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.

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[*]   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:
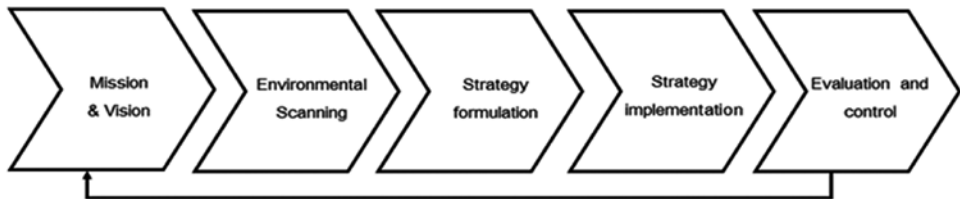

Figure 1. Strategic planning process, according with Kaplan and Norton (1996)

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.
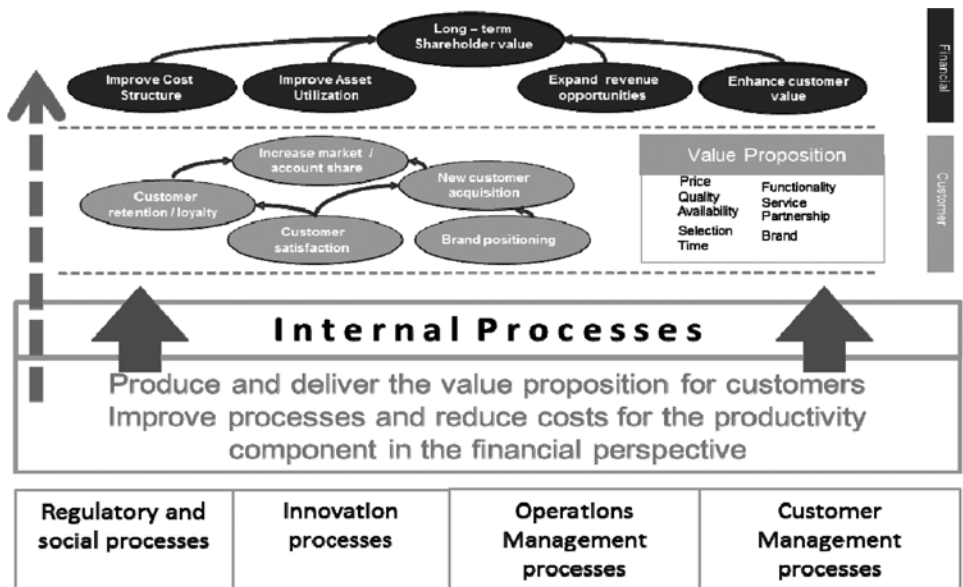

Figure 2. Prepared by the authors, according to literature

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:

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

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:

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

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).

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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 kluczowe: firma społecznie odpowiedzialna, innowacyjność, akcje.