

# CEOs' MONETARY INCENTIVES AND PERFORMANCE OF MEXICAN FIRMS

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## Abstract

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This paper analyzes if changes in CEO remuneration and the execution of CEO stock options impact firm performance, under an emerging market context. Data is obtained from 88 non-financial companies listed in the Mexican Stock Exchange (2001-2012). A dynamic panel specification is employed, and regressions are run through the Generalized Method of Moments. Some evidence is found on the negative relationship between flat monetary incentives and Mexican firm performance, specifically for normal times. In addition, financial incentives based on results (particularly CEO stock options) do not imply higher firm performance. Results suggest that companies in particular contexts should move towards the development of CEOs, more than promoting mostly monetary incentives for boosting firm performance. Companies operating in Mexico will gain from hiring intrinsically motivated CEOs, together with testing different extrinsic rewards (neither flat nor stock options) in order to attain additive effects on intrinsic motivation.

**Keywords:** Self-Determination Theory, Agency Theory, Monetary Incentives, Firm Performance, Emerging Markets

## 1. INTRODUCTION

In order to align CEOs' and shareholders' objectives, monetary incentives are the main motivation device used by most companies around the world (Harris and Bromiley, 2007). It is thought that personal economic gains will boost chief executive officers' efforts towards an efficient leadership for profit maximization (Jensen and Murphy, 1990). This idea has its roots in the Agency Theory, which suggests that executives are materialistic, self-interested, and individualistic people. These assumptions underlying the Agency Theory come from the notion of economic utilitarianism (Ross, 1973), and are based on methodological individualism (Donaldson, 1990). It is assumed that executives' financial rewards come from negotiations between managers and the Board of Directors, resulting in optimal levels which are efficient reducing agency costs (Bebchuk and Weisbach, 2010).

Nevertheless, firms' poor performance and corporate scandals that have taken place during the most recent global financial crisis incite the debate on the pertinence of certain monetary incentives as proper corporate governance mechanisms. Managerial financial rewards might be related with excessive executive power, and instead of a solution, part of the agent-principal problem (Bebchuk and Weisbach, 2010). This applies mainly to Anglo-Saxon countries, where ownership concentration is low. Consequently, monitoring costs for shareholders

usually exceed its benefits, which provide CEOs with higher degrees of freedom to look after their own objectives. Significant payments in spite of low firm performance have been widely documented and criticized by the media, particularly in developed economies where information on remuneration is widely available. During turbulent episodes, agency costs rise, increasing the odds of entrenchment by managers and directors. The fulfilment of private benefits (such as excessive monetary rewards) is detrimental to other stakeholders' interests, and generally harms companies' performance (di Donato and Tiscini, 2009; Mitton, 2002).

The previous phenomenon has attracted the attention of economists, business people, and psychologists. Some economists, based on a more holistic human behavior approach than the simple homo economicus view, have accepted the narrowness of motivation systems based solely on monetary rewards, particularly when these are not related to performance. The adoption of incentives that favor well-being, such as recognition, respect, cooperation, and the possibility of maintaining a balance between personal activities and work, are now more commonly addressed by economic literature (Arthurs and Busenitz, 2003; McCabe et al., 2003). And, in the business world there is a deep interest in improving competitiveness and firm value. In order to attract and keep the right type of CEOs for the firms- those involved with companies' long-term success, ethical, and intrinsically motivated- many companies have incorporated in

their motivation schemes both monetary and non-monetary rewards. As discussed by Dyer and Reeves (1995), bundles are more effective than individual motivation practices. In the psychological arena, it has been brought to attention that motivation involves both complementary and non-additive intrinsic and extrinsic incentives. As so, alternative theories such as the Self-Determination Theory (Deci and Ryan, 1985) serve to explain that some monetary rewards (extrinsic incentives) can detriment intrinsic motivation, with negative effects on productivity and performance.

In spite of the above, there are still doubts on the proposition that certain monetary rewards might not be effective and could even harm firm performance. Many believe that this phenomenon can be biased by a particular crisis event, and possibly not visible at other time horizons. And, as this singularity has been documented mainly for developed economies, it might not be possible to generalize the findings to other markets. Most of the research on the relationship between monetary incentives and firm performance is experimental, cross-sectional, and based on case studies for employees (not CEOs) in developed nations (Dyer and Reeves, 1995; Camerer and Hogarth, 1999; Rynes et al., 2004). Results are non-conclusive; around fifty percent of experiments show a positive relationship between firm performance and financial incentives, while the rest manifest the opposite (Bonner et al., 2000). Hence, these queries have not been completely addressed.

