the “classical econometric” assumptions that observed data come from a stationary process (meaning that means and variances are constant over time), in this study the test was done under Johansen (1988) considerations, and the results showed that the Ohlson model has robust results for Mexican data.

Recently there have been similar studies in emerging markets, highlighting the work of Martinez, Prior and Rialp (2012) for Latin American equities. And in other countries, there are results of found evidence of Ohlson model in Naim and Qabajeh (2012) which are similar with respect to Mexico, for the Jordan Stock Exchange market.

Methodology

First, we applied the methodological criteria followed, by Bukit and Iskandar (2009), about the calculation of the modified Jones model (1991), consistent with the definition criteria of Dechow (1994) for the measure the discretionary portion of the information accrued (DAI) in the financial statements in cross-sectional analysis of the years 2007, 2008 and 2009 (in order to identify any contrasting behavior before, during and after the crisis Global 2008). Besides that, we test the significance of the model, under panel data analysis.

For the second part of the study (when we add the modified Jones´ model variable on the Ohlson model), we analyzed the impact of "residuals (DAI variable)" of modified Jones´ model in the stock price share of selected Mexican´ companies, as investor response about it. For this part we consider the dependent variable (the stock price) one period after the independent variable period, according to the methodology of Collins, Maydew and Weiss (1997) and by adding a third independent variable: the discretionary accrual information (DAI) contained in the absolute value of the residuals (of modified Jones´ model estimated on the first part).

Research Hypothesis

First hypothesis: the modified Jones model is valid in all three cuts per year: 2007, 2008 and 2009, seeking to find difference in behavior for the period of crisis in the country before, during and after.

Second hypothesis: the modified Jones model is valid under panel data analysis for the 1st. study period (from the 4th quarter of 2000 to 4th quarter of 2011), based on annual closing data.

Third hypothesis: the modified Jones´ model is tested as an independent variable impact on the returns of the stock price variable after one quarter, for the 1st. study period: from the 4th quarter of 2000 to 4th quarter of 2011 (based on annual closing data).

Fourth hypothesis: Discretionary Accrual variable (identified in the modified Jones´ model as it residual) is added (as the third explanatory variable for the share price one quarter after) in the Ohlson model (1994), the 1st. study period: from the 4th quarter of 2000 to 4th quarter of 2011 (based on annual closing data).

Studied Models

The model used for the first and second hypotheses is the modified Jones´ model (1991) which is detailed below in Equation 1. Importantly, we must emphasize that each variable is deflated by total assets before a period of time, to avoid heteroscedasticity problems, according to Chung, et al (2005):

$$TAI_{it}/TA_{it-1} = \alpha_0(1/TA_{it-1}) + \alpha_1((\Delta Rev_{it}-\Delta AR_{it}) / TA_{it-1}) + \Delta_2 (\Delta PPE_{it} / TA_{it-1}) + \varepsilon it \qquad (1)$$

where:
TAI_{it}: Total accrual information for firm i, in the quarterly period t (calculated in equation 2)
TA_{it-1}: Total assets of firm i, in the quarterly period t-1,
ΔRev_{it}: Change in revenue (previous year) of firm i, in the quarterly period t,
ΔAR_{it}: Change in accounts receivable (previous year) of firm i in the period quarter t,
ΔPPE_{it}: Change in Property, Plant and Equipment Gross (previous year) of firm i in quarterly period t, and
ε_{it}: Other relevant information of firm i in the quarterly period t, being orthogonal to independent variables

The Total Accrual Information variable for firm i in period t quarterly: (TAI) is calculated with the equation number 2:

$$TAI_{it}: (\Delta \text{Current Assets}_{it} - \Delta \text{Cash}_{it}) - (\Delta \text{Short-term liabilities}_{it} - \Delta \text{Short-term debt}_{it} - \Delta \text{Taxes payable}_{it}) - \text{depreciationit} \quad (2)$$

where:
Δ represents the change in year t-1 to year t of each concept identified in the financial statements of the company i, in the quarterly period t.

In order to identify the portion of the Discretionary Accrual Information we considered the total accrued information (TAI) as the sum of the accrued discretionary information (DAI) and accrued nondiscretionary (NDA). That is, according to the equation number 3:

$$TAI_{it}: DAI_{it} + NDA_{it} \quad (3)$$

DAI is defined as the residual of equation 1, while NDA is defined as the set values of equation 1. This approach is consistent with the literature, where DAI is considered as the result of the opportunities for decision makers as alternatives that the managers selected of accounting methods.

The first hypothesis was tested under cross-sectional analysis on three points: 4th annual closures of: Quarter of 2007, 2008 and 2009.

The second hypothesis was tested by panel data analysis for the 48 quarters of the study (the 1st. Quarter 2000 to 4th. Quarter of 2011).

The model used to test the third hypothesis is specified in equation 4:

$$\Delta P_{it+1} = \alpha_{1it}[(TAI_{it} / TA_{it-1} - (1/TA_{it-1}) - ((\Delta Rev_{it} - \Delta AR_{it})/TA_{it-1}) - (\Delta PPEit / TA_{it-1})] + \varepsilon_{it} \quad (4)$$

where:
Equation 1 is incorporated as an independent variable to explain the change in the price a quarter later, looking for evidence of response from the stock market. The definition of the variables is the same as specified above. The only change is the

definition of the dependent variable which is identified as: ΔP_{it+1}: Change in the share price of firm i, in the quarterly period t+1.

We performed panel data analysis for the 48 quarters of the study (the 1st. Quarter 2000 to 4th. Quarter of 2011). We used the change in financial reporting variables, as they are non-stationary series, in order to avoid spurious regressions.

The model used to test the fourth hypothesis is detailed in equation number 5:

$$\Delta P_{it+1}1 = \alpha_{0it} + \alpha_{1it} \Delta BV_{it} + \alpha_{2it} \Delta E_{it} + \alpha_{3it} R_{it} + \varepsilon_{it} \qquad (5)$$

where:

ΔP_{it+1}: Change in the share price of firm i, in the quarterly period t +1.
ΔBV_{it}: Change in book value of firm i, in the quarterly period t,
ΔE_{it} : Change in the profit or loss of the company i, in the quarterly period t,
R_{it} : Absolute value of residuals obtained Ec.1, for firm i, in the quarterly period t
ε_{it} : Other relevant information of firm i in the quarterly period t, being orthogonal to the independent variables

For this model we also performed panel data analysis for the 48 quarters of the study, and we used the change in the variables, as they are non-stationary series, in order to avoid spurious regressions.

Characteristics of the Database

The data analyzed was obtained from the MSM (Mexican Stock Market, in Spanish: Bolsa Mexicana de Valores: BMV). Currently (2012), it is composed by 124 active companies. The CPI (Index of Prices and Quotations, in Spanish: Índice de Precios y Cotizaciones: IPC) is the main indicator of the Mexican Stock Exchange, the performance expressed in terms of changes in the stock market price of a balanced sample, weighted and representative of all shares traded on the Stock Securities and serves as the underlying financial products.

The number of stocks companies that belong to the Price Index (IPC) is 35 series. The sample used in the calculations is made of the companies of different economic sectors. Table 1 showed the companies that belong to the IPC and that met the criteria of the models of this study, in the table we added the identification of the economic sector activity of each one. We must emphasize that we leave out the financial sector companies (because of the difference in accounting standards criteria used for financial reporting). The purchasing power of the accounting and financial information (took from the queried database of Economatica) is with the currency denomination of constant Mexican pesos as of 30 April 2012 (this is relevant because the average annual inflation in Mexico, in the study period was around 4%).

The independent variables are financial accounting information taken from the consolidated financial statements, and they are used at the end of each quarterly period and the share price used in the next quarter of the accounting data.

Empirical Results

Results are presented according to each hypothesis tested. We considered the "t-statistic" to verify that if a independent variable is significant or not. We are not testing how well the model is used, only if the independent variables have value relevance to the dependent variable (if they were affecting it or not).

First hypothesis:

Significance of residuals of the modified Jones´ model (from equation number 1), in three annual cuts of study: 2007, 2008 and 2009.

We estimated the modified Jones´ model under the specifications mentioned in the methodology and the residuals were obtained (as a measure of discretionary accrual information, DAI).

The calculation of these residuals was performed according to the methodology for calculating a prediction error similar to the standard used by Patell (1976). For each prediction error we calculated an estimated standard deviation. If the prediction errors are normally distributed, then the following relationship holds over the prediction errors of the standard deviation, with a t-distribution with Ti - 3 degrees of freedom: $V_{it} = \upsilon_{it} / \sigma(\upsilon it)$

This statistic (V_{it}) is used as a measure of "standardized prediction errors." Following the methodology of Patell, the central limit theorem is presented for the next statistical calculation in equation No. 6:

$$Z_{Vp} = \sum_{i=1}^{N} V_{ip} \Big/ \left[\sum_{i=1}^{N} (T_i - 3)/(T_i - 5) \right]^{1/2} \tag{6}$$

This measure Z (calculated for the 4th quarter of the years 2007, 2008 and 2009) is asymptotically distributed as a standard deviation unit, considering that the forecast errors are independent across. In this test, the null hypothesis is that the average prediction error (i.e. discretionary accrual information) is greater than or equal to zero. The interpretation of the result can show the existence or nonexistence of Accrued Discretionary Information (DAI). In this case T is equal to 12 (being the total number of years of observations from 2000 to 2011). Below, in Table 1, there are the results of analyzes of these 3 years of study:

Table 1. Z statistic calculated, where the decision value is> = to -1.65 (being one-tailed test), indicating that if there Accrued Discretionary Information (DAI), which makes it susceptible to the financial information to be manipulated

Period	**Result**		**Interpretation**
2007-4to.Quarter	Z=	0.878	There is Discretionary Accrual information
2008-4to.Quarter	Z=	-0.873	There is Discretionary Accrual information
2009-4to.Quarter	Z=	-0.144	There is Discretionary Accrual information

Interpretation:

The results in Table 1 show no change in the years prior, during and after crisis. However, the presence of "Discretionary Information Accrued Information: DAI" implies that management is taking advantage of alternative decisions accounting, to present the results for the year.

Second hypothesis:

This hypothesis was focused to find significance of the variables modified Jones model in panel data analysis, for the 1st study period: from the 4th quarter of 2000 to 4th quarter of 2011 (based on annual closing data each quarter, in total there were 48 observations).

Analysis was performed by panel data, where we found autocorrelation problems (these statistics are shown in the first part of Table 2). Then the model was made incorporating a Settings Auto-Regressive of order 1 and offset independent variables in one period (the second part of Table 2). And finally fixed effects are incorporated (the third part of the Table 2). In the second and third of these adjustments, we found strength in the econometric modified Jones´ model, under panel data (in terms of meeting the assumptions necessary to accept a model).

Table 2. Estimating panel data analysis of the model parameters modified Jones, according to the three stages of analyzing the second study hypothesis. It is noted with * significant at 5%

First Stage: Original Panel original, without adjustments with autocorrelation			Second Stage: Panel with AR(1) and one period after of the independent variables			Third Stage: Panel with AR(1), one period after of the independent variables with fixed effects		
	Coefficient	T-statistic		Coefficient	T-statistic		Coefficient	T-statistic
$1/TA_{it-1}$	-32201.83	-2.35	$(1/TA_{it-1})(-1)$	-13738.57	-0.28	Constant	-0.04	-22.90 *
$(\Delta Rev_{it}-\Delta AR_{it}) / TA_{it-1}$	496.44	1.97	$((\Delta Rev_{it}-\Delta AR_{it}) / TA_{it-1})(-1)$	42.47	0.54	$(1/TA_{it-1})(-1)$	-44901.68	-0.99
$\Delta PPE_{it} / TA_{it-1}$	-0.04	-56.52 *	$(\Delta PPE_{it} / TA_{it-1})(-1)$	0.01	6.59 *	$((\Delta Rev_{it}-\Delta AR_{it}) / TA_{it-1})(-1)$	25.64	0.31
			AR(1)	0.99	300.77 *	$(\Delta PPE_{it}/ TA_{it-1}) (-1)$	0.01	6.07 *

Interpretation:

It is important to note that the third independent variable (corresponding to the change in property, plant and equipment under the deflator factor of total assets a quarter earlier) was the only one with significance for the selected Mexican companies tested (in the three stages of analysis) according with the t-statistic of the independent variables.

Third hypothesis:

We test the significance of the modified Jones´ model (as an independent variable) in the stock price after one quarter, for the 1st study period from the 4th quarter of 2000 to quarter of 2011 (based on annual closing data). It is significant, besides this result we evaluated the possibility of fixed effects existence bur it was rejected. Below in Table 3, we present the estimate:

Table 3. Estimating panel data analysis of the modified Jones model, as an independent variable that affects the stock price change is noted with * significant at 5%

Original panel without adjustments			
	Coefficient	T-statistic	
Jones Model	-0.057	-6.595	*

Interpretation:

When we test the modified Jones´ model (as an independent variable effect on stock price) we found that it is significant to the change in stock price. This lets us to consider the importance of financial information Total Accrued (TAI) minus adjustments nondiscretionary information (NDA), taking an approach of significance Discretionary Accrued Information (DAI). That´s why we decided to test DAI as additional independent variable on the Ohlson model.

Fourth hypothesis:

We expect to find significance of Discretionary Accrual Information (DAI) variable (identified in as residual in modified Jones´ model), which is added as a third explanatory variable) in the Ohlson model. For this we considered 46 quarters of study (on year-end basis for each quarter). The residuals are considered according to the literature of the “earnings quality” of financial reporting information, in absolute values.

The panel data analysis was performed in differences. Below are the results:

Table 4. Panel data of Ohlson model with the residual variable estimation. * It is significant with 5% significance

	Coefficient	T-statistic	
α_0	1.717	1.970	
Δ BV	1.407	8.277	*
Δ E	3.225	14.003	*
R	11.975	0.065	

Interpretation:

In Table 4 we find that the Ohlson model variables: Book value and Net income are significant and the variable that was added (the residuals of the modified Jones´ model) is not significant. This means that the Discretionary Accrual Information (DAI) does not provide additional relevant information to the Ohlson model, one explanation of this evidence is that the accrual information is implied in the two original variables of the Ohlson model.

Conclusions

In this paper we analyzed the significance of the modified Jones´ model (1991) from several perspectives. The importance of this model emphasize on the presence of Accrued Discretionary Information, which becomes important in the light of the quality of earnings presented in financial reports, both for managerial decision making (internal management), and for potential investment of shareholders. We assessed the significance of this variable in terms of the relevance value that means for the stock price.

We found evidence for the existence of this information Discretionary Accrued Information (DAI) on analysis specified years (2007, 2008 and 2009) without contrast behavior in the studied periods of before, during and after the international crisis of 2008.

The modified Jones´ model (1991) was tested to selected Mexican´ companies (the ones that belong to the IPC and met the models´ characteristics of the study period of 2000-2011). We identified that the following variable was the only one with value relevance for Mexican behavior (in terms of DAI): change in Property, Plant and Equipment. This variable represents the decision making of long-term investment, and it seems that it has the reflection of total information accrual significance, according to the tests (even under the analysis of panel data, fixed effects or as well without them).

Finally, we incorporated the residuals of the modified Jones´ model (DAI) in the Ohlson model (which is significant for Mexican data, as was it shown in Duran and Lorenzo (2010)). This paper adds Discretionary Accrual Information (DAI variable), and it was found that is not statistically significant (under t-statistic criteria) and we conclude that it does not affect prices or it could be a highly correlated relation between variables, indicating that DAI characteristics could be incorporated into Book Value or Earnings. We will continue researching about this implication, in terms of the relevance of the financial information on fundamental analysis of corporate finance.

References

Aminul Md., Ali R., and Ahmad Z. (2011). Is Modified Jones Model Effective in Detecting Earnings Management? Evidence from a Developing Economy. *International Journal of Economics and Finance*, 3, 2, May 2011, 116-125.

Azofra V., Castrillo L. and Delgado M. (2006). Evaluación de los modelos de ajustes por devengo: ajustes discrecionales a informes de auditoria con salvedades. *Revisa Partida doble*, 181, 88-104.

Ball R. and Brown P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research*, 6, 2, 159-178.

Barth, M.E., Cram D.P. and Nelson K.K. (2001). Accruals and the prediction of future Cash Flows. *The Accounting Review*, 76, 1, 27-58.

Bukit B.R. and Iskandar M. (2009). Surplus Free Cash Flow, Earnings Management and Audit Committee. *Journal of Economics and Management*, 3 (1), 204-223.

Castrillo, L.A. and San Martín, J.M. (2008). Los ajustes por devengo como medida de discrecionalidad directiva. *Revista de Contaduría y Administración*, 226, sept-dic, 9-37.

Collins, D.W., E.L. Maydew, e I.S. Weiss, (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics*, 24(1), 39-67.

Chung, R., Firth, M. and Kim J.B. (2005). Earnings management, Surplus Free Cash Flow and External Monitoring. *Journal of Business Research*, 58, 766-776.

Davis-Friday, P., Rivera, J. (2000). Inflation accounting and 20-F disclosures: Evidence from Mexico. *Accounting Horizons Journal*, 14, 113–135.

DeAngelo, L.E. (1986). Accounting numbers as Market Valuation Valuation Substitutes: A Study of Management Buyouts of Public Stockholders. *The Accounting Review*, 61, 400-420.

Dechow, P.M., (1994), Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics*, 18(1), 3-42.

DeFond, M.L., and Subramanyam, K.R. (1998). Auditor Changes and Discretionary Accruals, *Journal of Accounting and Economics*, 25, 2, 35-67.

Durán, R., Lorenzo A. and Valencia H. (2007). Value relevance of the Ohlson model with Mexican data. *Revista de Contaduría y Administración*, 1, 223, UNAM, Septiembre-Diciembre, 33-52.

García B. and Gill-deAlbornoz, B. (2005). Gobierno corporativo y las prácticas de earnings management: evidencia empírica en España. *Instituto Valenciano de Investigaciones Económicas S.A.*, Abril 2005, 1-46.

Hansen, G.A. and Noe C.F. (1998). Do Managers´ Accrual Decisions Speak Louder than Words?, *Journal of Accounting and Economics*, 7, April, 85-107.

Healy, P.(1985). The impact of Bonus schemes on the selection of Accounting Principles. Journal of Accounting and Economics, 7, 85-107.

Johansen (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control*, 12, 231-254.

Jones, J. (1991). Earnings Management during Import Relief Investigations. *Journal Accounting Research*, 1995, 213-228.

Lomelí Venegas L. and Muruyama C. (2009) .México frente a la crisis: hacia un nuevo curso de desarrollo. *Revista de Economía UNAM*, 6, 18, 7-60.

Lorenzo A. and Durán R. (2010). Ohlson model by panel cointegration with Mexican data. Revista de Contaduría y Administración 1, 232, *UNAM, Septiembre-Diciembre*, 131-142.

Martínez P., Prior D. and Rialp J. (2012). The Price of stocks in Latin American financial markets: an empirical application of the Ohlson model. *Global conference on business and finance proceedings*, 7, 96-100.

McNichols, M. and Wilson, G.P. (1988). Evidence of Earnings Management from the Provision for Bad Debts. *Journal of Accounting Research*, 26, 1-31.

Naim F. and Qabajeh. Value relevance of Ohlson model with Jordanian data. *Interdisciplinary Journal of contemporary research in business*. 3, 11, 551-560.

Ohlson, J. A. (1995). Earnings, books values and dividends in equity valuation. *Contemporary Accounting Research*, 11(2), 661-687.

Patell J.M. (1976). Corporate forecast of Earnings per share and Stock Price Behavior: Empírical Tests. *Journal of Accounting Research*, 14 (Autumn 1976), 246-276.

Poveda F. (2001). Cuestiones estadísticas sobre modelos y constrates de ajustes por devengo anormales. Working paper, *Instituto Valenciano de Investigaciones Económicas*, julio, 1-52.