This paper explores some of these gaps, considering CEOs in an emerging market scenario and using panel data that contains both normal times and the recent financial crisis period. There are differences in materialistic values among developed and emerging markets. When considering Latin America, it drives to attention that contrary to Europe and the United States, money is not significantly related to happiness (Rojas, 2007; Beytia, 2016). This finding questions if monetary rewards represent an effective incentive for Latin American CEOs. In addition to the above, in emerging markets, and specifically in Latin American countries, corporate governance practices and ownership structure of firms are quite different from that prevailing in many developed nations. In these emerging economies, external corporate governance schemes and regulations are comparatively weaker, which allows for more management entrenchment actions against stakeholders (La Porta et al., 1999; Sáenz-González & García-Meca, 2014). Hence, CEOs can obtain several privileges (such as high financial rewards), which are not shared by other stakeholders, and adversely affect corporate profitability (Lemmon and Lins, 2003). However, as in these economies ownership concentration tends to be greater and a larger percentage of corporations are controlled by families, the conflict between executives and shareholders is reduced as CEOs are usually monitored by majority shareholders that protect themselves through internal controls that prevent opportunistic behavior (Khanna and Palepu, 2000). As such, the odds for disproportionate monetary incentives due to excessive managerial power are lessened, and financial rewards might serve to reduce the agent-principal conflict and consequently

produce positive corporate outcomes. Hence, this particular context is quite different from many western economies. Executives' excessive power and its consequences for shareholders is the axis of the principal-agent conflict in countries like USA and the UK. Instead, in Mexico and other places where companies are controlled by majority shareholders, the problem takes place basically between majority shareholders and minority shareholders. Therefore, expropriation by external (not part of the controlling group) CEOs through high monetary compensations is not that common, even if these economies are weaker in terms of corporate governance.

This study uses a novel database, constructed from the annual reports of 88 non-financial companies, listed in the Mexican Stock Exchange from 2001-2012. This research is the first to consider if changes in CEO remuneration (where 70-80% of payments offered to Mexican CEOs are fixed or flat) and the execution of CEOs' stock options (a monetary reward more contingent to corporate results) constitute favorable incentives for Mexican firm performance, both during normal and crisis periods. The latent conflict between majority shareholders and other stakeholders is isolated by including only companies with non-family (external) CEOs. This in turn permits to take into account solely the agency problems between executives and shareholders, which according to the Agency Theory can be diminished through monetary rewards. In spite of it, results evidence a negative impact of flat monetary incentives on firms' performance during normal times and no association between the execution of CEOs stock options and companies' results, which is in line with alternative frameworks such as the Self-Determination Theory; therefore, the need to re-consider the Agent-Principal Theory in these types of contexts is discussed.

The paper is organized in the following way: Section 2 refers to the literature review and hypothesis construction. Section 3 deals with the methodology. It brings up the data, variables, presents descriptive statistics and methods. Section 4 shows econometric results and robustness checks. A dynamic panel specification is employed. In order to deal with endogeneity problems, regressions are run through the Generalized Method of Moments (GMM). Section 5 discusses results and concludes.

## 2. LITERATURE REVIEW AND HYPOTHESES

After the recent global financial crisis, more debate has arisen (particularly in developed economies), regarding the convenience of certain companies' monetary incentives as worthy motivation mechanisms. Motivation is a psychological phenomenon that incites an action, through different incentives, towards a particular goal. For shareholders, this goal is maximization of firm value. There are several theories that explain motivation; this paper is focused on Mexican CEOs' financial incentive schemes and their impact on firm performance, and addresses two opposing approaches: Agency Theory and Self-Determination Theory.

## 2.1. Monetary Incentives under the Agency Theory

The origin of Agency Theory dates back to the work of Berle and Means (1932) and was put at the forefront of finance and management research by Jensen and Meckling (1976). It was developed further by authors such as Baiman (1982) and Eisenhardt (1989). It assumes that individuals are rational, that they have clear preferences, and their self-interest is fulfilled through the maximization of an expected utility function (positive on wealth and leisure). In the classical approach, the agent-principal conflict arises as managers and shareholders have different objectives. While owners search for profit-maximization, executives are interested on their own personal economic benefit (Berle and Means, 1932; Jensen and Meckling, 1976). In order to motivate such agents, there has to be an individual economic gain; otherwise, they will not do any effort in order to increase performance (Bonner and Sprinkle, 2002). According to this framework, monetary incentives are the optimal way to obtain desirable outcomes; they constitute effective mechanisms to align the interests of shareholders and CEOs, and also serve to retain executives (Aguinis et al., 2013; Bhagat et al., 2009).

In line with the Agency Theory, the economic literature has assumed for many years that the most efficient way to solve the agency conflict is by paying high wages and tying chief executive officers' (CEOs) monetary compensations to their performance (Baker and Hall, 2004; Bratten et al., 2010; McConville, 2006; Mislin, 2006; Westphal, 1999). In this manner, CEOs are motivated to take decisions that favor the firms, as an important part of their personal revenues depend on the companies' value (Kumari, 2011; Lilling, 2006). It is thought also that the most effective and capable employees tend to look after compensations based on their results; so, monetary incentives knotted to corporates' outcomes should attract the best executives (Eriksson and Villeval, 2008; Rynes et al., 2004). As well, it has been argued that payments based on results have a direct relationship with work satisfaction and organizational commitment (Carpenter and Sanders, 2002; Ibrahim and Boerhaneoddin, 2010).

Nowadays, economic incentives are widely used among companies throughout the world, in order to align the interests between shareholders and CEOs. Money is a symbol for social status, success, and allows satisfying higher-level needs (Long and Shields, 2010). Executives receive monetary incentives such as salaries, bonuses, shares, executive stock options, pension funds, and other benefits, hoping that the organization reaches certain short and long term performance objectives, and at the same time attracting, keeping, and motivating top executives (Blair, 2003; Liu and Tang, 2011; Peterson and Luthans, 2006). Currently, stock options represent one of the most significant elements of CEO compensation, and in general terms financial incentives have grown about 3.6 times in the last two decades (Harris and Bromiley, 2007). As these economic recompenses increase, CEOs might perform better as their work satisfaction will probably rise too (Chan, 2012).

However, the Agency Theory was framed under a western view, which could differ from other contexts. There are differences in materialistic values among developed and emerging markets. When considering Latin America, it drives to attention that contrary to Europe and the United States, money is not significantly related to happiness (Rojas, 2007; Beytia, 2016). This finding questions if pay-for-performance represents an effective incentive for Latin American CEOs. In line with the latter, the following hypothesis is tested:

*H<sub>1</sub>*: Contrary to the Agency Theory postulate, monetary incentives that are tied to performance (such as shares acquired through the execution of CEOs' stock options), are not effective in increasing Mexican companies' performance.

## 2.2. Monetary Incentives under the Self-Determination Theory

In the psychological arena, it has been highlighted that monetary rewards (especially fixed ones) might drop intrinsic motivation, with negative effects on firm performance (Bender, 2004; Frey and Jegen, 2001; Srivastava, 2011; Van Herpen et al., 2005). This was theoretically brought to attention by Deci and Ryan back in 1985, with the Self-Determination Theory, but has not been widely empirically tested in the economics field. It is based on the notion that there are non-additive external and internal incentives that determine motivation. Extrinsic rewards are given in order to obtain desirable outcomes; on the contrary, intrinsic motivation involves self-interest to perform particular activities, which provide satisfaction on its own (Gagné and Deci, 2005). Some extrinsic recompense will complement internal motivation (crowding-in effect (Frey and Jegen, 2001)); others will act in the opposite direction, which is known as the crowding-out effect (Frey, 2012; Frey and Jegen, 2001). For instance, it is argued that the relationship between intrinsic and extrinsic incentives such as flat monetary rewards (that are not contingent to any achievable goal), deadlines, sanctions, and evaluations, is negative, as they are perceived as controlling devices (Bender, 2004; Deci et al., 1999; Fehr and Gächter, 2000; Gneezy and Rustichini, 2000; Van Herpen et al., 2005; Bonner et al., 2000). Therefore, according to the Self-Determination Theory, extrinsic incentives have to be carefully designed in order to avoid situations where employees' self-esteem, creativity, autonomy, relatedness, and competence, and consequently intrinsic motivation, is diminished. In this regard, external factors such as positive feedback, support, recognition, and respect while performing a task have proven more effective for augmenting self-interest and motivation, retaining executives, and enhancing both their wellbeing and firm value (Arthurs and Busenitz, 2003; McCabe et al., 2003).

People have different attitudes towards work. For some, it is just a job in order to gain money. For others, it is a career which will allow them to climb from one position to another. Finally, others perceive their work as calls, and are interested in socially valuable enterprises and activities (Donaldson and Davis, 1991; McConville, 2005a, 2005b). Those who perceive their work in a more materialistic way will be more likely driven by

monetary recompenses than the rest, which present higher levels of internal (intrinsic) stimulus (Hendry, 2012). Several authors have concluded that intrinsic motivation allows better performance of complex tasks, such as those that involve decision-taking (Gottschalg, 2004; Grolnick and Ryan, 1987; Koestner and Losier, 2002). Therefore, companies will probably benefit from hiring intrinsic motivated CEOs, and encouraging extrinsic rewards with additive effects on intrinsic motivation.