Shvakumar L. (1996). Essay Related to Equity Offerings and Earnings Management. *Dissertation, Vanderbilt University*.

Subramanyam K.R. (1996). The Pricing of Discretionary Accruals. *Journal of Accounting and Economics*, 22, 1, 3-27

Xie B., Davison, W.N and DaDalt, PK. (2003). Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee. *Journal of Corporate Finance*, 9, 295-316.

Abstract (in Polish)

Niniejsza praca stosuje zmodyfikowany model Jones´a (1991) wykorzystując dane finansowe wybranych firm meksykańskich. Celem modelu jest ocena wpływu Discretionary Accrual Information (DAI) na zawartość sprawozdań finansowych w celu identyfikacji wartości „jakości zysku”. Praca stosuje kryteria metodologiczne zaproponowane w Chung et al (2005) i Mukit & Iskandar (2009). Autorzy poddali analizie finansowe dane 35 firm, których akcje występowały w indeksie cen i cytowań (IPC) na Mexican Stock Exchange (BMV) w okresie 2000 do 2011. 19 firm spełniło specyfikacje modelu biorąc pod uwagę dane kwartalne w okesie 12 lat będących przedmiotem rozważań. Analiza została przeprowadzona w trzech etapach: najpierw, analiza zmodyfikowanego modelu Jones'a na danych panelowych przy użyciu efektów stałych i modyfikacji wynikających z autokorelacji rzędu pierwszego; analiza korelacji pomiędzy wartościami rezydualnymi zmodyfikowanego modelu Jones'a i stopą zwrotu z akcji w trzech kolejnych latach analizy: 2007, 2008 i 2009; test modelu Ohlsona z użyciem zmiennej DAI, danych panelowych i efektów stałych w rozważanym horyzoncie czasowym.

Słowa kluczowe: rynki finansowe, modele Jones'a i Ohlson'a, ekonometryczne oszacowania.

Ownership Structure, Firm Value and Investment Opportunities Set: Evidence from Mexican Firms

Juan M. San Martin-Reyna*, Jorge A. Durán-Encalada**

Abstract

This paper analyses the influence of ownership, board of directors, and financial leverage on companies' performance when these either face, or do not face, profitable growth opportunities. Towards that end we examined a sample of 83 listed Mexican firms during the period 2005-2011. The results confirm the relevance of debt and board of directors in terms of firm market value by showing a negative relationship between performance and both, board of directors and leverage, in the presence of growth opportunities. In contrast, the relationship between debt and performance becomes positive when firms have no profitable investment projects. The results also demonstrate that the relevance of controlling shareholders on firm value is different when firms have or not growth opportunities. Therefore, our results show that ownership structure, composition and size of board and the level of leverage play a dual role on performance (increase or decrease the firm value) and determinewhether the firms have profitable investment projects.
Keywords: debt, investment opportunities, performance, family business.

Introduction

The agency problem between shareholders and managers raised by Berle and Means (1932) as a result of dispersed shareholders in large enterprises arises when the contributors of the funds need to finance investments. Then, while assuming the business risk, the shareholders are forced to entrust supervision and direction to someone who possesses the qualifications and skills needed to perform these functions. If the shareholders were to have complete information on investment opportunities presented to the organization and available to company managers, they would be able to design full-blown contracts that do not give room for the discretion of managers. But this is not likely and the actions of management and investment opportunities are not perfectly observable by the owners, as a result, managers can

* *Dr. Juan M. San Martin-Reyna, Family Business Research Centre – Universidad de las Américas Puebla, juanm.sanmartin@udlap.mx.*

** *Dr. Jorge A. Durán-Encalada, Family Business Research Centre – Universidad de las Américas Puebla, jorgea.duran@udlap.mx.*

engage in an opposite conduct to the owners' interests. In other words, managers may have incentives to expropriate the company´s profits through projects that benefit them but can adversely impact shareholders (Jensen and Meckling, 1976; Fama and Jensen, 1983).

A conflict of interests has a potential agency cost such as management decisions that do not maximize shareholders' interests. Managers may handle reported earnings to justify their actions and this can lead to an agency cost where investors make non-optimal investment decisions from reported earnings. In a situation where a company has a high free cash flow, the manager may be engaged in earnings management that leads to a less than satisfactory performance of the company. This relation can be explained by using agency theory. In this contractual context, characterized by the conflict of interests between shareholders and managers, corporate governance involves the design of a series of mechanisms that reconcile the interests of shareholders and managers (Fama and Jensen, 1983; Hart, 1995; Mayer, 1996), thus avoiding the management that seeks to maximize its utility function at the expense of shareholder's wealth.

A growing body of literature has shown how growth opportunities open to the firm influence the relation between performance and financial decisions (Smith and Watts, 1992; McConnell and Servaes, 1995; Lang et al., 1996; De Andres et al., 2005; Bukit and Iskandar; 2009; Chen and Liu 2010). However, much less is known about how this relationship is influenced by ownership structure, particularly family ownership. This is an important issue because a new conflict of interests can arise between the controlling majority and the minority shareholders. The fundamental agency problem for listed companies in emerging markets is not a conflict of interest between outside investors and managers, as argued by Berle and Means (1932), but a conflict of interest between controlling shareholders and minority shareholders (Shleifer and Vishny, 1997).

Evidence shows that family businesses retain advantages and that the superior performance of family ownership is even more evident in emerging markets where they are viewed as the "engines" of the economy (Whyte, 1996). Large family controlled groups are dynamic and versatile, and they account for a significant proportion of gross national product in high-growth emerging markets (Carney, 2005; Claessens et al., 2002). In Mexico, a majority of firms, as in most developing countries, are considered family businesses. Nevertheless, very few studies refer to Mexican family businesses, so it is important to have more research that focuses on them.

Under the agency theory approach, our study aims to analyze if the measures set by shareholders to control the managerial team through internal mechanisms work, and whether these measures have a positive or negative impact on performance when managers face options to increase firms' profits. These growth options consider the use of cash flows available for the managers to invest in projects with positive net present value, once they have covered all short-term liabilities.

As a consequence, this study examines if in the presence of growth opportunities shareholders operate with the same control mechanisms as when there is an absence of growth opportunities. We applied this theoretical framework to a sample of large Mexican firms publicly traded in capital markets for the period 2005–2011.

This study follows the research made by Andres et al. (2000), Myers (1977), Jensen (1986), Morck et al. (1988), Stulz (1990), Smith and Watts (1992), Lasfer (1995), and draws heavily on the works of McConnell and Servaes (1995) and De Andres et al. (2005). These last authors are among those which propose to sort out companies according to their growth opportunities using variables like price earnings ratio (PER), the market-to-book ratio (MBR) (Smith and Watts, 1992; Lasfer, 1995; McConnell and Servaes, 1995), or sales rate of growth (SRGR) (McConnell and Servaes, 1995; La Porta et al., 2000, De Andres et al., 2005). However, the present study deviates from that research by focusing not only on debt influence, but also on family ownership and board variables effects in order to expand the analysis framework.

The results show that ownership, leverage, and board of directors variables affect firm value, and that the type of influence depends on the presence or absence of investment opportunities. Family ownership, composition and size of board of directors, and the level of financial leverage play a dual role: they increase the performance when there are not investments projects, but have negative impact in the presence of growth opportunities. A problem of wealth expropriation arises between majority and minority shareholders in firms with greater growth opportunities. However, ownership concentration, debt, and board act as disciplinary mechanisms only in firms with an absence of growth opportunities.

To accomplish its aims the paper is divided into five sections, starting with this introduction. Section two examines previous research and presents the theoretical foundations of the work. In the third section the methodological issues include a description of the sample, variables, and the regression model applied. Section fourth presents the results as well as some comments and discussion. The final section, draws some conclusions from the results and points out to some future research directions.

Literature review

Agency theory

The importance of corporate mechanisms and its implications for the company has been widely studied in economic theory. One of the main theories that study formally this relationship is the agency theory, which establishes the existence of interest conflict between owners and managers (principal and agent problem). Ross (1973) defines an agency relationship as a link between two or more parts, one designated as the "agent", acting as the representative of the other, named the "principal". However, monitoring and controlling the agent is expensive as the agent can engage in decision making and behaviors that may be inconsistent with maximizing shareholder wealth (Daily et al., 2003). Thus, owners have as their main objective profits maximization, but due to incomplete information they cannot make contracts that allow them to eliminate the managerial discretion (Jensen and Meckling, 1976). It also creates information asymmetries that make it possible for agents to engage in activities that, if left unchecked, would threaten firm performance and may ultimately harm the welfare of owners and agents alike. Information asymmetries and incentives therefore combine and pose a moral hazard to principals, which owners can reduce by monitoring agents conduct, gaining access to their firms' internal information, and providing incentives that encourage agents to act in the owners' best interests (Schulze et al., 2001). In this sense, the separation between ownership and control has as a main challenge to avoid possible opportunistic behavior of managers that tends to reduce the firm value. In this respect, the literature on corporate governance emphasizes the mechanisms available to protect investors' rights (Shleifer and Vishny, 1997).

A usual classification scheme makes a difference between external and internal control mechanisms. Whereas the market for corporate control is widely known as being the most outstanding external mechanism (Jensen, 1986), there is a number of possible internal mechanisms such as ownership structure and board that have been proved to discipline managers (Jensen, 1993).

Ownership structure: family firms

The widely dispersed ownership among small shareholders of the modern firm was first approached by Berle and Means (1932). According to them, equity ownership is separated from the day-to-day operation of the corporation, resulting in a conflict of interest between shareholders and managers. However, the fundamental agency problem for listed companies in emerging economies is a conflict of interest between controlling and minority shareholders (Shleifer and Vishny, 1997). The study of La Porta et al. (1999) is the first one to examine the issue of ultimate controlling shareholders and finds, in contrast to the argument of Berle and Means (1932), that relatively few firms are widely held in countries with poor shareholder protection. La Porta et al. (1999) document that corporate ownership tends to be more concentrated and agency problems tend to be more severe in countries with weaker investor protection, which can be seen in emerging markets such as Mexico. Babatz (1997), Husted and Serrano (2002), and Castañeda (2000) extend on La Porta et al. (1999) to investigate the issue of ultimate controlling shareholders in Mexico, because managers of Mexican corporations are usually related to the family of the controlling shareholder. They document that Mexican companies present a higher ownership concentration and many firms are directly or indirectly controlled by one of the numerous industrial conglomerates. A conglomerate is a group of firms linked to each other through ownership relations and controlled by a local family or a small group of investors. Usually, conglomerates are controlled by the dominant shareholders through relatively complex structures including the use of pyramids, cross-holdings and dual class shares[1]. We extend this strand of research to examine deeply the

1 Usually, class A shares convey a full voting rights and are tightly held by the controlling family. Most traded stocks have limits regarding voting rights and are held by the minority shareholders (Castañeda, 2000).

corporate governance role of controlling shareholders in Mexico by investigating the positive (convergence of interest) or negative (entrenchment) effects of controlling shareholders (families) on the relation between the investment opportunity set and the firm value.

The convergence of interest hypothesis refers to the argument that controlling shareholders exert greater monitoring on management, reduce agency conflicts, and maximize firm value (e.g., Demsetz and Lehn, 1985; Shleifer and Vishny, 1997). Accordingly, family firms can provide several benefits. Jensen and Meckling (1976) show that the control of the property can be advantageous as family firms will take long-term profitable projects because they want the company to persist in time and to be inherited by family members. James (1999) argues that families have a longer investment horizon and achieve greater efficiency, while Stein (1988, 1989) finds that firms with longer investment horizons are less myopic, maximizing long-term profits. Demsetz and Lehn (1985) show that family firms with high ownership concentration have a lower cost of supervision due to lower agency costs, achieve greater efficiency and maximize the value of the company. In addition, authors such as Jensen (1986) and Stiglitz (1985) argue that by means of a high ownership concentration firms are able to discipline managers and prevent inefficient use of free cash flow.

In contrast, the combination of ownership and control in a family can generate an excessive role by the owner through its leadership, which can lead to problems of management entrenchment. For example, the use of pyramidal groups and cross-holdings makes it easier for controlling shareholders to separate ownership and control, and makes difficult for minority shareholders to detect actions that benefit the controlling shareholders (Fama and Jensen, 1983, Shleifer and Vishny, 1997). Private ownership, and particularly the family business, increases the problem because property rights and formal authority are combined with family status and resistance to new changes in the company, which increases the risk of entrenchment of managers. Moreover, an excessive concentrated ownership (in families) can produce adverse consequences since it can become an obstacle when the firm faces profitable growth opportunities demanding a specialized ownership and control (Burkart et al., 1997). Hence, ownership concentration may originate two possible effects: on the one hand, it reduces agency problems by enhancing a more in-depth control and, on the other hand, it could prevent exploiting growth opportunities (De Andres et al., 2005; Gopalan and Jayaraman, 2011). Thus, the core issue is to predict a relation between family ownership and performance when the firm has or does not have growth opportunities.

Board of directors, leverage and growth opportunities

It is common for firms outside the U.S. to be controlled by insiders, typically a family, financial institution, or the government (La Porta et al., 1998). These insiders usually have concentrated ownership stakes and enjoy control rights far in excess of their cash flow rights. Such disproportionate control, in conjunction with lack of intervention from outside shareholders or a market for corporate control, affords insiders significant autonomy over firm decisions even though their ownership stakes are small. In many instances, firm's managers are also associated with the controlling entity. This provides insiders added opportunities to expropriate outside shareholders through the firm's operating and financing decisions (Lins, 2003; Leuz et al., 2009). Prior research provides evidence on how governance mechanisms are designed to motivate managers to make choices leading to the creation of value in the company. In this sense, there exists a large literature that shows a correlation between internal mechanisms of government and performance (Jensen and Murphy, 1990; Morck et al., 1988; Yermack, 1996; Gompers et al., 2003; Castrillo and San Martín, 2007). These mechanisms proposed in the literature include design elements which are held by the companies themselves, such as board of directors and debt.

The board of directors is considered an intermediate entity between owners and managers whose members are elected by the first to monitor and limit the decision freedom of the second. There are a number of empirical studies that explore the relationship of various aspects of the director board with the firm value. The central part of this paper is to analyze the effectiveness of the board as a supervisor of the process of maximizing firm value. Most of the empirical evidence shows a negative relationship between board size and performance. In this sense, authors such as Eisenberg et al., (1998); Jensen (1993); Yermack (1996); Fernández et al. (1998); Azofra et al. (2005); Mak and Kusnadi (2005), and San Martín (2010) find that smaller boards are positively related to a high value of the company.

Board's composition plays an important role. The advantages brought by external directors in widely held firms are clear (Schulze et al., 2001), as they are better able to monitor firm performance, oversee discipline, or even dismiss managers when they are not beholden to the firm (Finkelstein and D'Aveni 1994; Lin 1996; Walsh and Seward, 1990). They also bring needed expertise and perspective to boards which might otherwise lack these skills (Finkelstein and Hambrick, 1996). Despite the advantages of outside directors, family firms are less likely to use them. First, outsiders almost never attain the status of large-block ownership that they sometimes do in widely held firms, and they are likely to be less motivated than family directors (Alderfer, 1988). Second, while their ''impartial'' status can enhance their ability to offer advice on some decisions, they have little influence on decisions involving family members or other family matters (Nelsen and Frishkoff, 1991). Therefore, outside directors can be limited in their advising role (for example, exploit efficiently the projects when the firm faces profitable growth opportunities), mainly by high levels of ownership concentration in family firms (Rubenson and Gupta, 1996). Consequently, we anticipate important effects associated with family businesses and the composition of their boards of directors.

Finally, the last theme highlighted is financial leverage and the role that debt structure plays both in the presence and in the absence of profitable projects. In presence of growth opportunities the underinvestment problem is likely to arise

(Myers, 1977). It is widely known that the underinvestment problem stresses the shortcoming of excessive debt financing in the presence of growth opportunities since too much debt can prevent managers from undertaking positive NPV projects. If this is the case, under the pressure of high financial leverage ratios managers acting on behalf of the shareholders may forgo some profitable projects. Following De Andres et al. (2005), the rationality underlying this fact is the priority that debtors have over firm cash flows in comparison to shareholders. If debt holders are the first claimholders, managers do not find it worthwhile undertaking investment projects whose cash flows will not be perceived by company owners but by creditors. As Myers (1977) and McConnell and Servaes (1995) argue, the higher the growth opportunities are set, the lower the leverage rate should be, therefore we expect a negative relationship between debt and firm value in presence of growth opportunities.

On the other hand, the managers prefer self-financing rather than undertaking new issues of equity or debt, they do not want to be reviewed by the capital markets or increase the likelihood of insolvency in the company, while shareholders prefer not to retain cash flow and distribute it as dividends. Therefore the distribution of free cash flow can generate confrontations between managers and owners and lead to an overinvestment problem emphasized by Jensen's theory of free cash flow (1986). Jensen (1986) stated that if free cash flow in a company is not used or invested to maximize or to balance the best interest of shareholders, then it raises agency problems. The manager may choose to invest in an unprofitable project due to his or her self interest. As a result, the company may be in the position of low growth. This overinvestment view emphasizes the negative consequences of too much cash flow under the discretionary control of managers. Thus, a way to safeguard the value of the firm is to issue debt, so that managers lose control over free cash flow (Grossman and Hart, 1982; Jensen, 1986; Harris and Raviv, 1991; De Andres et al., 2005; Castrillo et al., 2010; San-Martin and Duran-Encalada, 2012). This overinvestment view applies when the firm has no growth opportunities, and is closely related to the free cash flow situation (Jensen, 1986 and 1993; Lang et al., 1996; Smith and Watts, 1992; McConnell and Servaes, 1995; Singh and Faircloth, 2005). According to this view, a positive relation exists between debt and performance when the firm has no growth opportunities since the higher the leverage the more in-depth is the control undertaken by lenders (Lima and López, 2010).

Mexican context and institutional framework

The framework has been broadened with the "Law and Finance approach" (La Porta et al., 1997, 1998, 1999, and 2000). Following these authors, it is logical enough to suppose that the system of corporate governance of a particular country and the predominance of certain supervisory mechanisms over others, whether of an internal or external nature, would be strongly influenced by the institutional framework of the country. This is a view confirmed by works such as Roe (2000), Francis et al. (2001), Denis and McConnell, (2003), within the line of research initiated by Rajan and Zingales

(1995) and La Porta et al. (1997, 1998, 2000, 2002), which highlights the differences between the international economic environments as well as the relevance of the institutional framework on the decision making process within the firm. The conflict between managers and shareholders differs from one country to another and might not prove worthwhile to use the same tools to solve it. As it has been shown (Becht and Röell, 1999; Bianco and Casavola, 1999; La Porta et al., 1997, 1998, 2000, 2002; Roe, 2000; Francis et al., 2001; Denis and McConnell, 2003; and San Martín, 2010), the relationship between large controlling shareholders and weak minority shareholders is an important issue in these countries. Mexico belongs to the French tradition of the civil-law countries. In these nations shareholders' rights are not sufficiently protected, and the concentration of the ownership in the hands of large block-holders (mainly families) arises to shield shareholders' interests (Khanna and Palepu, 1999; La Porta et al., 1999; Barca and Becht, 2001; Facio and Lang 2002).

Thus, the institutional environment in which the corporation operates can affect its investment opportunity set (Smith and Watts, 1992), and consequently can have an impact on the relation between firms' investment opportunities and performance, the issue examined in this paper. We believe that the institutional environment in Mexico provides an ideal setting for examining the corporate governance role of controlling shareholders between the investment opportunities set and firm value for the following reasons. La Porta et al., (1998, 1999, 2000) document that corporate ownership tends to be more concentrated and agency problems tend to be more severe in countries with a weaker investor protection, as can be seen in emerging markets such as Mexico.

In Mexico families play an essential role in defining the corporate governance practices. Analytically, the predominance of family corporate structure has been explained in terms of conflict theory, assuming a framework to protect inefficient property rights (Castillo-Ponce, 2007). In this context, the choice of maintaining the company in the hands of the family is a rational decision; this choice represents the strategy to increase family's share value.

The most dominant companies in Mexico, regardless of size, are owned and managed by one or more families, usually descendants of the founding family. This creates some difficulties for gaining access to information on ownership and control structures of the companies[2]. Despite these difficulties, it is clear that two main features characterize the ownership and control structures of most companies in Mexico. First, these companies present a much higher ownership concentration, and second, many firms are directly or indirectly controlled by one of the numerous financial and/or industrial conglomerates. A conglomerate is a group of firms linked to each other through ownership relations and controlled by a local family, or a small group of investors. Usually, conglomerates are

2 Accessibility was drastically improved in 2002 when the annual reports of listed companies, which are submitted to the National Banking and Securities Commission (in Spanish Comisión Nacional Bancaria y de Valores, CNBV) of Federal Government , begin to be placed on the web page of the Mexican Stock Exchange (in Spanish, Bolsa Mexicana de Valores, BMV).

controlled by the dominant shareholders through relatively complex structures, including the use of pyramids, cross-holdings and dual class shares[3].

High ownership concentration and conglomerate structures also have an important effect on the board room composition. Most board members in Mexican companies are related to controlling shareholders through family ties, friendship, business relationships, and labor contracts. Babatz, (1997), and Husted and Serrano, (2002) show that 53 percent of directors or executive seniors are also directors of other companies of the same group, or are relatives to companies' executives. According to Castañeda (2000), in most Mexican firms the president of the board is usually the main stockholder and the CEO, and therefore he or she practically does not have opposition from independents board members. On average, only 20 percent of the firms present a majority of external members on the board and this fact does not necessarily mean independence, since they could be related to another company of the same business group[4]. Our data follows this pattern, as we can see in panel A and B of Table 1, only 40.54 percent of the companies show a majority of independent directors. In addition, in 40 percent of the companies the CEO is also the chairman of the board. As we can see, the companies´ board composition in Mexico is very peculiar because this country has a high ownership concentration. In Mexico, a company is usually defined as a family firm when the founder or family member holds more than 40 percent of the company's property, unlike other countries' studies criteria, where to classify as a family company depends on whether the founder holds more than 20 or 30 percent of the property or the CEO is a member of the firm.

Table 1. Descriptive Data for Board and CEO of the 83 Listed Firms Sample

Panel A: Percentage of companies whose CEO is chairman or not of the board.		
2005 to 2009	**Percentage**	**Total**
CEO- Chairman	40	36
CEO-Non Chairman	60	54
TOTAL	100	90

Panel B: Classified by number of directors: Shareholder, Independent and Related.	
2005 to 2009	**Percentage**
SHR	46.32
IND	40.54
REL	12.95
Members of the family on the board	23.29

Panel A presents the breakdown of those companies where the CEO holds or not the role of the chairman. Panel B presents data for the boards' breakdown classified by Shareholder, Independent and Related [5].
Source: Mexican Stock Exchange classification, 2005-2019 annual reports.

3 Usually, class A shares convey a full voting rights and are tightly held by the controlling family. Most traded stocks have limits regarding voting rights and are held by the minority shareholders (Castañeda, 2000).

4 Besides, on average, 35.2% belong to the president family and around 57% of board members are employees or relatives of the president.

5 The shareholder director is the one chosen based on their character as significant shareholder. Independent directors are persons who are not linked with the management team of the company and meet the requirements of the code of best corporate practices. Related director is one who is not in any of the cases listed in the definitions of independent or shareholder.

Methodology

The sample and data collection

The sample includes the total number of the companies listed in the Mexican Stock Exchange for the period 2005-2011. Out of 132 listed companies, non-profit companies, companies that do not include enough information in their financial statements, as well as financial institutions, were excluded. The latter are not comparable to other industries and there are some difficulties in calculating Tobin's Q for banks. We were thus left with 83 companies. We obtained the annual reports and financial indicators from Economatica, and Isi Emerging Markets. Information about industrial sector was obtained from company annual reports published by the Mexican Stock Exchange on its website. Table 2 shows the companies that make our sample, according the sectors to which they belong.

Table 2. Number and Percentage of Family and Non-Family Firms by Sector

Sector	Number	Percentage
Materials	16	19.3
Industrial	22	26.5
Services and non-basic consumer goods	16	19.3
Common consumer products	18	21.7
Health	4	4.8
Telecommunications services	7	8.4
Total	83	100.0

Source: Mexican Stock Exchange classification code, 2011.

Certainly, the companies in the sample are basically medium to large companies compared with the average Mexican firm size either in terms of assets, sales or employees. This could raise some caveats about a possible sample bias, however, descriptive statistics in Panel A of Table 3 shows that firm size (in terms of assets) is quite heterogeneous and highly dispersed around the mean value, so it can be assumed that the results are not biased by size issues. The sample composition is quite industry-balanced, although there is a slight bias towards industries and consumer products firms at the expense of health or telecommunications companies that can be explained by the heavier concentration of the former in the Mexican market.

A key aspect of our study is the identification of the availability of growth opportunities, where the choice of how to measure this becomes crucial issue. The price-earnings ratio[6] (PER) has been chosen. This is obtained by dividing equity market value by net income. There is a general agreement that this variable is a good indicator of future growth opportunities by incorporating the market point of view on the firm ability to generate cash flows in the future (Smith

6 Some authors use other variables as the market equity value to total asset ratio (Lasfer, 1995), the market asset value to cash flow ratio (Smith and Watts, 1992) or sales rate of growth (McConnell and Servaes, 1995; La Porta et al., 2000). This last variable will be used later as a sorting variable in order to test the robustness of the results.

and Watts, 1992; Lang and Stuz, 1994; Berger and Ofek, 1995). PER is positively related to growth opportunities, so that, the higher the PER the higher the impact of growth opportunities on firm value (Chung and Charoenwong, 1991). As a consequence, the sample was split into two sub-samples (firms with or without profitable growth opportunities) according to McConnell and Servaes (1995). The sample was first divided into three groups as a function of the PER value. Those companies in the upper third are certain to have more growth opportunities, while those in the lower third could be quite reasonably characterized by the lack of valuable projects. This work uses another one additional measure of growth opportunities, the sales rate of growth (McConnell and Servaes, 1995; La Porta et al., 2000), as explained later.

Performance is measured using Tobin's Q ratios (Q) or the asset market-to-book ratio. The remaining of corporate governance variables are debt (DEBT), family ownership percentage (FAMOWN)[7], ownership concentration measured also by the ownership of the three largest shareholders (OWN3), and the size (BSIZE) and composition of the board as represented by the percentage of independent (IND) and shareholders (SHA) directors. In addition to the aforementioned variables, we include some control variables in order to embody some additional determinants of the performance. Based on what has been done in previous works, (De Andres et al., 2005; Delgado, 2003; Wang, 2006; Warfield et al., 1995; De Andres et al., 2004), we have included the firm size measured by assets that, to some extent, proxies the problems stemming from asymmetric information (Devereux and Schiantarelli, 1990). Descriptive statistics for the sample and for the sub-samples are shown in Panel A and B of Table 3.

Table 3. Sample Descriptive Data

Panel A: Total Sample				
Variables	**Mean**	**Std. Dev.**	**Min**	**Max**
Q	1.47	1.04	0.25	6.97
DEBT	0.43	0.20	0.01	1.23
FAMOWN	55.29	22.06	0	1
OWN3	64.56	24.11	0.02	1
BSIZE	11.59	3.66	5	20
IND	4.16	2.39	0	11
SHA	5.21	2.40	3	14
Assets	41028	90674	153	945616

7 The most dominant companies in Mexico (regardless of size) are owned and managed by one or more families or descendants of the founding family (San Martín and Duran-Encalada, 2012).

Panel B: Sub-samples divided by Growth Opportunities								
	PER				PER			
	Low Growth				High Growth			
Variables	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Q	1.24	0.701	0.379	4.803	1.44	0.64	0.25	3.15
DEBT	0.508	0.223	0.109	1.233	0.403	0.199	0.015	0.842
FAMOWN	0.575	0.206	0.095	0.978	0.576	0.223	0.000	0.910
OWN3	64.81	26.30	0.05	1	67.46	22.32	0.116	1
BSIZE	11.760	3.705	5	20	11.37	3.959	5	20
IND	4.5	2.008	0	9	5.959	2.910	1	11
SHA	7.076	1.958	2	12	5.013	2.679	0	10
Assets	31280	47428	237	264030	33769	50554	153	274704

Source: Mexican Stock Exchange for the period 2005-2011.

As stated before, the sample contains data of 83 firms with seven year observations in each originating in a panel data with 581 observations. Given the aim of the study, the panel data methodology seems to be the most accurate (Arellano and Bover, 1990; Arellano, 1993). The fixed-effects term is unobservable, and hence becomes part of the random component in the estimated model. It is quite convincing that each one of the firms in the sample has its own specificity (e.g., the way it is run by the managers, the impression it makes to the market, the way it generates growth opportunities, etc.). This specificity is different from a company to company and it is almost certain to be kept throughout the study period. A pooling analysis of all the companies without noticing these peculiar characteristics could cause an omission bias and distort the results. The random error term εit controls both, the error in the measurement of the variables and the omission of some relevant explanatory variables. With regard to the basic model to be estimated, a multivariate regression model was built including the previously cited variables. We use Tobin´s Q (Q) as the performance measure and regress it on two models, according to the alternative ways to measure property concentration: FAMOWN and OWN3. In the models we use the natural logarithms of board size and firm size, LBSIZE and LTA, respectively. These are shown as follows:

$$Q = \beta + \beta_1 DEBT_{it} + \beta_2 FAMOWN_{it} + \beta_3 LBSIZE_{it} + \beta_4 IND_{it} + \beta_5 SHA_{it} + \beta_6 LTA_{it} + \varepsilon_{it} \qquad \text{Model 1}$$
$$Q = \beta + \beta_1 DEBT_{it} + \beta_2 OWN3_{it} + \beta_3 LBSIZE_{it} + \beta_4 IND_{it} + \beta_5 SHA_{it} + \beta_6 LTA_{it} + \varepsilon_{it} \qquad \text{Model 2}$$

Where *i* refers to the firms and *t* to the year (*i* =1….83; t=1….7).

Discussion

Regression Analysis

The results of the panel data estimation are displayed in Table 4. Model one measures family ownership by using FAMOWN while model two considers as an alternative measure OWN3. The Hausman test reveals the importance of the fixed effect component, so that within groups estimation method becomes necessary in order to deal with the constant unobservable heterogeneity.

Table 4. Results of estimations based on PER

Model 1

	Panel A: Presence of Growth Opportunities with PER			Panel B: Absence of Growth Opportunities with PER		
add	Coefficient	t-statistic	P-value	Coefficient	t-statistic	P-value
DEBT	-0.4799606	-2.05	[0.042]	0.675333	2.33	[0.021]
FAMOWN	-0.4705819	-1.20	[0.232]	0.7986329	2.14	[0.039]
LBSIZE	-2.601172	-2.50	[0.013]	-0.532537	-1.70	[0.092]
IND	0.4760229	2.24	[0.026]	0.306753	0.71	[0.476]
SHA	-0.3669473	-3.20	[0.002]	0.032822	1.77	[0.079]
LAT	0.1281382	0.87	[0.383]	-0.09893	-0.93	[0.351]
_cons	0.9236327	0.58	[0.396]	0.317440	2.73	[0.007]
R-squared	0.21			0.17		
Hausman Test	47.03		[0.000]	25.72		[0.000]

Model 2

	Panel A: Presence of Growth Opportunities with PER			Panel B: Absence of Growth Opportunities with PER		
add	Coefficient	t-statistic	P-value	Coefficient	t-statistic	P-value
DEBT	-0.4518110	-1.92	[0.057]	0.7157122	2.46	[0.015]
OWN3	-0.2745623	-1.58	[0.115]	0.3194998	2.71	[0.007]
LBSIZE	-2.5966410	-2.49	[0.014]	-0.5837899	-1.74	[0.084]
IND	0.4529111	2.10	[0.037]	0.2152203	0.50	[0.617]
SHA	-0.3598032	-3.12	[0.002]	0.0429041	1.23	[0.220]
LAT	0.1402697	0.94	[0.351]	-0.1740820	-1.09	[0.279]
_cons	0.9548920	0.99	[0.324]	0.4860170	2.71	[0.008]
R-squared	0.19			0.17		
Hausman Test	46.21		[0.000]	29.78		[0.001]

These results confirm the hypothesis about the influence of leverage, board of directors, and ownership structure on value creation. First, the financial leverage ratios are significant in all the estimations, although its role is quite different depending on the existence or the absence of growth opportunities. When firms do not have profitable projects (Panel B, Table 4), the DEBT positive sign suggests the debt contribution to increase the company value by disciplining managers, reducing the free cash flow problem (Jensen, 1986). On the other hand, DEBT coefficient becomes negative in firms with high growth opportunities (Panel A, Table 4), emphasizing the negative impact that debt can have on performance when firms face growth opportunities. These findings suggest, first, that the free cash flow problems in absence of growth opportunities are controlled, in part, by the degree of obligation to comply with the clauses that debt contracts impose on manager discretion and, second, the importance of the problems of underinvestment that debt can generate in firms with more investment opportunities and greater access to positive net present value projects (Gaver and Gaver, 1993; Smith and Watts, 1992; De Andres et al., 2004; De Andres et al., 2005). Our result could be understood as the important role that debt plays over performance that is different when the firm has or does not have growth opportunities.

Concerning the family ownership structure variable, this has a different impact in both sub-samples, although it only comes out significant when firms do not have growth opportunities. The family ownership has a positive influence on performance in firms without growth opportunities and negative relationship with Tobin´s Q in the presence of growth opportunities. This result is consistent with the previous literature and demonstrates again the existence of some agency problems inside the companies and suggests a combination of alignment and entrenchment effects (Morck et al., 1988). In the face of absence growth opportunities, a majority control in families seems to increase the performance. However, when we consider only firms with growth opportunities the relationship becomes negative, indicating a decrease in the firm value in family firms, even though there this relationship is not statistically significant. The explanation that might be attributed to this dissimilar behaviour of ownership structure in different institutional frameworks might be related to agency problems and information asymmetries that differ in accordance with the firm's institutional environment. As we have seen in the case of Mexico, ownership structure is highly concentrated in families and this plays a fundamental role as control mechanism.

In the absence of growth opportunities, the ownership and control structure (FAMOWN) play an important role in reducing the agency problems. In this case, ownership concentration becomes necessary because in absence of investment opportunities, the family ownership acts as a disciplining mechanism of behavior management. This result shows that in Mexican firms, an increase in ownership concentration is a factor associated with better performance. This argument goes along with the traditional assumption that ownership concentration in families provide closer supervision on the manager, based on the idea that when managers are faced with low investment opportunities they might be tempted to act opportunistically. In this case high levels of ownership can compensate the reduced levels of investor protection that exist in the Mexican institutional framework. However, when we talk about firms with growth opportunities, the combination of ownership and control seems to be disadvantageous, because this combination can generate an excessive role by the owner through its leadership, deteriorating shareholders' wealth. Furthermore, the existence of family control on the ownership structure of companies with growth opportunities could lead, to some extent, to wasting these opportunities (Carlin and Mayer, 1998; De Andres et al., 2005). The results in model two, using OWN3, are similar to those in model one.

Another variable, the board size (LBSIZE), presents a negative relationship with the performance when the firm has or does not have significant cash flows (presence or absence of growth opportunities). It was observed that small boards of directors, in absence or presence of growth opportunities, contribute in a significant way to increase the performance. This leads us to conclude that the possible benefits of greater supervision over the management by numerous board members are outweighed by the problems of coordination and information that can arise in the decision-making process (Jensen, 1993; Yermarck, 1996; Azofra and López 2005, San Martín, 2010). When we focus on independent board members (IND), our results show a positive relation between independent members and performance (with or without growth opportunities), but the variable is significant only in the sub-sample of firms with growth opportunities. Its positive correlation with firm value represents the convergence of independent directors and shareholders' interest. The independent corporate boards are associated with better performance for firms with growth opportunities, because the presence of independent directors on the board allows the firm to exploit projects with positive net present value (growth opportunities), given their professional background and experience.

However, the shareholders board members (SHA) show a positive and significant relationship with performance only for firms without growth opportunities, indicating that high number of shareholders in the board improve the firm performance by high supervision on managers. Nevertheless, the sign of the variable depends on the growth opportunities availability. The results confirm this dual behavior, when companies have growth opportunities shareholders are significant and negatively related to firm value. Nevertheless, when the firms have growth opportunities, a larger number of shareholder directors on the board could hinder the decision making process, especially because in the Mexican market the majority of such directors are part of a controlling family, and usually they have close relationships with the managers, and they do not represent any opposition to managers' decisions. This lack of professionalism that independent directors might exercise in the decision-making process, could impact negatively on the firm performance when the companies face profitable investment projects. Thus, the influence of shareholders directors is not the same when the firm has or does not have growth opportunities. In firms without profitable projects, the shareholder directors will help in the value creation process, however, when the company faces profitable investment projects their role seems to "relax". This finding could explain the constant ups and downs of business in the Mexican market.

Finally, with respect to the control variable size (LTA), this has a positive coefficient from firms with high-growth opportunities and negative in firms without growth opportunities, but do not have any significant effect in each one of the subsamples.

One of the study's concerns is to know whether the results that have been obtained are contingent upon the specification of the model. In order to assess the robustness of the results to alternative specification and variable measurements a sensitivity analysis is added consisting of an alternative identification of growth opportunities. In this case, we decided to measure growth opportunities according to the sales rate of growth -SRGR- (McConnell and Servaes, 1995; La Porta et al., 2000; De Andres et al., 2005). Again, we divided the whole sample into three and then two sub-samples considering their growth opportunities, and regress Tobin's Q (Q) on the variables, considering the alternative measures of ownership concentration (FAMOWN and OWN3). Results are shown in Table 5.

Table 5. Results of estimations based on SRGR

Model 1

Panel A: Presence of Growth Opportunities with SRGR				Panel B: Absence of Growth Opportunities with SRGR		
Variables	**Coefficient**	**t-statistic**	**P-value**	**Coefficient**	**t-statistic**	**P-value**
DEBT	-0.6942499	-3.07	[0.003]	0.3520154	2.39	[0.018]
FAMOWN	-0.4963814	-1.05	[0.293]	0.3186631	1.74	[0.084]
LBSIZE	-1.736012	-2.07	[0.040]	-0.6084392	-1.69	[0.094]
IND	0.1447820	2.10	[0.038]	0.1545861	0.67	[0.503]
SHA	-0.1690060	-1.91	[0.057]	0.1623779	0.98	[0.329]
LAT	0.1847002	1.36	[0.175]	-0.4330879	-1.09	[0.277]
_cons	0.726875	0.84	[0.402]	0.552369	0.34	[0.737]
R-squared	0.26			0.14		
Hausman Test	62.78		[0.000]	28.90		[0.001]

Model 2

Panel A: Presence of Growth Opportunities with PER				Panel B: Absence of Growth Opportunities with PER		
Variables	**Coefficient**	**t-statistic**	**P-value**	**Coefficient**	**t-statistic**	**P-value**
DEBT	-0.6375161	-2.89	[0.004]	0.3945149	2.59	[0.011]
OWN3	-0.4646074	-0.31	[0.753]	0.4683410	2.93	[0.004]
LBSIZE	-1.8230910	-2.17	[0.032]	-0.5699796	-1.80	[0.074]
IND	0.1579396	2.32	[0.022]	0.2226424	0.95	[0.344]
SHA	-0.1752790	-1.97	[0.050]	0.2171965	0.92	[0.360]
LAT	0.1880925	1.38	[0.168]	-0.4559408	-1.15	[0.252]
_cons	0.7794470	1.38	[0.168]	0.4251042	0.09	[0.928]
R-squared	0.23			0.14		
Hausman Test	66.35		[0.000]	39.28		[0.000]

Table 5 reports the results, and these are consistent with the previous ones: debt reduces the performance in firms with growth opportunities but increases the firm value in firms without growth opportunities. Family ownership is negatively associated with the performance, but in low-growth firms a positive relation exists between firm performance and family ownership concentration. In addition, independent corporate boards have a negative coefficient in all model specifications and have a statistical significant relationship with firm performance. Results show that the presence of a larger number of independent members in the board has benefited the company in firms with presence of growth opportunities. Results also show that the presence of a large number of shareholders in the board can lead to entrenchment problems given the high ownership concentration.

Conclusions

Research about the relationship between corporate mechanisms and performance begins with the work of Berle and Means (1932). Traditionally mechanisms as ownership structure, debt and board structure arise as different factors affecting those opportunities' utilization. Essentially, these mechanisms try to give managers the incentive to efficiently use firm cash flows and to impede wasteful uses. Our research differs from prior studies which investigate the relation between corporate governance characteristics and performance by incorporating the role of growth opportunities, a prevailing institutional factor in Mexico, because the extent to which corporate governance controls can provide effective monitoring is likely to be conditioned on a firm's production-investment attributes characterized as the mix of assets-in-place versus growth options (Andersen et al., 1993).

The results show that ownership structure, leverage and board of directors affect the firm value as well as the type of influence depends on the presence or absence of investment opportunities. Family ownership, composition of board and leverage play a dual role: increase the performance when there are no investments projects, but impact negatively in presence of growth opportunities. Family ownership, for example, helps to create value by disciplining managers in those companies without growth opportunities, while it has a negative effect in those firms with investment opportunities due to the propensity to wasting profitable projects. The reason is because the combination of ownership and control can generate an excessive role by the owner through its entrenchment, deteriorating shareholders' wealth.

In short, our results confirm the relationship between ownership structure, board of directors, leverage, growth opportunities and performance. We find a positive relation between family control and performance in firms without growth opportunities and this relation will be moderated by corporate mechanisms when the companies have access to positive NPV projects. In this sense, when we focus on the control aspects of proprietary directors on the boards and debt, we find that they provide effective oversight function but only from firms with absence of growth opportunities.

The results achieved are consistent with those obtained by a number of authors from other countries. Some future research directions can be pointed out. One of these has to do with the interaction of different corporate mechanisms issue, mainly related to the particular institutional country context. These efforts will surely open new avenues in research on corporate governance, since it has been shown that the mechanisms of government are not independent. The authors would also like to consider a broader time analysis, able to reveal how governance mechanisms can affect the earnings management in companies over time. In this way, models with a larger database could incorporate temporal effects in the estimation, which would give us a broader view of the results and the causality relationship among some of the most significant variables.

References

Andersen, D., Francis, J. and Stokes, D. (1993). Auditing, directorships and the demand for monitoring. *Journal of Accounting and Public Policy*, 12 (4), 353-375.

Andres, P., Azofra, V. and Rodríguez, J. A. (2000). Endeudamiento, oportunidades de crecimiento y estructura contractual: Un contraste empírico para el caso español. *Investigaciones Económicas*, 24(3), 641-79.

Anderson, R. and Reeb, D. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301-1328.

Arellano, M. and Bover, O. (1990). La econometría de datos de panel. *Investigaciones Económicas (Segunda época)*, 14(1), 3-45.

Arellano, M. (1993). *Introducción al análisis econométrico con datos de panel, La industria y el comportamiento de las empresas españolas. Ensayos en homenaje a Gonzalo Mato*. Alianza Editorial, Madrid, 23-47.

Azofra, V., Andrés de, P. y López, F. (2005). Corporate Boards in OECD Countries: Size, Composition, Functioning and Effectiveness. Corporate Governance: An International Review, 13(2), 197-210.

Barca, F., and Becht, M. (2001). *The Control of Corporate Europe*. Oxford University Press.

Babatz, G. (1997). *Agency Problems, Ownership Structure, and Voting Structure under Lax Corporate Governance Rules: The Case of Mexico*. Ph.D. thesis; Harvard University.

Becht, B. and Röell, A. (1999). Corporate governance in Europe, blockholdings in Europe: an international comparison. *European Economic Review*, 43, 1049-56.

Becht, M., Bolton, P. and Roell, A. (2002). *Corporate governance and control*. National Bureau of Economic Research [NBER], Working Paper No. 9371.

Available at http://papers.ssrn.com/so13/papers.cfm?abstract_id=343461

Bianco M. and Casavola P. (1999). Italian Corporate Governance: Effects on Financial Structure and Firm Performance. *European Economics Review*, 43, 1057-69.

Berger, P.G. and Ofek, E. (1995). Diversification's effect on the firm value. Journal of Financial Economics, 37, 39-65.

Berle, A. and Means, G. (1932). The Modern Corporation and Private Property. Commerce Clearing House, New York, NY.

Bukit, R.B. and Iskandar, T.M. (2009). Surplus Free Cash Flow, Earnings Management and Audit Committee. Int. *Journal of Economics and Management*, 3(1), 204-223.

Bushman, R.M. and Smith, A.J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32, 237-333.

Castañeda, G. (2000). Governance of large corporations in Mexico and productivity implications. ABANTE. *Studies in Business Management*, 3(1), 57-89.

Castillo-Ponce, R. (2007). Entre familia y amigos: La elección de la estructura de propiedad corporativa. *Estudios Económicos*, 22, 3-18.

Castrillo, L.A. and San Martín-Reyna, J.M. (2007). La propiedad familiar como mecanismo disciplinador de la dirección en las empresas mexicanas: Una evidencia empírica. *Contaduría y Administración*, 222, 59-82.

Castrillo, L.A.; Marcos, S. and San Martín-Reyna, J.M. (2010). Corporate governance, legal investor protection, and performance in Spain and the United Kingdom. *Corporate Ownership and Control Journal*, 7(3), 416-429.

Chen, K.Y. and Liu, J.L. (2010). Earnings management, CEO domination, and growth opportunities –Evidence from Taiwan. *International Journal of Public Information Systems*, 1, 43-69.

Chen, K.Y., Elder R.J. and Hung, S. (2010). The investment opportunity set and earnings management: Evidence from the role of controlling shareholders. *Corporate Governance: An International Review*, 18(3), 193–211.

Chung, K. and Charoenwong, C. (1991). Investment options, assets in place, and the risk of stocks. *Financial Management*, 20, 21-33.

Chung, R., Firth, M. and Kim, J.B. (2005). Earnings Management, Surplus Free Cash Flow, and External Monitoring. *Journal of Business Research*, 58, 766 –776.

Claessens, S., Djankov, S. and Lang, L. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58, 81-112.

Claessens, S., Djankov, S., Fan, J. and Lang, L. (2002). Disentangling the incentive and entrenchment effects of large shareholders. *Journal of Finance*, 57, 2741–2771.

De Andres, P.A., López, F.J. and Juan Rodríguez, A. (2005). Financial decisions and growth opportunities: a Spanish firm's panel data analysis. *Applied Financial Economics*, 15, 391-407.

De Andrés, P.A., San Martín, P.M., y Saona, P.H. (2004). Decisiones Financieras en la Empresa Chilena: Una Mirada a través de las Oportunidades de Crecimiento. *Revista Abante*, 7(1), 3-34.

Delgado, M.M. (2003). Factores determinantes de la discrecionalidad contable: Una aplicación empírica a las empresas cotizadas españolas. Servicio de Publicaciones de la Universidad de Burgos, Burgos.

Demsetz, H. and Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economics*, 93, 1155-1177.

Denis, D.K. and McConnell, J.J. (2003). International corporate governance. *Journal of Financial and Quantitative Analysis*, 38(1), 1-36.

Devereux, M. and Schiantarelli, F. (1990). Investment, financial factors, and cash flow: Evidence from UK panel data. In R.G. Hubbard [ed], Asymmetric information, corporate finance and investment, *University of Chicago Press,* 279-306.

Doyle, J., Ge, W. and McVay, S. (2007). Accrual quality and internal control over financial reporting. *The Accounting Review*, 44, 193-223.

Eisenberg, T., Sundgren, S. and Wells, M.T. (1998). Larger board size and decreasing firm value in small firms. *Journal of Financial Economic*, 48, 35-54.

Faccio, M., and Lang, L. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics*, 65, 365-395.

Fama, E.F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88, 288-307.

Fama, E.F. and Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26, 301-325.

Fernández, A., Gómez-Ansón, S. and Fernández, C. (1998). El papel supervisor del consejo de administración sobre la actuación gerencial: Evidencia para el caso español. *Investigaciones Económicas*, 22, 501-516.

Francis, J., I. Khurana and Pereira, R. (2001). Investor protection Laws, Accounting and Auditing Around the World. Working Paper (SSRN). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=287652

García, O. and Gill, B. (2005). El gobierno corporativo y las prácticas de earnings management: Evidencia empírica en España. Working Paper of Instituto Valenciano de Investigaciones Económicas (Ivie), WP-EC 11.

Gaver, J. and Gaver, K. (1993). Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Accounting and Economics*, 16(1-3), 125-160.

Gomez-Mejia, L., Nuñez-Nickel, M., and Gutierrez, I. (2001). The role of family ties in agency contracts. *Academy of Management Journal*, 44, 81–95.

Gompers, P.A., Ishii, J.L., and Metrick, A. (2003). Corporate governance and equity prices. *The Quarterly Journal of Economics*, 118, 107-155.

Gopalan, R. and Jayaraman, S. (2011). Private Control benefits and earnings management: Evidence from insider controlled firms. *Journal of Accounting Research*, forthcoming.

Grossman, S.J. and Hart, O.D. (1982). Corporate financial structure and managerial incentives. In: The Economics of Information and Uncertainty. Ed. by J.J. McCall, Chicago: *The University of Chicago Press*, 123-155.

Harris, M. and Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, 46, 297-356.

Hart, O. (1995). Firms, contracts, and financial structure. *Oxford University Press*, Oxford.

Husted, B. and Serrano, C. (2002). Corporate Governance in México. *Journal of Business Ethics*, 37(3), 337-348.

Jara-Bertin, M. and López-Iturriaga, F.J. (2008). Earnings management and contest to the control: An analysis of european family firms. MPRA Paper No. 9660, posted 21. Retrieved from http://mpra.ub.uni-muenchen.de/9660/

Jensen, M.C. and Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial of Economics*, 76, 305-360.

Jensen, M.C. (1986). Agency costs and free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76, 323-29.

Jensen, M.C. and Murphy, K.J. (1990). Performance pay out and top management incentives. *Journal of Political Economy*, 98, 225-264.

Jensen, M.C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance,* 48(3), 831-880.

Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29, 193-233.

Khanna, T. and Palepu, K. (1999). Policy shocks, market intermediaries, and corporate strategy: Evidence from Chile and India. *Journal of Economics and Management Strategy*, 8, 271-310.

Lang, L., Ofek, E. And Stulz, R.M. (1996). Leverage, investment, and firm growth. *Journal of Financial Economics*, 40, 3–29.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (1997). Legal determinants of external finance. *The Journal of Finance*, LII (3), 1131-50.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (1998). Law and finance. *Journal of Political Economy*, 52(3), 1113-55.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (1999). Corporate governance around the world. *Journal of Finance*, 24, 471-517.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58, 3-27.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance*, 57 (3), 1147-70.

Lang, L. and Stulz, R. M. (1994). Tobin's q, corporate diversification, and firm performance. *Journal of Political Economy*, 102(6), 1248–80.

Lasfer, M.A. (1995). Agency costs, taxes, and debt: the UK evidence. *European Financial Management*, 1(3), 265–85.

Lemmon, M. and Lins, K. (2003). Ownership structure, corporate governance, and firm value: Evidence from the East Asian financial crisis. *Journal of Finance*, 58, 1445–1468.

Leuz, C., Nanda, D. and Wysocki, P.D. (2002). Investor protection and earnings management: and international comparison. Working Paper 4225-01, MIT Sloan School of Management.

Leuz, C., Lins, K. and Warnock, F. (2009). Do foreigners invest less in poorly governed firms? *Review of Financial Studies*, 22(8), 3245-3285.

Lins, K.V. (2003). Equity ownership and firm value in emerging markets. *Journal of Financial and Quantitative Analysis*, 38(1), 159-184.

López, F.J. and Lima, V. (2010). Do Leverage, Dividend Payout, and Ownership Concentration Influence Firms' Value Creation? An Analysis of Brazilian Firms. *Emerging Markets Finance and Trade*, 46(3), 80-94.

Lorsch, J. and MacIver, E. (1989). *Pawns and potentates: The reality of corporate boards*. Boston: Harvard Business School.

Mak, Y.T. and Kusnadi, Y. (2005). Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, 13(3), 301-318.

Myers, S.C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5, 147-175.

Mayer, C. (1996). Corporate governance, competition and performance. J*ournal of Law and Society*, 24, 152–76.

McConaughy, D., Matthews, C. and Fialko, A. (2001). Founding family controlled firms: Performance, risk and value. *Journal of Small Business Management*, 39, 31-49.

McConnell, J. J. and Servaes, H. (1995). Equity ownership and the two faces of debt. *Journal of Financial Economics*, 39, 131–57.

Morck, R., Schleifer, A. and Visnhy, R. N. (1988). Management ownership and market valuation. *Journal of Financial Economics*, 20(1/2), 293–315.

Mohd.-Saleh, N., Mohd.-Iskandar, T. and Mohid-Rahmat, M. (2007). Audit committee characteristics and earnings management: evidence from Malaysia. *Asian Review of Accounting*, 15(2), 147 – 163.

Pound, J. (1988). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 22, 237-265.

Rajan, R.G. and Zingales, L. (1995). What do we know about capital structure? some evidence from international data. *Journal of Finance*, 50(5), 1421-1460.

Roe, M.J. (2000). Political Foundations for Separating Ownership from Corporate Control. Stanford Law Review, 53.

San Martín-Reyna, J.M. (2010). Mecanismos de gobierno y protección al inversor como forma de control de la discrecionalidad directiva: *Un estudio para países europeos", Innovar Journal*, 20(37), 75-89.

San Martín Reyna, J. M. and Duran-Encalada, J. A. (2012). Relationship among family business, corporate governance and firm performance: Evidence from the Mexican stock exchange. *Journal of Family Business Strategy*, 3(2), 106-117.

Shackelford, D. (1998). Discussion of The effects of taxes, agency costs, and information asymmetry on earnings management: A comparison of public and private firms. *Review of Accounting Studies*, 3, 327-329.

Shleifer, A. and Vishny, R.W. (1997). A survey of corporate governance. *The Journal of Finance*, LII (2), 737-83.

Singh, M. and Faircloth, S. (2005). The impact of corporate debt on long term investment and firm performance. *Applied Economics*, 37, 875-883.

Skinner, D. (1993). The investment opportunity set and accounting procedure choice. *Journal of Accounting and Economics and Economics,* 16, 407-445.

Smith, C. W. and Watts, R. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, 32, 263–92.

Stiglitz, J.E. (1985). Credit markets and the control of capital. *Journal of Money Credit and Banking*, 17, 133-152.

Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics*, 26, 3–27.

Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, 44(3), 619-656.

Warfield, T.D., Wild, J.J. and Wild, K.L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, 16, 61-91.

Watts, R.L. and Zimmerman, J.L. (1986). *Positive accounting theory*. Prentice Hall, Englewood Cliffs.

Yermarck, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40, 185-211.

Abstract (in Polish)

Praca analizuje wpływ struktury własności, rady nadzorczej i dźwigni finansowej na zarządzanie zyskiem w sytuacjach, gdy przedsiębiorstwo staje wobec możliwości rentownego rozwoju i gdy taka możliwość nie istnieje. Badanie jest oparte o próbę 83 meksykańskich firm i dotyczy okresu 2005-2011. Rezultaty wskazują na pozytywny związek zachodzący pomiędzy zarządzaniem zyskiem i radą nadzorczą oraz dźwignią finansową w sytuacji możliwości rozwoju firmy. Związek ten ma charakter ujemny, gdy firma nie ma możliwości podjęcia rentownych projektów inwestycyjnych. Rezultaty wskazują także na znaczenie kontroli udziałowców firmy na zarządzanie zyskiem w sytuacji potencjalnego wzrostu. W podsumowaniu, struktura własności, skład i wielkość rady oraz dźwignia finansowa redukują zarządzanie zyskiem w sytuacji braku możliwości podjęcia projektów inwestycyjnych i mają dodatni wpływ, gdy takie możliwości pojawiają się.

Słowa kluczowe: dźwignia finansowa, możliwości inwestycyjne, biznes rodzinny.

A Research Proposal to Examine Entrepreneurship in Family Business

Jorge A. Durán-Encalada*, Juan M. San Martin-Reyna**, Héctor Montiel-Campos*

Abstract

This paper builds on existing theoretical and empirical studies in the areas of family business and entrepreneurship. It uses Dubin´s theory building framework to propose a model for conducting research of family businesses and its linkage to entrepreneurial activities in Mexico. This works starts by describing the concepts of family business and explains the importance that these definitions can have on the variables to be included in the research. After that, the paper explains how the concept of "familiness" relates to the essence definition of family business. Using the resource-based view (RBV), agency theory, and social capital theories we describe how social capital resources are the basis for building firm capabilities and competitive advantages that influence firm's performances. Based on this perspective, a theoretical model, laws of interaction, a set of propositions and suggestions for further research are provided.

Keywords: entrepreneurship, family business, familiness, business performance.

Introduction

This work seeks to explore different approaches to entrepreneurship in family businesses. In this way, it contributes to a research program on family business that is underway at the Family Business Research Center in the Universidad de las Américas Puebla. This program has the purpose of finding out the specific characteristics of factors associated to entrepreneurship in the context of family businesses in Mexico. This paper utilizes Dubin´s (1978) theory building framework to propose a model to examine entrepreneurship in family business. We include a revision of some theoretical constructs that have been directed at examining the relationship between factors associated to family businesses and actions related to entrepreneurship in these same firms. In order to do so, we can see initially that according to the way that

* *Dr. Jorge A. Durán-Encalada, Family Business Research Centre – Universidad de las Américas Puebla, jorgea.duran@udlap.mx*

** *Dr. Juan M. San Martin-Reyna, Family Business Research Centre – Universidad de las Américas Puebla, juanm.sanmartin@udlap.mx*

*** *Dr. Héctor Montiel-Campos, Family Business Research Centre – Universidad de las Américas Puebla, hector.montiel@udlap.mx*

a family business is conceptualized, this will define those business family factors that will become relevant in the model (units of the theory).

Also, from a theoretical standpoint, those factors play a distinctive role in defining the strategic path that the family business follows and the process that takes place to arrive at strategies, namely, the strategic planning process. Therefore, we review some works that include the strategic planning as a mediating process between the family business factors and entrepreneurial actions. Based on these works, we made a theoretical model proposal to classify business family attributes and factors and how these relate to entrepreneurial activities that are undertaken by the firms (laws of interaction). After that, it is necessary to define the boundaries of the model and explain the conditions under which the theory is operative. Finally, based on this proposal, we present some empirical results that provide elements to build research propositions. These theoretical propositions will allow us to conduct further research on entrepreneurship in family business in Mexico.

The objective of this paper is, therefore, to build a model for conducting research of family businesses and its linkage to entrepreneurial activities in Mexico. Regarding the organization of the paper, it proceeds as follows. After introduction, we describe briefly Dubin´s methodology for building theory. In the next section, we develop the structural components of Dubin´s model- We shall conclude our paper by discussing the results and the conclusions conducted in this research.

Dubin´s methodology for theory building

In this research we use the Dubin´s (1978) methodological approach. Dubin provides a comprehensive methodology for theory building from a literature review perspective. It is particularly relevant for applied fields such as management, marketing, and organization theory. Dubin´s methodology has eight phases for building theory, and these are: (1) units (i.e., the main concepts) of the theory, (2) laws of interaction (among the concepts), (3) boundaries of the theory (the boundaries within which the theory is expected to apply), (4) system states of the theory (conditions under which the theory is operative), (5) propositions of the theory (logical deductions about the theory in operation), (6) empirical indicators (empirical measures used to make the propositions testable), (7) Hypotheses (statements about the predicted values and relationships among the units), and (8) research (the empirical test of the predicted values and relationships).

In order to reach the objective of this research, we use the first five phases of the methodology because these represent the structural components of Dubin´s model. The last three phases represent the process of empirical validation. Some theorists consider the eight phases of Dubin´s model for effective theory building; however, theory building and empirical research are often separated, and each of these in conducted as a distinct research effort.

Elements of a model to examine entrepreneurship in family business

We describe in this section the development of the model to examine entrepreneurship in family business using the first five phases of Dubin´s methodology for theory building.

Units of the model

The units of the model are the ideas, concepts and previous research, from which the model is constructed. To determine the concepts in our model, we reviewed academic papers on family business and entrepreneurship in leading academic journals and annual conference proceedings. Our review indicates that the literature includes several related concepts.

Family business concept

In order to examine the literature related to entrepreneurship in family business, we take as a basis the philosophical difference made by two approaches to define a family firm: the components of involvement and the essence approach (Chua, Chrisman and Sharma, 1999; Habbershon, Williams and MacMillan, 2003). The components of involvement approach has been the most influential approach in conducting research in the family business field, including those aspects related to strategic planning and entrepreneurship. It focuses on combination of variables related to the type and degree of ownership, type of governance and management, and trans-generational succession issues as distinctive attributes that identify a family business (Chua et al., 1999). The essence approach, on the other hand, considers that those variables, even though necessary, are not sufficient for identifying it as a family business. Therefore, it should also take into account matters related to intention, vision, behavioral aspects, and "familiness", which are intrinsic to its nature to qualify as such (Davis and Tagiuri, 1989; Litz, 1995; Chua et al., 1999).

Familiness is a concept that was first proposed by Habbershon and Williams (1999), who defined it as the unique bundle of resources and capabilities a particular organization possesses because of the family system's interaction among the family, its individual members, and the business. It is clear from these concepts that the components of involvement approach has created more opportunities for conducting research as the variables associated with the concept implicit in the approach are more amenable to become operational. However, for the case of the essence approach to be used as a basis for research, some theoretical underpinnings must be explained before that is attempted.

Theories associated with the essence approach

Various works have indicated that family business features can be examined under the lens of the resource-based view (RBV) and agency theories. The RBV of the firm suggests that returns achieved by firms are largely attributable to their resources (Penrose, 1959; Hitt and Ireland, 1985; Wernerfelt, 1984; Grant, 1996). RBV lends support for associating some features with family firms which allows them to display more valuable resources and capabilities that are the basis of a solid competitive advantage through an appropriate strategy in comparison to non-family businesses (Haynes, Walker, Rowe and Hong, 1999; Cabrera, De Saa and Garcia, 2001; Habbershon and Williams, 1999; Aldrich and Cliff, 2003). As part of these features, we have the high degree of family members' commitment and dedication, as well as customers' trust and perception as characteristics of family business (Ward, 1987; Leach, 1993; Gallo, 1995). These resources and capabilities are sustained by the unique resources attributes that family firms possess: human capital, social capital, patient capital, survivability capital and governance structures (Sirmon and Hitt, 2003).

Agency theory adds to the RBV by reducing or eliminating the agency costs that are normally present when the property and the administration of a business are in the hands of people who are not related by kinship (Jensen and Meckling, 1976; Myers, 1977; Becker, 1981; Shleifer and Vishny, 1997). In family business, as these roles are exercised by the same family members, there is a large identification between the economic and non-economic objectives of owners and the business administration (Fama and Jensen, 1983; Pollack, 1985; Schulze, Lubatkin and Dino, 2001, 2003). Pearson, Carr and Shaw (2008) complement the RBV and agency theories with the social capital theory in order to explain the content of familiness. They take the definition of social capital as "the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by and individual or social unit (Nahapiet and Ghoshal, 1998, p.243)." As a result, Pearson et al. (2008), based on other works (Arregle, Hitt, Sirmon and Very, 2007; Leana and Van Buren, 1999; Nahapiet and Ghoshal, 1998; Oh, Labianca and Chung, 2006) provide a social capital model of familiness and the parameters to implement this construct.

This model explains the structural, cognitive, and relational dimensions of social capital that serve as the behavioral and social resources that constitute familiness. The structural dimension comprises the social interactions, including the patterns and strength of ties, among the members of a collective integrated by the family. The cognitive dimension includes resources providing shared representations, interpretations, and systems of meaning among the family parties. The relational dimension that integrates the prior two dimensions consists of resources created through personal relationships, including trust, norms, obligations, and identity. These resources lead to a capability that consists in access to broader sources of information and improved information quality, relevance, and timeliness, on the one hand, and encourages willingness and ability of participants to subordinate individual goals and associated actions to collective goals and actions, on the other. In addition to addressing these dimensions, Pearson et al. (2008) indicate the antecedent conditions that help to create familiness. These comprise: (1) the family's existing structure and long-standing internal relationships that help to build the stability necessary to generate social capital; (2) interdependence that is largely a function of the joint and shared interests and the agreement toward shared goals that members of a collective have; (3) frequent and close social interactions that permit actors to know one another, to share important information and to create a common point of view; and (4) closure that can be interpreted as the degree to which boundaries exist, which prevent external influences and enhance internal focus on such management activities as information sharing and decision making.

In this work we take the social capital resources represented by the dimensions included in the social capital model of familiness to relate them to the building of entrepreneurial capabilities. In fact, as we will see later, information access and associability capacities, identified by Pearson et al. (2008) as the building blocks of capabilities, are important for conducting entrepreneurial type of activities in the family firm.

Demographic factors

The demographic factors represent the structural dimension of social capital resources, and these include age, time of tenure, founder-manager role, educational level of owner-manager, the number of generations involved, and the degree of ownership by the family owner. In general, there was not a significant relationship of owner-manager's age with entrepreneurial behavior (Kellermanns, Eddleston, Barnet and Pearson, 2008), even though in a study (Wang and Poutziouris, 2010) age was found to be negatively related to entrepreneurship. In this latter case, it was argued that risk taking behavior for young entrepreneurs may enhance their reputation and prestige within the firm and give further security to their leadership position. CEO tenure in the organization was negatively associated to entrepreneurship, as the behavior of longer tenured CEOs may be reflecting greater caution as they focus on succession issues, which in turn would lead to lower growth (Kellermanns et al., 2008; Zahra, 2005). However, Wang and Poutziouris (2010) found a positive relationship, as long tenure creates opportunities for owner-managers to identify externally generated valuable knowledge that is critical to the business operations and then absorb, assimilate and integrate it to the business processes.

The duality of being a founder and CEO did not appear to have any bearing on entrepreneurial risk. This may be due, on the one hand, to the fact that even though it preserves the experiences and values of the founder necessary for undertaking new initiatives, it also centralizes authority in the hands of the CEO and prevents others from contributing to entrepreneurial activities (Zahra, 2005). The number of generations involved in the firm's management positions was positively associated to entrepreneurship (Kellermanns et al., 2008), and to higher risk taking (Wang and Poutziouris, 2010). The higher the number of generations from the owner family in control or operating within the company, the higher the firm's focus on entrepreneurship (Zahra, 2005; Wang and Poutziouris, 2010). One interpretation of this finding is that different and multiple generations bring fresh insights and experiences and, therefore, new knowledge into the family firm. Finally, entrepreneurs' educational level and owner family's degree of ownership were neutrally related to entrepreneurship (Wang and Poutziouris, 2010).

Institutional factors

The variables included as institutional refer to ownership and governance systems and are considered as part of the structural dimension of social capital resources. We present the results of an influential research carried out by Zahra, Neubaum and Huse (2000). Stock ownership appeared to motivate executives to promote value-creating activities such as corporate entrepreneurship, which can enhance the wealth of the firm and its executives. Stock ownership by "pressure-sensitive" institutions (insurance companies, banks and non-bank trusts) was negatively associated with entrepreneurship. The business relationship they have with the companies in their portfolios might compromise their willingness to challenge and influence management to support long-term corporate enterprise initiatives. However, "pressure-resistant" institutional owners (public pension funds, mutual funds, endowments and foundations) encouraged and challenged senior executives to pursue corporate entrepreneurship. There was a positive relationship of board size and corporate entrepreneurship until a certain threshold (11 members) was reached in which case the relationship became negative. The negative association may reflect the difficulties that directors in large boards encounter in communicating and participating in the board's deliberations. The higher participation of outside directors in the boards was negatively associated to entrepreneurship. Their detachment from managerial decisions might prevent them from exercising influence and increase their dependence on the company executives' conservative-laden decisions. Increasing the outside directors' stock ownership acted as an incentive to understand the company's operations and strategic moves, especially in the realm of corporate entrepreneurship. Finally, separation of the company CEO and board chair position was associated positively with entrepreneurship. This situation may increase diversity of opinions, empower the board and increase its independence from the CEO.

Organizational factors

In order to complement the structural dimension of social capital resources, we will examine studies that have taken into account factors related to organizational structure characteristics and how these relate to entrepreneurship. Organizational characteristics and their association with entrepreneurship vary according to whether firms were classified as "founder-centered" (FC), "sibling/cousin consortium based" (CB) or "open family" (OF) (Salvato, 2004). In relation to organizational and governance issues the FC firms needed support from both family and non-family members of the organization to proactively devise innovative business ideas, and to take risks of pursuing them. In the CB case, firms were characterized as being in the path towards managerialization, yet still characterized by considerable levels of informality. Such an organizational hybrid proved beneficial for the levels of entrepreneurship. In the OF firms, there was a tendency towards compensating employees according to the value they add to the firm that was positively related to entrepreneurship.

Another organizational study was carried on by Miller (1983) who examined how the organization structure and type of environment modify the nature of entrepreneurship in different types of firms classified, according to Mintzberg (1973, 1979), as "simple", "planning" and "organic". In simple firms the locus of control, centralization and individual-scanning were very significantly correlated with entrepreneurial activity. Also entrepreneurship was so very tied up with the leader's personality power and information that almost nothing else seemed to count. Issues of technocratization were linked to entrepreneurship by the role played by external consultants, such as scientists, engineers or market experts. In the planning firms, there was a high correlation of entrepreneurship with the explicitness of strategy, even though the stable environment in which these firms operated did not serve as a stimulus to entrepreneurship. In organic firms, the level of entrepreneurial activity was tailored to the demands of the environment. Organizational structural variables (communication, differentiation, delegation of authority, technocratization and decentralization) correlated highly with entrepreneurship. Decision making power was so diffuse in these firms that the personality of the leader did not have a significant impact upon entrepreneurship which was performed by many individuals at many levels.

Behavioral and cultural factors

Now, we examine the cognitive dimension of the social capital resources considering the research that has focused on the relationship of behavioral and cultural factors with entrepreneurship. The ability to recognize technological opportunities, pursue organizational change, and exploit opportunities through strategic planning increased corporate entrepreneurship in family firms (Kellermanns and Eddleston, 2006). Family firms' willingness to change was an additional factor that increased corporate entrepreneurship (Kellermanns and Eddleston, 2006), and considered a characteristic that firms are often criticized for lacking. In relation to this issue, Shepherd and Haynie (2009) argued that many times firms face an identity conflict that opposes "who we are as a family" with "who we are as a business". In order to help solve this conflict, they proposed a model of a meta-level identity that deals gradually with the source of identity conflict and ultimately eliminates it. However, they also recognized that its application would likely result in a decline in the frequency of conflict-triggering opportunities discovered by the family business, suggesting that the nature of opportunities discovered by the business may represent more incremental (less novel) opportunities for growth. Results showed that family firms' individual –versus- group orientation had an inverted U-shaped relationship with entrepreneurship (Zahra, Hayton and Salvato, 2004).

Family firms whose cultures strongly favored an individual orientation might have found it easy to spur the entrepreneurial initiatives deriving from the autonomous action of the managers and employees. But these firms might have found it difficult to build the cooperation necessary to implement these activities. Therefore entrepreneurship flourishes at moderate levels of individualism and family businesses may benefit from balancing these opposite cultural orientations. High external cultural orientation was positively associated with entrepreneurship in family firms (Zahra et al., 2004). This culture values new knowledge acquired from customers, suppliers and competitors (Morris, 1998). Financial controls, a proxy for short-term orientation, lowered entrepreneurship, whereas there was a positive association between strategic control and entrepreneurship, indicating the importance of a long-term cultural orientation (Zahra et al., 2004).

Social network factors

We examine now the relationship between social network factors and entrepreneurship. The variables associated with social network represent the relational dimension of the social capital resources. Toledano, Urbano and Bernadich (2010) suggested that the promotion of trust of owner-managers in the organizational context may assume the role of intrapreneurs as network or human interaction builders within business, in order to promote corporate entrepreneurship through collective activities. In relation to social networks, Klyver (2007) considered the changes in the involvement of family members in an entrepreneur's social network during the entrepreneurial process. He used a "life cycle" approach represented by four phases for explaining behavior in the entrepreneurial process: "discovery", "firm emergence", "baby-business" and "operating". His research showed that family members counted as the most frequent role-relation in social networks during the entrepreneurial process, and their involvement tended to be more common in the firm emergence phase than in the others. They tended to be more critical than other players in their role-relationships. Family involvement was most common when entrepreneurs were young and had higher education of three years or above. As the discovery phase is more a cognitive and individual process, weak bridging ties and not strong family-based ties are needed (Evald, Klyver and Svendsen, 2006).

The emergence phase demand, on the other hand, is characterized by strong and emotional supportive ties typically provided by family members, where human, financial and physical resources have to be obtained. Further on, the baby-business and operating phases are driven by commercial type of ties. According to Anderson, Jack and Dodd (2005), the level of involvement in these networks is not limited only to family business members, whether we consider a narrow, middle, and broad family definition (Astrachan and Shanker, 2003). Involvement should consider also those family members who are beyond the family business boundaries, that he called the "family jugglers" group. These are in an intermediate position located between family-inside and family-out (Birley, Ng and Godfrey, 1999). Anderson et al. (2005) results showed that well over two-thirds of the family members to whom entrepreneurs turned for help with their business work outside the formal boundaries of the family firms. Indeed, for some topics, they were more likely to seek discussions with family than with business ties.

These subjects were found to be tax issues, production and operations, and managing staff. Family help was more likely to be emotional support than help from business contacts, and this was provided often in the form of advice, problem solving, and information. With the inside-family, strong, high-quality, opportune, non-cost, and professional links were set up, but these contributions were limited in scope and were of a homogeneous nature. With the jugglers, even though links were weaker, their advice included the heterogeneity of resources and viewpoints. Additionally, these maintained the high quality of advice, the rapidity of the service provided, and low or nonexistent costs. Issues related to taxes, promotion and advertising, operations management, managerial personnel, were included in these interactions. Although there was mainly a strong emotional content in these contacts, these did not suppress others related to consulting, problem resolution, and information.

Entrepreneurship and performance

Most studies that have focused on examining the linkage between family firms and entrepreneurship have taken the concept developed by Miller (1983). According to Miller (1983), entrepreneurship is a multidimensional concept that encompassing the firm's actions relating to product-market and technological innovation, risk taking and proactiveness (Miller, 1983). Lumpkin and Dess (1996) defined these concepts as follows. Innovativeness indicates the firm trend to support new ideas and foster creative processes that aim to develop new products and services. Risk taking is the firm tendency to support projects in which profits are uncertain. Proactiveness means taking initiative and pursuing new business opportunities in emerging markets. Actually, with similar connotations, the term entrepreneurship in the context of family firms has been referred to as corporate entrepreneurship (Zahra et al., 2000; Kellermanns and Eddleston, 2006), entrepreneurial behavior (Kellermanns et al., 2008), entrepreneurial orientation (Naldi, Nordqvist, Sjöberg and Wiklund, 2007), or entrepreneurial spirit (García-Tenorio and Sánchez, 2009).

Most recently, and based on a concept that implies social capital and familiness connotations, the term collaborative entrepreneurship or collective entrepreneurship has been used to refer to entrepreneurship (Johannisson, 2003; Ribeiro-Soriano and Urbano, 2009; Toledano et al., 2010). Concomitantly, scholars have begun paying more attention to entrepreneurial activities that take place within an established organization, using the term of intrapreneurship in these cases. As such, collaborative entrepreneurship "encompasses the relationships established among individuals in order to create new business within established firms, introduce significant innovations and enhance a company's competitive position" (Toledano, et al., 2010, p. 398). This concept emphasizes the role of human interactions or networks that are built around the family business and contains elements more closely related to the essence approach of family firms. In addition to the factors related to innovation, risk taking and proactiveness, mentioned above, collaborative entrepreneurship considers frequency and type of interactions, network access and openness, nature, occupation, and content of tie contact, among other relevant variables.

In relation to family firm performance associated with entrepreneurship, indicators as profitability (return on assets –ROA-, return on equity –ROE-, return on sales –ROS-, and earnings per share –EPS-), growth (employment, sales, profits, value), and others, such as cash-flow and the Tobin's q, have been used in those studies. A closer examination shows that the effects of entrepreneurship on different performance metrics vary according to the length of time considered for analyzing these impacts; growth normally precedes profitability. Also, some types of entrepreneurial initiatives may favor more clearly some performance measures instead of others (Wiklund and Shepherd, 2003). For example, family business venturing into international markets was associated negatively with ROA and ROS, as well as domestic venturing with EPS, while other innovations initiatives showed a positive association with those and other performance indicators (Zahra, et al., 2000).

Laws of interaction

The relationships among the units (concepts) of a theory are described in the theory´s laws of interaction (Dubin, 1978). The laws of interaction show how changes in one or more units of the theory influence the remaining units. We show the relationships outlined in Figure 1. The work developed by Pearson et al. (2008) on familiness serves well to build a model that connects the social capital resources to entrepreneurship, and then to competitive advantage and performance.

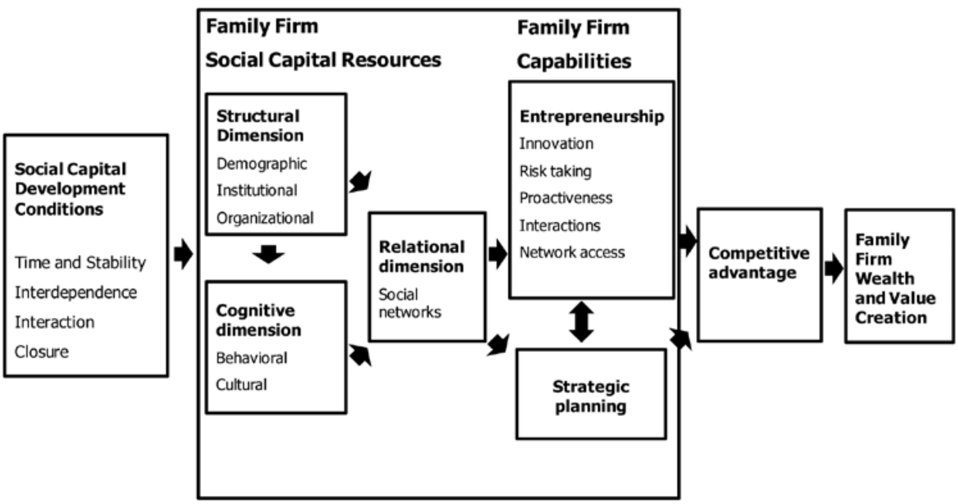

Figure 1. A Social Capital Model of Familiness for Entrepreneurship
Source: Adapted from Pearson et al., 2008.

First, the social conditions that help create familiness (time and stability, interdependence, interaction, and closure) are presented, followed by the social capital resources, which comprise the structural dimension that accompanies entrepreneurship in the family business. Following Pearson et al. (2008), strength of ties is represented by demographic factors and generations involved in the business, while social interactions comprise institutional and organizational configurations, such as governance and ownership systems, communications, or delegation of authority patterns, among other organizational structural variables. These variables are circumscribed to a large extent to the components of involvement approach of family business.

The cognitive dimension comprises behavioral and cultural factors. These factors contribute to build shared representations and interpretations that provide meaning to family initiatives, according to Pearson et al. (2008), and are more related to the essence approach of family business. Within this same approach, the relational dimensions complement the social capital resources, including variables connected to social networks. These networks lead to personal interrelationships which are not limited to the context of the immediate family business members and help to build trust, norms, obligations and identity. Therefore, the interaction of the structural, cognitive, and relational dimensions conducts to the building of firm capabilities that, in case of our model, consist of the different activities related to entrepreneurship. By combining these dimensions, we are able to relate the components of involvement and the essence approaches to family business, as the basis for reaching family firm capabilities represented by entrepreneurship capacities.

However, even though there are various advantages that are related to family business, to reduce informality and non-systematic examination in defining and reaching entrepreneurial activities some mechanisms are needed. Therefore, we introduce the strategic planning process in the model as an appropriate mechanism between setting up entrepreneurial priorities and exploiting these initiatives in order to achieve competitive advantages in the market (Naldi et al., 2007). The strategic planning allows the firm's management to identify new opportunities that match business's resources and capabilities (Randel and Ward, 2001). These will form the basis on which competitive advantage is sustained that leads to enhanced firm performance, according to our proposed model.

Boundaries of the model

The boundaries of a theory distinguish its theoretical domain from aspects of the world that have not been considered by any other theory. The boundaries of a theory distinguish its theoretical domain from aspects of the world not addressed by the theory (Dubin, 1978). The entrepreneurship research has demonstrated that there are important commonalties with family business research (Chua, Chrisman, and Steier, 2003). Therefore, the domain of the model that we propose is the domain of family business, and it can be small, medium or big.

System States

Dubin (1978) mentions that a system state that accurately represents a condition of the system being modeled has three characteristics: (a) all the units of the system are included in the system state (i.e., inclusiveness), (b) the relationship between units persists long enough to allow the goodness of fit between them to be determined (i.e., persistence), and (c) all units take on unique values for that system state (i.e., distinctiveness). We believe that our model has the three characteristics because: (a) it includes all the important units that have been identified as important in previous research on family business and entrepreneurship, (b) the relationships between all the units describe in Figure 1 are long-lasting relationships, and (c) there is no overlap in values between any of the units (i.e., each unit can be assigned a unique value)

Propositions

Yin (2002) argues that propositions are logical deductions about the theory in operation. Propositions are statements that are logically derived from theory; propositions can be subjected to empirical testing (Dubin, 1978). Derived from the literature review we can make the following research propositions. Although these propositions focus mainly on one of the capital social dimensions of the model, an interaction with the others is suggested, mainly the relational dimension and the planning strategic process.

We saw that participation of different family generations in the control or operations of the owner family tend to promote entrepreneurial activities. However we add that in order to flourish these initiatives, it is necessary that the company has established communication channels where participants can expose and discuss these ideas, as indicated by the factors included in the relational dimension. Based on these findings we can propose the following proposition:

P1: The higher the number of family owner's generations involved in the company, the higher the level of entrepreneurial activities, as mediated by social networks where owners and employees can interact.

It was seen that the involvement of the founders or owners in preparing and exposing successors to risk taking activities strengthen future leaders' capacities and skills to undertake entrepreneurial activities. Additionally the family support during the emergence phase of the idea is a key factor that affects the initiative success. Derived from these findings we can frame the following proposition:

P2: A more planned process for grooming and nurturing younger generation's risk-taking capability and capacity, and the family members support during the emergence phase of the entrepreneurial process, are associated with the successful continuance of the entrepreneurial initiative.

As seen there were certain conditions that promote a more entrepreneurial type of governance structure in the family business, mainly related to the board of directors. A greater size up to a certain number (11 members), a broader participation in the stock ownership, and a separation of the role CEO and the president of the board, create better opportunities for supporting entrepreneurial activities. However, as argued, the role of strategic planning structures and processes may capitalize that participation, introducing a more objective and analytical assessment of those initiatives. Based on this information the following proposition can be advanced:

P3: The set-up of ownership and governance structures and systems that promote broad participation and discussion in the family firms leads to higher levels of corporate entrepreneurship. In these processes, strategic planning can enhance the exploitation and success of entrepreneurship opportunities a family firm recognizes.

We reported an association between entrepreneurial activities and the way that family members in charge of the business evolve, from founder base to open family type. Also, organizational structural variables and the complexity of the environment affect the level of entrepreneurial activities in the family business. Based on these findings and according to the contribution that family members beyond those related directly with the business can make, we proposed the following proposition:

P4: The set-up of organizational structures that considers the type of firm in terms of family involvement (FC, CB or OF) and environmental complexity in which these firms operate is linked to the presence of entrepreneurial activities. A higher instability of the environment may suggest a family participation in social networks beyond the boundaries of business family members.

Those studies that have focused on the behavioral aspects of family firms have emphasized the external and long term orientation of the family and its members as a condition for displaying higher levels of entrepreneurship. But in order to have the opportunity to build a shared understating and collective purpose, spaces must be created where human interaction takes place and networks are built, including the participation of non-family members working in the business. Thus, we can suggest the following proposition:

P5: A higher participation in social networks where owners and employees can interact leads to innovation and new ventures initiatives. Towards this purpose, the establishment of system and structures that give employees the opportunity to make contributions, while providing the mechanisms to integrate and coordinate these efforts, contribute to raise entrepreneurship.

Previous research about entrepreneurial orientation has found evidence that leads to the assumption that companies with entrepreneurial orientation has a better performance (Rauch, Wiklund, Lumpkin and Frese, 2009). However, Hart (1992) mentions that the results are not conclusive and although differences in results can be attributed to various research designs, the differences reflect the fact that the entrepreneurial orientation sometimes does not contribute for a better performance. Lumpkin and Dess (1996) argue that the strength of this relationship depends on internal characteristics and external to the organization, so the entrepreneurial orientation-firm performance relationship is more complex than a simple relationship. Therefore, we suggest the following proposition:

P6: The relationship between entrepreneurial orientation of a family business and its performance is moderated by the strategic planning. The current competitive environment is complex, and complexity is derived from different dimensions, which makes short-term or long term decisions crucial to maintaining the competitiveness of family businesses.

Discussion

In making a distinction of the essence and components of involvement definitions of family business and familiness, we were able to build a conceptual model to group and connect those variables that associate family business to entrepreneurship. Through this theoretical construct of family business, we attain some important recommendations that argue for the need of a family embedded perspective on entrepreneurship (Aldrich and Cliff, 2003; Heck, Hoy, Poutziouris and Steier, 2008). However there are two aspects that we should take into account in relations to the scope and limitations of the proposed model and the theoretical propositions derived from it.

Firstly, one can argue that there are many more propositions that can be built from the reviewed literature that combines factors from those different dimensions. What we tried to do in elaborating these propositions was to base them on those findings that were more robust and replicated by various studies. We must admit that some of these propositions can be modified and adapted once the empirical research to be taken in the Mexican context is underway.

Secondly, contrary to the advantages posed by the social capital model of familiness for supporting entrepreneurship, some authors warn about the perils that surround family business that work against those entrepreneurial activities and their performance. According to these views, family involvement in a business increases agency costs due to challenges such as nepotism, free riding, family entrenchment, and intergenerational conflict, thereby negatively affecting performance (Lansberg, Perrow and Rogolsky, 1988; Gomez-Mejia, Nuñez-Nickel and Gutierrez, 2001; Miller, Le Breton-Miller, Lester and Cannella, 2007; Schulze et al., 2003). Moreover, Nordqvist (2005) argues that strategic proximity and persistence in the family firms can also lead to groupthink, alienation, and strategic simplicity. In trying to disentangle these opposing views, Rutherford, Kuratko and Holt (2008) examined the link between family and performance using the familiness instrument named familiness-power, experience, and culture (F-PEC) scale developed by Klein, Astrachan and Smyrnios (2005). As a result of empirical research, they found that the presence of high levels of familiness possesses some competitive advantages enhancing family firm qualities, and insisted that future studies work further to measure the essence of familiness as a mediator between involvement and performance. In a similar vein, the research undertaken by Sirmon, Arregle, Hitt and Webb, (2008) on how family firms take unique strategic actions in response to competitive threat of imitation to produce performance differences, also attempted to clarify those opposing views. Their results suggest that family influence (i.e. family managerial presence and ownership without providing unilateral control) might offer advantages to the firm (e.g. existence of patient capital) while mitigating weaknesses found in family-controlled firms (e.g. myopic tendencies) (Sirmon and Hitt, 2003). Therefore, family influence can help the firm achieve positive returns, but only when there are other views represented in the governance to balance the family views. In this way, the positive effects of family involvement are realized, but the other stakeholders are able to forestall the actions taken that could benefit the family to the detriment of the firm's performance. We believe that in the elaboration of the propositions we have been able to take variables that can provide a broader perspective that will allow us to prevent neglecting those possible factors that may act against entrepreneurship.

Conclusions

There have been many discussions about the factors associated with entrepreneurship or more properly, intrapreneurship in family business context. Sometimes, recommendations derived from these studies seem to contradict each other, reflecting different family business concepts and organizational contexts on which research was conducted, not to mention different institutional and cultural environments. To delve into these issues is not only a matter of academic interest, but also concerns practitioners, consultants, and those agencies that direct their efforts to promote entrepreneurial initiatives among small-and -medium sized enterprises, mainly family businesses.

This work allowed us to arrive at important research propositions that will be used for conducting research in entrepreneurship in family businesses in Mexico. However, we should recognize that the large majority of the studies on which the theoretical propositions were based came from research undertaken in other countries with different socioeconomic conditions and cultural patterns to the Mexican ones. However, on the one hand, the same concerns regarding how to promote entrepreneurship in family business and similar factors to the ones dealt with here that could be behind those entrepreneurial activities have been suggested in some Mexican studies (Cerutti, 2000; Hoshino, 2005; Pozas, 2002). On the other hand, we are quite aware that these research propositions are only an initial step towards revealing the nature of entrepreneurship in Mexican family firms. The nature of the research should be flexible enough to consider adaptations and modifications to the propositions framed as the research progresses (Eisenhardt, 1989: Eisenhardt and Graebner, 2007). The type of research to be developed will employ a case study approach as it is important to begin answering questions related to the why and how those family dimensions and variables are associated with entrepreneurship (Yin, 2002).

References

Aldrich, H. E. and Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18(5), 573-596.

Anderson, A. R., Jack, S. L. and Dodd, S. D. (2005). The role of family members in entrepreneurial networks: beyond the boundaries of the family firm. *Family Business Review*, 28(2), 135-154.

Arregle, J. L., Hitt, M. A., Sirmon, D. G. and Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, 44(1), 72-.95.

Astrachan, J. and Shanker, M. (2003). Family businesses' contribution to the U.S. economy: A closer look. *Family Business Review*, 15(1), 45-48.

Becker, G. (1981). A treatise on the family. Cambridge, MA: Harvard University Press.

Birley, S., Ng, D. and Godfrey, A. (1999). The family and the business. *Long Range Planning*, 32(6), 598-608.

Cabrera, K. S., De Saá, P. P. and García, D. A. (2001). The Succession Process from a Resource- and Knowledge-Based View of the Family Firm. *Family Business Review*, 14(1), 37-48.

Cerutti, M. (2000). *Propietarios, empresarios y empresa en el norte de México*. México: Siglo XXI.

Chua, J. H., Chrisman, J. J. and Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39.

Chua, J. H., Chrisman, J. J. and Steier, L. P. (2003). Extending the theoretical horizons of family business research. *Entrepreneurship Theory and Practice*, 27(4), 331-338.

Davis J. A. and Tagiuri, R. (1989). The influence of life-stage on father on father-son relationship in family companies. *Family Business Review*, 2(1), 47-74.

Dubin, R. (1978). *Theory building. 2nd* ed. New York: Free Press.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.

Eisenhardt, K. M. and Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25-32.

Evald, M. R., Klyver, K. and Svendsen, S. G. (2006). The changing importance of the strength of ties throughout the entrepreneurial process. *Journal of Enterprising Culture*, 14(1), 1-26.

Fama, E. and Jensen, M. (1983), Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.

Gallo, M. (1995). The role of family business and its distinctive characteristic behavior in industrial activity. *Family Business Review*, 8(2), 83-97.

García-Tenorio, R. J. and Sánchez, Q. J. (2009). Amenazas y oportunidades: El reto de emprender en la empresa familiar. *Gestión de empresa*, 212, 66-77.

Gomez-Mejia, L., Nuñez-Nickel, M. and Gutierrez, I. (2001). The role of family ties in agency contracts. *Academy of Management Journal*, 44(1), 81-95.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109-122.

Habbershon, T. and Williams, M. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*, 12(1), 1-25.

Habbershon, T., Williams, M. and MacMillan, I. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, 18(4), 451-465.

Hart, S. L. (1992). An integrative framework for strategy-making process. *Academy of Management Review*, 17(2), 327-351.

Haynes, G., Walker, R., Rowe, B. and Hong, G. (1999). The intermingling of business and family finances in family-owned businesses. *Family Business Review*, 12(3), 225-239.

Heck, R. Z., Hoy, F., Poutziouris, P. Z. and Steier, L. P. (2008), Emerging paths of family entrepreneurship research. *Journal of Small Business Management*, 26(3), 317-330.

Hitt, M. A. & Ireland, R. D. (1985). Corporate distinctive competence, strategy, industry and performance. *Strategic Management Journal,* 6(3), 273-293.

Hoshino, T. (2005). Executive Managers in Large Mexican Family Businesses. Discussion paper. *Institute of Developing Economie*s, JETRO, pp. 144.

Jensen, M. C. and Meckling, W. F. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Johannisson, B. (2003). Entrepreneurship as a collaborative phenomenon, in Genescà, E., Urbano, D., Capelleras, J., Guallarte, C. and Vergès, J. (Eds), *Creación de Empresas-Entrepreneurship*, Servei de Publicaciones de la Universitat Autónoma de Barcelona, Barcelona, 87-109.

Kellermanns, F. W. and Eddleston, K. A. (2006). Corporate entrepreneurship in family firms: A family perspective. *Entrepreneurship Theory and Practice*, 30(6), 809-830.

Kellermanns, F. W., Eddleston, K. A., Barnett, T. and Pearson, A. (2008). An exploratory study of family member characteristics and involvement: Effects on entrepreneurial behavior in the family firm. *Family Business Review*, 21(1), 1-14.

Klein, S. B., Astrachan, J. H. and Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implication for theory. E*ntrepreneurship Theory and Practice*, 29(3), 321-339.

Klyver, K. (2007). Shifting family involvement during the entrepreneurial process. *International Journal of Entrepreneurial Behaviour & Research*, 13(5), 258-277.

Lansberg, I., Perrow, E. L. and Rogolsky, S. (1988). Family business as an emerging field. *Family Business Review*, 1(1), 1–6.

Leach, P. (1993). La empresa familiar. Barcelona: Ediciones Granica.

Leana, C. R. and Van Buren, H. J. (1999). Organizational social capital and employment practices. *Academy of Management Review*, 24(3), 538-555.

Litz, R. A. (1995). The family business; Towards definitional clarity. *Family Business Review*, 8(1), 71-81.

Lumpkin, G. T. and Dess, G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–173.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.

Miller, D., Le Breton-Miller, I., Lester, R. H. and Cannella, A. A. (2007). Are family firms really superior performers? *Journal of Corporate Finance*, 13(5), 829-858.

Mintzberg, H. (1973). Strategy-Making in Three Modes. *California Management Review*, 16(2), 44-53.

Mintzberg, H. (1979). *The Structuring of Organizations*, Prentice-Hall, Englewood Cliffs, N.J.

Morris, M. H. (1998). *Entrepreneurial intensity*. Westport, CT: Quorum Books.

Myers, S. (1977). The determinants of borrowing. *Journal of Financial Economics*, 5(2), 147-175.

Nahapiet, J. and Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational adavantage. *Academy of Management Review*, 23(2), 242-266.

Naldi, L., Nordqvist, M., Sjöberg, K. and Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47.

Nordqvist, M. (2005). Familiness in top management teams: Commentary on Ensley and Pearson's "An exploratory comparison of the behavioral dynamics of top management teams in family and nonfamily new ventures: cohesion, conflict, potency, and consensus". *Entrepreneurship Theory and Practice*, 29(3), 285-291.

Oh, H., Labianca, G. and Chung, M. (2006). A multi-level model of group social capital. *Academy of Management Review*, 31(3), 569-582.

Pearson, A. W., Carr, J. C. and Shaw, J. C. (2008). Toward a theory of families: A social capital perspective. *Entrepreneurship Theory and Practice*, X(X), 949-969.

Penrose, E. T. (1959). The theory of the growth of the firm. New York: John Wiley.

Pollack, R. (1985). A transaction cost approach to families and households. *Journal of Economic Literature*, 23, 581-608.

Pozas, Maria de los Angeles (2002). *Estrategia internacional de la gran empresa mexicana de la década de los noventa*. México: El Colegio de México.

Randel S. C. & Ward, J. L. (2001). *La Planificación Estratégica de la Familia Empresaria*. España, Deusto, IEF, PwC.

Rauch, A. J., Wiklund, G., Lumpkin, T. and Frese, M. (2009). Entrepreneurial Orientation and Business Performance: Cumulative Empirical Evidence. *Entrepreneurship Theory and Practice*, 33(3), 761–788.

Ribeiro-Soriano, D. & Urbano, D. (2009). Overview of collaborative entrepreneurship: an integrated approach between business decisions and negotiations. *Group Decision and Negotiation*, 18(5), 419-430.

Rutherford, M. W., Kuratko, D. F. and Holt, D. T. (2008). Examining the link between "familiness" and performance: Can the F-PEC untangle the family business theory jungle? *Entrepreneurship Theory and Practice*, 32(6), 1089-1109.

Salvato, C. (2004). Predictors of Entrepreneurship in Family Firms. *The Journal of Private Equity*, X(X), 68-76.

Schulze, W. S., Lubatkin, M. H. and Dino, R. N. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science,* 12(2), 99-116.

Schulze, W. S., Lubatkin, M. H. and Dino, R. N. (2003). Toward a theory of agency and altruism in family firms. *Journal of Business Venturing*, 18(4), 473-490.

Shepherd, D. and Haynie, J. M. (2009). Family business, Identity conflict, and an expedited entrepreneurial process: A process of resolving identity conflict. *Entrepreneurship Theory and Practice*, 33(6), 1245-1264.

Shleifer, A. and Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737-783.

Sirmon, D. G. and Hitt, M. A. (2003). Managing resources: Linking unique resources, Management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4), 339-358.

Sirmon, D. G., Arregle, J. L., Hitt, M. A. and Webb, J. W. (2008). The role of family influence in firms' strategic responses to threat of imitation. *Entrepreneurship Theory and Practice,* 32(6), 979-998.

Toledano, N., Urbano, D. and Bernadich, M. (2010). Networks and corporate entrepreneurship. A comparative case study on family business in Catalonia. *Journal of Organization Change Management*, 23(4), 396-412

Wang, Y. and Poutziouris, P. (2010). Entrepreneurial risk taking: empirical evidence from UK family firms. *International Journal of Entrepreneurial Behaviour & Research*, 16(5), 370-388.

Ward, J. L. (1987). Keeping the family business healthy. San Francisco: Jossey-Bass.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.

Wiklund, J. and Shepherd, D. (2003). Knowledge-Based Resources, Entrepreneurial Orientation, and The Performance of Small and Medium-Sized Businesses, *Strategic Management Journal*, 24(13), 1307–1314.

Yin, R. K. (2002). *Case Study Research: Design and Methods. 3rd* ed. Thousands Oaks, CA: Sage.

Zahra, S. A. (2005). Entrepreneurial risk taking in family firms. *Family Business Review*, 18(1), 23-40.

Zahra, S. A., Neubaum, D. O. and Huse, M. (2000). Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. *Journal of Management*, 26(5), 947-976.

Zahra, S. A., Hayton, J. C. and Salvato, C. (2004). Entrepreneurship in family vs. non-family Firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, 28(4), 363-381.

Abstract (in Polish)

Niniejsza praca jest oparta o dotychczasowe badania teoretyczne i empiryczne w zakresie zarządzania i przedsiębiorczości firm rodzinnych. Praca proponuje model badawczy oparty o teorię Dubina dla prowadzenia badań nad firmami rodzinnymi i omawia jego związek z przedsiębiorczością w Meksyku. Praca podejmuje tematykę podstawowych koncepcji w zakresie rodzinnego biznesu i wyjaśnia wpływ podstawowych pojęć na dobór *zmiennych wykorzystanych w modelu badawczym. Następnie, praca wyjaśnia w jaki sposób "rodzinność" wiąże się z zasadniczą definicją biznesu rodzinnego. W oparciu o spojrzenie oparte o zasoby (ang. resource-based view (RBV)), agency theory i teorie społecznego kapitału (ang. social capital theories) praca wyjaśnia w jaki sposób społeczne zasoby kapitałowe stanowią podstawę budowania zdolności firmy i jej przewagi konkurencyjnej. W oparciu o taką perspektywę, praca proponuje teoretyczny model, dyskutuje prawa oddziaływania między zmiennymi i nakreśla kierunki dla przyszłych badań w tym zakresie.*

Słowa kluczowe: teoria Dubina, przedsiębiorczość rodzinna, rodzinność, teoria zasobowa, przewaga konkurencyjna.

The Role of Hypertext in Consumer Decision Making. The Case of Travel Destination Choice

Raúl Valdez Muñoz[*]

Abstract

Travel is one of the most popular items people tend to be comfortable with purchasing over the Internet. Hypertext is a form of electronic text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails. This study explores the importance of hypertext in the travel destination choice from websites. Results show that hypertext links containing images of destinations, informative texts, and search tools are the three most important features utilized by tourist website browsers. This study aims to offer insights into new areas for further research on tourism websites design, application and evaluation.
Keywords: travel, internet, websites, destination choice, hypertext.

Introduction

The increasing rate of online transactions and the fast growth of online users provide clear evidence of the popularity of the communications technology. Customer-oriented and information-intensive tourism enterprises are increasingly adopting E-Business models to achieve their organizational goals (Buhalis & Licata, 2002; Law, Qi, & Buhalis, 2010). The fast adoption of ICT around the world and the expansion of the Internet have affected a great proportion of industries such as tourism in many countries.

The global economy in the next century will be driven by information technology, telecommunications, and tourism. This considers very specific characteristics of the tourist sector which need to cope with the large distances usually involved between the origin and destination of travelers.

By means of e-commerce, companies are selling and buying goods and services to consumers around the world. One of the most recent developments in e-tourism applications is at the destination level. Many tourism intermediaries have successfully integrated e-tourism in promoting destinations, providing

* *Ph.D. Raúl Valdez Muñoz, Department of Tourism, Business & Economics School, Universidad de las Américas, Puebla, Sta. Catarina Mártir, Cholula, Puebla, México, raul.valdez@udlap.mx.*

tourists with travel information, helping tourist enterprises to promote their products, and encouraging the creation of tourism network systems (Buhalis D., 2003; Buhalis D., 1998) (Xiaoqiu, Buhalis, & Song, 2003).

Tourism suppliers took advantage of the new opportunities and developed e-commerce applications by allowing users to access directly their products (Buhalis & Licata, 2002). Searching through the Internet is an interactive process between travelers and hypertext (the Internet) implemented through a computer and a web browser. Then, the understanding of travel information searchers' behavior on the Internet is essential to the design of useful Internet-based technology. The Internet is an interactive hypertext system where information nodes are "hyperlinked" according to their relevance (Boechler, 2001). In this way, when travelers' search for information on the Internet, their choices of links are determined by the value of relevance of the link anchors (linked texts, pictures or contextual information).

Tourism and the Web

Use of the Internet has grown 146.2% between 2000 and 2005 around the world. The use of the Internet is similarly high in many countries, such as USA: 61%, South Korea: 66%, Australia: 60%, Japan: 57%), Canada: 56%, UK: 53, and Germany: 50% (Gertner, Berger, & Gertner, 2006). Several regions of the world have grown even faster. The number of Internet users in Latin American and the Caribbean Countries grew by 211.2%. By 2011, the number of worldwide Internet users reached nearly two billion out of a population of approximately 6.93 billion (Stats, 2001). Changes in the economic, cultural and technological environments have definitely encouraged consumers to increase the use of the Internet in their quest to save time and money. Now, popular search engines, such as Yahoo and Google are being constantly improved to provide faster access of information for travelers (Mitchell, 2006).

Tourism is a key element of modern societies. It has contributed to local and regional economic development. Distribution becomes one of the most critical factors for competitiveness in tourism business. Appropriate distribution systems allow the building of bridges between destinations and travelers providing mechanisms for purchasing tourism products and destinations.

Internet has strengthened the relevance of electronic intermediaries and changing their positions as strategic suppliers to a degree that they can substitute traditional distribution channels. Virtual communities can be established between people with common interests enhancing the global knowledge basis by sharing advice based on personal experience (Buhalis D., 2003).

The ways that consumers search for already evaluated travel information is currently changing with the rising popularity of websites that contain content submitted by real travelers (e.g., TripAdvisor, Lonely Planet, MySpace, Facebook, and YouTube) (Cox, Burges, Sellitto, & Buultjens, 2009). This is possible now using

Web 2.0, which refers to the second generation of web-based services letting people collaborate and share information online in more sophisticated ways. Web 2 enables any individual to post their own content, opinions, videos, audio, or imagery on the web for other users to see and respond to.

The fast development of E-Commerce has dramatically changed the tourism industry (Buhalis, 2003; Ho & Lee, 2007; Buhalis &Law, 2008). By employing the Internet, Intranet and Extranet, many tourism organizations have successfully integrated this function in promoting destinations, providing tourists with pre-trip and in-trip information, helping small and medium tourist enterprises to promote their products, and internal management tasks. In tourism, a wide range of ICT technologies are used in order to reduce the cost and time required for undertaking particular activities. Computer reservation systems (CRSs) and global distribution systems (GDSs) represent technological solutions and transaction mechanisms between travel agencies, hotels, airlines, tourist destination, car rental firms, etc. CRSs and GDSs empower Internet travel portals enabling tourist enterprises to reach travelers directly.

Promoting travel destinations by websites

ICTs and particularly web based advertising tools have been used to redefine tourism and deliver products to end consumers (Law, Qi & Buhalis, 2010; Aaron, 2006; Gretzel, Yuan & Fesenmaier, 2000). Businesses, including customer-oriented and information-intensive tourism enterprises, are increasingly adopting E-Business models to achieve their organizational goals.

Internet advertising significantly impacts travel and purchase behavior (Buhalis & Licata, 2002; Tierney, 2000) and provides a medium to disseminate information to consumers in the form of interactive scenarios between travelers and companies. Tourism literature has found that attractive and stimulating advertising content design produces a positive perception of destinations promoted in websites (Wu, Wei, & Chen, 2008). Travel is one of the most popular items people tend to be comfortable with purchasing over the Internet. A major issue of the Internet is its ability to bring travel and hospitality services and products “live” to consumers and also the consumers' ability to access the information without time and space limitation. Thus, travel marketers must pay attention to the Internet application on marketing strategies and travel information distribution (Lin, 2005). According with several travel organizations and survey companies such as US Destination Marketing; Forrester Research, Trip Advisor; Bust Media and AC Nielsen, features such as room availability and rates, travel promotions, travel bulletins and alerts, chat/forum links and, information about travel destinations are those that most encourage internet user to utilize travel websites around the world. Over one–half of travel web users traveled to cities featured in tourism portals and approximately one-third of them research trips via internet. Forecast statistics demonstrate that in USA online leisure and individually booked business travel sales are projected to reach US $162.4 billion in 2012, and travel planning online increases spectacularly by means of thousands of websites (e.g. Lonely Planet, Travel Online, Travel Notes, Itravel net, When We...Get There, etc.) existing now around the world (Miller, Washington, & Miller, 2009).

Traditional media were previously used to deliver messages; if consumers noticed a tourist-destination advertisement, they had to physically travel to a store to make a purchase. Now, Internet stores combine both advertising and purchasing, thus enabling consumers to make a purchase instantly. Internet aids destination managers in identifying target markets and in accurately matching traveler's demands, hence, websites benefit enterprise–consumer relationships, help increase brand value, and allow the creation of a tourist image. Diverse studies demonstrate that 85% of advertising, marketing, and sales companies believe online advertising aims to increase traffic to the websites promoted. Viewing a banner on a website can convey a message; therefore, regardless of whether the consumer clicks or not, simply viewing a banner increases the chance of a purchase. (Wu, Wei, & Chen, 2008).

Online promotional sites content includes variables such as: web interface, background colors, pictures, sound effects, textual content and dynamic techniques that also contribute highly to advertisements' results. Consumers recall advertisements more effectively if they display images and texts. In contrast, confusing website designs have negative effects on the perception of tourist products and destinations, and decrease purchases generated by the website. Animated information is more likely to be recalled correctly; however, animation does not help the recall of advertisements. Users may remember animations on web pages, but those animations are not necessarily related to advertising content (Wu, Wei, & Chen, 2008).

Finally, the degree of personal involvement is a significant mediator for tourists' attitudes toward the website and its promotional effect. It has been determined that websites that engage and entertain travelers are more likely to be "clicked".

Due to the widespread use of the Internet as an important source of information, many tourist enterprises have shifted from printed brochures to the Internet during the last few years. Today, millions of travelers use the Internet to make travel plans such as getting information on destinations or checking prices and schedules. Several studies have shown the direct fit of the Internet environment for the marketing of travel and tourism products (Lin, 2005; Buhalis & Licata, 2002).

Web site development and Internet access have become popular and easy to use, broadening the scope of the production and consumption of this media. The typical user visits 25 websites a week spending as little as 48 seconds on each site. Hence, this short amount of time means that alternative tourist destinations are advertised seductively for the virtual tourist's gaze, designed specifically to attract the hurried user (Holman, 2011). However, other studies demonstate that travel planners can also stay for longer periods of time searching on tourist websites in order to choose the right leisure place, and, if the Web site contains the information that potential tourists are looking for, the information search process will be more efficient and satisfactory (Pan & Fesenmaier,2006).

All marketing strategies and sales tactics are based on implicit beliefs and concepts about consumer behavior. Consumer behavior concerns the process that consumers use to select, use and dispose of products, services, experiences or ideas to satisfy their needs and desires. Thus, knowledge of consumer behavior can be an important competitive advantage for tourism enterprises.

Essentially a marketing strategy is a set of decisions and commercial actions focused to provide superior customer value to target markets. These decisions and actions constitute the marketing mix; that is to say, the product, price, communications, distribution and services provided to the target market. In the web market context, online consumers perform all the functions of traditional consumers on a computer while interacting with a system, thus, the physical store has been transformed into a virtual store through many tools of ICTs.

In the past seventeenth years, online consumer behavior has become an emerging research area with an increasing number of publications per year. Most of the components of consumer behavior theory have been applied to the study of online consumption; however, results demonstrate that there are significant differences between offline and online consumer behavior that warrant a distinguishing conceptualization.

Early studies on online consumer behavior largely were oriented to explore how consumers adopt and use Internet tools. Later, other studies found that: a) personal innovativeness is a key personality trait that explains consumer online purchase, b) internet shopping is strongly affected by the presentation mode, search engines, and navigation structure of product items, c) trust in an Internet store is a salient determinant of online shopping, and, d) consumer trust and satisfaction were the key antecedents of continued purchase.

More recently, studies seem to be oriented to build models to understand the main aspects of consumer behavior online (e.g. information acquisition, purchase decision, reasons for not shopping online, etc.). Several studies aim to determine if online consumers think and act differently than offline consumers; other studies attempt to explain why online consumers are more demanding and utilitarian in their shopping expeditions; and, finally, diverse studies try to determine the reason by which customer loyalty on the web is generally low in comparison with offline customers.

Business-to-consumer (B2C) electronic commerce depends not only on consumer acceptance of Internet technologies as viable transaction means, but on consumer recognition of web retailers as reliable suppliers. The Internet infrastructure generates an implicit uncertainty around on-line transactions because it exist a spatial and temporal separation between consumers and web retailers. Certainly, a risk of monetary loss exists, since consumers have to rely on electronic information and thus become vulnerable to incomplete or distorted information provided by web retailers, and also, a risk of loss of privacy derived from providing personal information to web retailers (Pavlou, 2003).

Product information search can be a fun-seeking experience and can improve consumer decision making through complex, nonlinear, and non-directed queries being an important incentive for people to shop online (Koufaris, 2002). In the new electronic competition, web stores have responded to the call for customer control by providing various site features like internal search engines and systems to enable consumers to easily find what they need, learn more about products/ services and quickly purchase them.

As well as in offline purchasing, price, quality, and product type constitute three key elements in shaping consumers' perception online. Attributes such as ease of use, quality, security and reliability are included in the study of electronic commerce systems. Indeed, web specific factors such as ease of navigation, interface and network speed are also considered. Finally, factors pertaining to merchant and intermediaries characteristics like service quality, privacy and security control, brand/reputation, delivery/logistic, and post sales services integrate the broad field of online consumer behavior (Koufaris, 2002; Pavlou, 2003; Cheung et al., 2003).

The destination choice process from websites

Nowadays, in tourism business, destinations must design online marketing strategies to succeed in their efforts to attract visitors. In 2005, a survey of 18,000 online consumers in 18 countries showed that in 14 of those countries the web was the most important source of information employed by Internet users in deciding where to go for their vacations. Through the increased use of the Internet, the tourism website has emerged as a useful lens with which to examine the shifting nature of global flows of information, experience and consumer behavior.

A strong country brand with a clear focused image can be used to attract tourists, investors, and businesses that will stimulate the economy and create economic growth. Countries can be taught to use marketing to manage their promotional activities in creating a brand that facilitates worldwide tourism. In Europe the shaping of image and marketing of a country has been put into action in countries such as Germany, France, Portugal, Estonia, and Poland. Destinations are treated as products and specifically, holiday destinations are considered place-products within a marketing system. Destination branding involves the creation of a single, strategic idea that captures what the country/destination has to offer. The capacity to offer travelers a flexible and personalized relationship is probably one of the most important advantages offered by e-commerce to tourism retailers. It allows them to provide accurate and timely information to consumers which, in turn, often generate additional sales. Also, personalization increases the level of loyalty consumers hold toward a retailer.

Consumer decision process intervenes between the market strategy - as implemented in the marketing mix - and the outcomes. A company can succeed if consumers see a need that its product can solve, choose this product, proceed to buy it and become satisfied with the results of the purchase. Thus, consumer satisfaction is a major concern of companies.

A central component of consumer decision process is the problem recognition. Problem recognition involves a discrepancy between consumers' desired state (what they would like) and their actual state (what they perceive as already existing). Hence, if this discrepancy is sufficiently large and important, consumers will search for solutions. Relevant information from consumers' memory (internal search) or from external sources is used to determine if a satisfactory solution exists. Memory of past searches, personal experiences and learning are the mayor internal sources.

Today, a most relevant external source of information used by consumers is the Internet or World Wide Web (WWW). WWW consists of search engines, websites, specific addresses or files in the network, to access to those with the requested characteristics. The Internet contains market data in the form of advertising messages associated with search, entertainment, and general information sites and Internet presence Sites (IPS) also called home pages. A home page is a Web site created and maintained by organizations (enterprises, government agencies, altruist organizations, cultural organizations, etc.) or individuals that provide detailed product and organizational data. Into the Web pages, banner ads are a very important promotion tool.

Banner ads represent today a powerful mean to lead consumers to the company or product home page. In tourism industry, the banners ads play a very important role connecting travelers with thousands of websites of travel agencies, hotels, transportation companies, restaurants, car rental companies, etc. and, maybe more important, with thousands of tourist destination sites available to be chosen.

Tourist destination managers must visualize major decisions concerning the use of Internet. Having a destination Web site, they need to decide if the site should be active or passive. A passive Web site focused on providing only specific information about a tourist destination whereas an active Web site allows the destination managers to develop a relationship with visitors over time and provide them with additional information related to the site facilities and other tourist attractions and services. No matter if a Web site is active or passive; it needs to be easy to access, up-to-date, logical and oriented to travel needs. The more complete and interactive the Web site, the more effective and useful it will be for marketing and commercial purposes.

Web 2.0 enables any traveler to post their own content, opinions, videos, audio, or imagery to the web for other travelers to see and respond to. Web 2.0 includes the ability to integrate information in new forms, the desire to harness distributed knowledge, and the need to engage users as co-developers (Cox, Burges, Sellitto, & Buultjens, 2009). Hyung-Park, Lee, & Hang (2007) establish that online consumer reviews are often considered more trustworthy and credible than information which is provided by suppliers of products and services, presumably because consumers provide more trustworthy information.

Consumer characteristics of travelers affect perceptions about benefits and search costs of use websites. A satisfying experience with a particular destination increases the probability of a repeat choice of this destination. In contrast, a negative travel experience decreases the likelihood of travel to the same place and/or choice a similar destination. Travelers who are highly involved with a destination category normally seek information relevant to the destination category on an ongoing basis. Research has demonstrated that tourists use different types of online information sources depending on where they are at in the travel planning process—that is the pre-trip, during trip and post-trip stages (Choi, Letho, & O'Leary, 2007; Seabra, Abrantes, & Lages, 2007).

Concerning how travelers make destinations choices, they can follow sequential process based on attributes or on attitudes about alternative places to be considered. Attribute-based choice required the knowledge of specific and distinctive attributes of each place and attribute-by-attribute comparison across places. In the field of tourism, it is extremely important for destination managers to understand how travelers search for and review information at the various stages of their travel decision making process (Choi, Letho, & O'Leary, 2007).

The meaning of the product is one of the variables that predict searching and buying behavior. Meaning is derived from the practical utility of the product and is intrinsically linked to its convenience, efficiency, and the exchange value per se (Vaz & Pérez-Nebra, 2007). The symbolic meaning is the result of social experiences, which lead to the subjective categorization of the product, by means of social institutions, communication systems, and the culture of a society. In the field of tourism, research has found that tangible and abstract attributes of tourist sites influence destination choice behavior. These attributes can be considered by tourists as symbolic meanings of places affecting their destination choice process (Klenoski, 2002).

Pan and Fesenmaier (2006) note that travel consumers tend to seek information related to 10 key sub-decisions regarding the trip-travel partners: the destination; expenditure required; activities; travel dates; attractions to visit; transportation providers; length of trip; rest stops; and food stops. Jeng & Fesenmaier (2002) note that travelers generally collect and review various forms of travel information early in the travel decision making process in order to minimize the risk of making a poor destination decision. The central role that individual consumers have in submitting, reviewing, and responding to online content is reflected in terms such as user-generated content (UGC) or consumer-generated media (CGM) that are commonly used for Web 2.0 (Gretzel, 2006, 2007). In the marketing context, UGC sites are effectively a form of consumer to consumer e-marketing (Ahuja, Michels, Walker, & Weissbuch, 2007).

The role of the hypertext in the travel destination choice from websites

Destinations satisfy the need for travelling and are recognized as a set of products, facilities and services that comprise the total tourist product. With the continuing growth of the Internet and, in particular, the World Wide Web (WWW) a new marketing potential exists for tourist destinations. Websites offer information on a variety of categories, including travel, geography, tourist information centers, reservation services and an events calendar. All destinations bring together many tangible elements and attractions (e.g. museums, theatres, parks, monuments, etc.) and also a number of intangible aspects (e.g. art, ambience, culture, etc.) as well as facilities and services (e.g. hotels, restaurants, information offices, etc.) for tourists.

Despite the prevalent use of Internet sites in the travel planning process, there is still limited research available on the information search process and decision making behavior related to online vacation planning (Ho & Liu, 2004; Pan & Fesenmaier, 2006). A vital aspect of Web pages is to be visually attractive to their readers The problem is that many Web pages tend to contain too much text, too little graphics and not enough attractive appearance. Then, the challenge for Web pages is to offer relevant travel-related information together with useful links and graphical illustrations of tourist attractions.

Hypertext is a term originally used by Theodor H. Nelson in the 1960s. It refers to a form of electronic text that follows a non-sequential writing and "allows choices to the reader, best read at an interactive screen". Computer hypertext contains an enormous number of signifiers and it can be defined as a "text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails (Landow, 2009). Specifically, hypertext is a medium of gathering information linking verbal, nonverbal and other forms of data. Hypertext expands the notion of text beyond the solely verbal concept, linking passages of written discourse to images, maps diagrams and sounds (Landow, 2009).

Utilizing hypertext users have the possibility of creating, adding, connecting and sharing information from diverse sources, and the possibility of acceding to documents in non-sequential way, unlike more traditional information systems in which the access is naturally sequential. This flexibility allows readers to navigate across different documents and/or the Web pages interlinked around a central subject.

Methodology

One of the most unclear and understudied issues in the travel industry is the role that Web site links (e.g. hypertext tools) have in the users' travel behavior and decision making processes. However, academicians and practitioners agree that websites are a very important source of information for prospective travelers when they are in the research phase (i.e. information search) of the travel planning process and, particularly when they need to choose a leisure destination.

Studies conducted in the USA demonstrate that approximately one third of website users are influenced by links with social content sites when making purchase decisions (Cox, Burges, Sellitto, & Buultjens, 2009). This suggests that the potential for websites to have a strong and credible influence on travelers' destination choice depends on how credible and transparent the information appearing in these sites is.

To explore the importance of hypertext in the travel destination choice from websites, a quantitative study was conducted using a survey of individuals who were known to use the Internet to gather information when choosing leisure destinations. The survey was developed based on website features such as texts, photographs, videos, links with tourist services and other web page elements.

A questionnaire of ten questions was designed and used to collect the information needed. This instrument was developed based on website features such as texts, photographs, videos, links with tourist services and other web page elements. It contained two sections: the first section was focused on discovering the type of links considered by travelers as the most useful when they search information about leisure places and, more important, when they choose a tourist destination. The final section asked for the demographic characteristics of participants.

The sample of the study was integrated by individuals having experience as Web browsers. Experience of Internet use was, therefore, a filter, and non-users were excluded from the survey. In order to determine the proportion of Web browsers, the questionnaire was applied to 1000 individuals over a two-week period in the city of Puebla, Mexico, in diverse university campuses and travel agencies. The proportion of Web users was 66% and the proportion of non-users was 34%.

To obtain effective measurement tools, the questionnaire was submitted to a pilot-test. During this stage, the questionnaire was refined and the size of sample (345 individuals) was determined following the probabilistic-proportions formula (where Z=1.96, 95% confidence level; p=0.66; q=0.34; E=0.05).

The survey process was carried out applying 365 valid questionnaires in order to anticipate a 5% of invalid questionnaires. The database was processed using the software SPSS 18 (Statistical Package for the Social Sciences).

Results

Respondents were split between male 134 (36.71%) and female 231 (63.27%) individuals. Ages ranged from 18 years to 57 years, with a mean of 21.3 years (σ = 2.83). The great majority of respondents were students (98%) and, 83.3% of them use the Internet daily, whereas only 16.7%, some days a week.

The importance granted by individuals to Web page links was measured by means of question 1 utilizing a 4-point ordinal scale, where the value of "1" is assigned to the most important link, and the value of "4" to the less important link. Results demonstrate that the images shown, the search section, and the informative texts are the three more important features of tourist Web pages (ranked first (53%), second (35%), and third (29%) respectively). Chi-squared tests were performed to identify if correlations between the three more important links identified by individuals and their age and gender exist. Results demonstrate that there are not statistically significant correlations between these variables (see Table 1).

Table 1. Correlations between the most important links and demographics of individuals

Variables	Pearson Chi-Square χ^2	df	Sig.†
Web images vs. gender	3.880	2	0.140
Informative texts vs. gender	2.880	2	0.236
Search section vs. gender	0.383	2	0.826
Web images vs. age	30.692	30	0.431
Informative texts vs. age	37.098	28	0.117
Search section vs. age	14.035	16	0.595

† * Sig.<0.05; ** Sig.<0.01

The use of links (hypertext) appearing in tourist websites was evaluated by means of a 4-point nominal-type scale anchored at value 4 (always use the links) and 1(never use the links). The most frequent answer was point 2 (many times use the links) with 48.5% of responses, followed by point 3 (few times use the links) with 47.7% of responses.

The importance of links in tourist websites was determined using a 4-point nominal-type scale anchored at value 4 (extremely important) and 1 (not important). Results show that point 2 (very important) was the most frequent answer with 65.7% of responses. Indeed, Chi-squared coefficients were calculated to explore if gender, age and occupation of interviewers could be correlated with the use of hypertext links in tourist websites. Results show that links usage and gender are correlated variables, with women using the hypertext links more frequently. In contrast, age and occupation of respondents are not correlated with the use of links in tourist websites (see Table 2).

Table 2. Correlations between link's usage and demographics of individuals

Variables	Pearson Chi-Square χ^2	df	Sig.†
Links' use vs. gender	8.850	3	0.035*
Links' use vs. age	57.477	45	0.100
Links' use vs. occupation	7.728	15	0.934

† * Sig.<0.05; ** Sig.<0.01

To explore the existence of correlations between the demographic characteristics of Web users and the importance assigned by them to hypertext links, Chi-squared tests were performed. Results also demonstrate that there are not significant correlations between these variables (see Table 3).

Table 3. Correlations between links' importance and demographics of individuals

Variables	Pearson Chi-Square χ^2	df	Sig.†
Links' importance vs. gender	2.795	4	0.593
Links' importance vs. age	67.860	60	0.227
Links' importance vs. occupation	9.014	20	0.983

† * Sig.<0.05; ** Sig.<0.01

To identify the types of links preferred by tourist websites users an ordinal scale was utilized. In this scale, the value of "1" corresponds to the most preferred link, and the value of "4"to the less preferred link.

The most preferred links (45.9% of responses) were those that connect users with tourist services (e.g. travel agencies, hotels, transportation firms, etc.) others than those appearing in the website. In second place, the links offering information about the website's attractions (41% of responses) and, in third place, the links containing information about tourist services available in the website browsed. Also, Chi-squared coefficients were calculated to identify the existence of possible correlations between the demographic characteristics of Internet users and the three most preferred links explored by them. Again, Chi-squared coefficients showed that there are not significant correlations (see Table 4).

Table 4. Correlations between the most preferred links and demographics of individuals

Variables	Pearson Chi-Square χ^2	df	Sig.†
Tourist services in other places vs. gender	1.131	2	0.568
Tourist services in other places vs. age	22.185	26	0.679
Tourist services in other places vs. occupation	7.362	4	0.118
Site tourist-attractions vs. gender	1.950	2	0.377
Site tourist-attractions vs. age	15.486	26	0.948
Site tourist-attractions vs. occupation	3.760	6	0.709
Site tourist-services vs. gender	0.692	3	0.875
Site tourist-services vs. age	30.090	30	0.461
Site tourist-services vs. occupation	9.845	15	0.829

† * Sig.<0.05; ** Sig.<0.01

The level of influence of hypertext links on tourist's destination choice was evaluated using a 4-point Likert-type scale anchored at values: 4 (essential for make a choice) and 1 (non-required for make a choice). Answers to this question show a mean value of 2.79 (σ=0.706, mode=3, median=3) that, being close to value 3. This means that Internet users consider that hypertexts exert a powerful influence on the destination-choice-processes of travelers.

In addition, a t-test was performed to explore possible differences between the opinions expressed by men and women concerning the influence of hypertexts on their destination-choice decisions. Results show that the responses of men and women are very similar (t=-1.303, df=363, sig. =0.193>0.05), hence, the gender of respondents does not influence their tourist destination choice.

Finally, an ordinal scale was used to rank the three more influential links on the travel-destination choice of Web users. Results of this analysis show that hypertext links having photos were ranked in first place (47%), the links containing information about the destinations' attractions were ranked in second place (45%), and the hypertext links connecting with tourist services (e.g. hotels, travel agencies, transportation services, etc.) available in the destinations (24%) were ranked in third place.

No significant correlations were detected between these three more influential links and the demographic characteristics of individuals (see Table 5).

Table 5. Correlations between the most influential links and demographics of individuals

Variables	Pearson Chi-Square χ2	df	Sig.†
Destination's photographs vs. gender	0.288	2	0.866
Destination's photographs vs. age	42.719	30	0.062
Destination's photographs vs. occupation	15.404	10	0.118
Site tourist-attractions vs. gender	4.09	2	0.129
Site tourist-attractions vs. age	26.189	28	0.563
Site tourist-attractions vs. occupation	3.394	6	0.758
Site tourist-services vs. gender	0.710	2	0.965
Site tourist-services vs. age	11.283	16	0.792
Site tourist-services vs. occupation	7.395	8	0.495

† * Sig.<0.05; ** Sig.<0.01

Considering that this study was carried out to explore the importance of hypertext links on travel destination choice, two correlation analyses were performed between the most important link of tourist websites and: 1) the most preferred link, and 2) the most influential link on the tourist-destination choice. The results demonstrate a low level of correlation between these variables (ρ=0.062, and ρ=0.195 respectively). Hence, we can conclude that the use of hypertext links showing beautiful images of destinations (the best ranked) are not correlated with the use of both the links connecting with tourist services others than those appearing in the website (the most preferred) and the links containing destinations' photographs (the most influential on the tourist-destination choice).

Conclusions and managerial implications

Appropriate electronic distribution systems provide good mechanisms for purchasing tourism products and destinations. The Internet has increasingly impelled the relevance of tourist-product suppliers and has contributed to replacement of traditional distribution channels. Certainly, through the Internet, tourism companies have successfully promoted a great variety of destinations.

Promoting travel destinations online is today a great business and many travel developers provide information to viewers interested in leisure destinations. This study examines the influence of hypertext links appearing in tourist websites on the travel-destination choice of leisure travelers.

Important conclusions can be drawn from the findings of this study. Results show that the use of links in tourist Web pages is a very frequent practice (48.5% of responses) for young individuals (21 years, average), and, principally, for female undergraduate students (64%). Thus, hypertext links available in tourist websites must be considered as a very important promotional tool utilized by individuals when search and evaluate tourist destination alternatives.

Hypertext links containing images of destinations, informative texts, and search tools are the three most important features utilized by tourist website browsers. Then, we can conclude that hypertext links appearing in tourist websites exert a powerful influence on the tourist-destination choice processes of Internet users.

Results demonstrate that links connecting with accommodation services, travel agencies, transportation companies and other complementary tourist services were ranked the most preferred types of links used by individuals. Specifically, links containing photographs of tourist sites (47%) and informative texts (45%) were classified by individuals as the most influential features when they choose a tourist destination. Only the gender of respondents seems to be related with the use of links available in tourist websites. In contrast, their age and occupation are not related with the importance, use, and types of links preferred by them when browsing tourist websites. Hence, Regardless of age, or occupation, individuals "click" on hypertext links that allow them to visualize destinations, to get relevant information about these places, and to contact tourist services suppliers that facilitate their travel decision.

Previous studies have established that the search of travel destinations in the Internet is determined by the relevance of the link anchors as pictures, texts or other hypertext features. For managers of tourism destination companies, tourist wholesalers and other tourism business, the results of this study can serve as a reference to help them identify the strengths and weaknesses of their websites and take competitive advantage in the market place because more effective tourist websites draw consumers into purchasing viewing destinations in a more favorable light.

Results of this study suggest that the demographic profile of individuals browsing tourist websites is not a salient factor influencing the destination-choice processes of individuals. Furthermore, results of this study also suggest that tourist websites designers must emphasize the inclusion of hypertext links containing attractive visual features, non-extensive texts and search tools enabling Internet users to get relevant information about tourist destinations. Hence, companies competing in tourism markets must include more attractive hypertext tools in order to improve the effectiveness of their promotional Web pages.

Studies concerning online tourism behavior have focused principally on consumers' profiles and tourist product characteristics, but they have neglected other factors such as the influence of website features on the destination-choice decisions of travelers. This study expects to offer insights into new areas for further research on tourism websites design, application and evaluation. For this reason, this study focused on analyzing website hypertext links in different scope that other precedent studies. Nevertheless, it would be worthwhile for future research to analyze more deeply other important issues related to use of hypertext links and their implications on tourist behavior. The findings of this study are expected to benefit researchers and practitioners by helping them better understand the importance and the role played by hypertext links in the context of tourist-destinations choice behavior.

References

Aaron, T. M. (2006). Ken-Air tours—The volatile tourism market in Singapore. *Tourism Management* , 27, 1371-1372.

Ahuja, R. D., Michels, T. A., Walker, M. M., & Weissbuch, M. (2007). Teen perceptions of disclosure in buzz marketing. *Journal of Consumer Marketing*, 24, 151-159.

Boechler, P. M. (2001). How Spatial is Hyperspace/ Interacting with Hypertext Documents: Cognitive Process and Concepts. *CyberPsychology & Behaivor*, 4, 1, 23-46.

Buhalis, D. (2003). *eTourism. Information technology for strategic tourism management.* Essex, England: Pearson Education Ltd.

Buhalis, D. (1993). RICIRMS as Strategic Tool for Small and Medium Tourism Enterprises. *Tourism Management*, 3, 14, 366-378.

Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management*, 19 (3), 409-423.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management. *Tourism Management*, 29, 4 , 609-623.

Buhalis, D., & Licata, M. C. (2002). The future e-tourism intermediaries. *Tourism Management*, 23 (3), 207-220.

Cheung, et al. (2003). Online Consumer Behavior: A Review and Agenda for Future Research. 16th Bled eCommerce Conference eTransformation (pp. 194-218). Bled, Slovenia: 16th Bled eCommerce Conference.

Choi, S. J., Letho, X. Y., & O'Leary, J. T. (2007). What does the consumer want from a DMO website? A study of US and Canadian tourists' perspectives. *International Journal of Tourism Research*, 9, 59-72.

Cox, C., Burges, S., Sellitto, C., & Buultjens, J. (2009). The Role of User-Generated Content in Tourist's Travel Planning Behavior. *Journal of hospitality Marketing & Management*, 18, 743-764.

Gertner, R. K., Berger, K. A., & Gertner, D. (2006). Country-Dot-Com: Marketing and Branding Destinations Online. *Journal of Travel & Tourism Marketing*, 21, 3, 105-116.

Gretzel, U. (2006). Consumer generated content: Trends and implications for branding. *e-Review of Tourism Research*, 4 (3), 9-11.

Gretzel, U. (2007). *Online travel review study:Role & impact of online travel reviews*. Texas A & M University, Laboratory for Intelligent Systems in Tourism, College Station, TX.

Gretzel, U., Yuan, Y. L., & Fesenmaier, D. (2000). Preparing for the economy: Advertising strategies and change in destination marketing organizations. *Journal of Travel Research* , 39 (2), 146-156.

Ho, C. L., & Liu, Y. P. (2004). An exploratory investigation of web-based tourist information search behavior. *Asia Pacific Journal of Tourism Research* , 10, 351-360.

Ho, C.-I., & Lee, Y.-L. (2007). The development of an e-travel service quality scale. *Tourism Management*, 28, 6,1434-1449.

Holman, C. (2011). Surfing for A Shaman: Analysing an Ayahuasca Website. *Annals of Tourism Research*, 38 (1), 90-109.

Hyung-Park, D., Lee, J., & Hang, I. (2007). The effect of on-line consumer reviews on consumer purchase intention: The moderating role of involvement. *International Journal of Electronic Commerce*, 11 (4), 125-148.

Jeng, J., & Fesenmaier, D. (2002). Conceptualizing the travel decision-making hierarchy: A review of recent developments. *Tourism Analysis,* 7, 15-32.

Klenoski, D. B. (2002). The "pull" of tourism destinations: a means-end investigation. *Journal of Travel Research*, 40 (4), 385-395.

Kotler, P., & Gertner, D. (2002). Country as brand, product, and beyond: A place marketing and brand management perspective. *Journal of Brand Management*, 9 (4/5), 249-261.

Koufaris, M. (2002). Applying the Technology Acceptance Model and Flow Theory yo Online Consumer Begavior. *Information Systems Research*, 205-223.

Landow, G. P. (2009). *Hipertexto 3.0. Teoría crítica y nuevos medios en la era de la globalización*. (A. J. Fernández, Trad.) Barcelona, España: Ediciones Paidós Ibérica S. A.

Law, R., Qi, S., & Buhalis, D. (2010). Progess in tourism management: A review of website evaluation in tourism research. *Tourism Management*, 31, 297-313.

Lin, L.-C. (2005). Internet as a Distribution Channel of Travel Information: A case study. *The Consortium Journal*, 9 (2), 49-57.

Miller, R. K., Washington, K. D., & Miller, R. K. (2009). *The 2009 travel&tourism market research handbook* (10th ed.). Loganville, Georgia, USA: Richard K. Miller & Associates.

Mitchell, A. (2006). The online retail revolution: All in the shopper's mind. *Marketing Week*, 29, 8, 28-29.

Pan, B., & Fesenmaier, D. R. (2006). Online Information Search:Vacation Planning Process. *Annals of Tourism Research*, 809-832.

Pavlou, P. A. (2003). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk wirh the Technology Acceptance Model. *International Journal of Electronic Commerce*, 7 (3), 69-103.

Seabra, C., Abrantes, J. L., & Lages, L. F. (2007). The impact of using non-media information sources on the future use of mass media information sources.

The mediating role of expectations fulfillment. *Tourism Management*, 28, 1541-1554.

Stats, I. W. (2001). *World Internet Statistics*. Retrieved september 17, 2011, from Internet World Stats. Usage and Population satistics: http://www.internetworldstats.com/

Tierney, P. (2000). Internet-based evaluation of tourism web site effectiveness: Methodological issues and survey results. *Journal of Travel Research*, 39 (2), 212-219.

Vaz, C., & Pérez-Nebra, A. R. (2007). The Influence of Human Values on Holiday Destination Choice in Australia and Brazil. *Brazilian Administration Review*, 4 (3), 63-76.

Wu, S.-I., Wei, P.-L., & Chen, J.-H. (2008). Influential factors and relational structure of Internet banner advertising in the tourism industry. *Tourism Management*, 29, 221-236.

Xiaoqiu, J., Buhalis, D., & Song, H. (2003). ICTs & Internet Adaption in China's Tourism industry. *Internayional Journal of Information Management*, 451-467.

Abstract (in Polish)

Podróżowanie należy do najpopularniejszych produktów, które nabywane są za pomocą internetu. Hipertext jest formą elektronicznego tekstu złożonego z bloków słów (lub obrazów) połączonych elektronicznie przy pomocy różnorodnych ścieżek, łańcuchów i szlaków. Niniejsza praca bada istotność hipertekstu w wyborze docelowych miejsc podróży poprzez strony internetowe. Rezultaty badań wskazują, że hipertekstowe łącza zawierające obrazy miejsc podróży, informacje w formie testu i narzędzia poszukiwania informacji są trzema naistotniejszymi cechami stron internetowych dla osób zainteresowanych tematyką turystyczną. Praca oferuje wgląd w przyszłe obszary badawcze nad projektowaniem, zastosowaniem i oceną stron internetowych.

Słowa kluczowe: podróżowanie, internet, hipertext, webpage