Monetary incentives may attract materialistic oriented people-looking only after the money-with a short run perspective, and lacking empathy and human understanding. In addition, remuneration schemes might promote misleading and unethical behaviors. As so, they might damage companies' performance instead of boosting it (Bender, 2004; Carpenter and Sanders, 2002; Hochberg and Lindsey, 2010; Peterson and Luthans, 2006; Powdrill, 2012). The corporate scandals that have taken place around the most recent financial crisis suggest that certain compensations might attract non-desirable people into the firms; or make them interested only on their monetary retributions and neither on the firms' profits nor the companies' reputation (Hendry, 2012; Pierce et al., 2003; Powdrill, 2012).

In synthesis, it is argued that flat monetary incentives might reduce internal motivation and attract materialistic people into the firms- or make them more money oriented- negatively affecting companies' outcomes. This has not been tested under a Latin American context. In Mexico, most of CEOs' remuneration is flat, accounting for 70-80% of total financial incentives. This brings to the following hypothesis:

$H_2$ : In line with the Self-Determination Theory, there is a negative and significant relationship between Mexican CEOs' flat remuneration increments and firm performance.

### 3. METHODOLOGY

#### 3.1. Data and Variables

##### 3.1.1. Data

For this study a panel database of 88 non-financial companies, which traded in the Mexican Stock Exchange during 2001-2012, is used. The information comes from all annual reports (2001-2012) issued by the 88 firms, which is complemented through meticulous internet company search. It corresponds to 1056 observations. During this time frame, there was a major event - the global financial crisis- that wounded the Mexican economy particularly during 2009. According to the World Bank, in 2009 the Mexican GDP declined around 6%.

The relationship between firm performance and CEOs' monetary incentives is analyzed. It is worth mentioning that in Mexico 78% of all listed companies are family owned; in this paper only CEOs who are not members of the families that control the companies are considered, which corresponds to 43.3% of the cases (457 observations in total). For the latter, the agent-principal conflict (as stated by Berle and Means, 1932), which arises from the separation between firms' ownership and control, may take place and consequently monetary

incentives as extrinsic stimulus might be better justified. It is worth noting that due to the particular high family ownership concentration in Mexico, it is more likely that majority shareholders will monitor CEOs in order to avoid opportunistic behaviors, reducing agency problems.

##### 3.1.2. Variables

###### 3.1.2.1. Firm Performance and Monetary Incentives

Firm performance corresponds to the dependent variable. It refers to return on assets (ROA), which is calculated as earnings before interest, taxes, depreciation and amortization (EBITDA), over total assets. As so, it reflects book value. It was chosen to alternative market value measures such as Tobin's Q, as these may not be adequate performance indicators in countries with relatively incipient capital markets.

Monetary incentives, which constitute the explanatory variables, deal with executive stock options (financial incentive contingent to results, which is mainly offered to CEOs) and CEOs' remuneration (mainly fixed). The existing data provides information only on the execution of these options (not the value itself). The implementation of executive stock options as a motivating devise is then treated as a categorical or dummy variable, being 0 if the CEO does not exercise his right in a particular year and 1 otherwise. It is noteworthy that an executive stock option provides the manager with the right, but not the obligation, to purchase a number of shares of the company at a future time (t), at a price agreed in the present. If the price of the stock in t exceeds the agreed price, the manager can execute the option and keep the shares- or sell the stocks (not a common practice in Mexico) - earning the difference between the market price at t and the exercise price. According to the Agency Theory, when executives own shares, incentives might be better aligned towards value maximization.

In Mexico it is not mandatory to disclose individual executive wages, only aggregate amounts. Neither are companies required to reveal the pay gap between CEOs and other executives or directors. In order to deal with this information limitation, average remuneration (in millions of Mexican pesos) is used as a proxy. Some companies report total payments provided to executives; others are less specific as they only disclose data on aggregate compensations given to executives and directors (altogether). It is worth stating that both the number and appointment of directors in each firm is stable in time; turnovers represent about 8% of all possible cases. In addition, on average between 70-80% of the payments provided to Mexican executives are fixed, or flat, as they are not contingent to any achievable goal (Expansion, 2001; Hays Salary Guide, 2014). In order to calculate the mean CEO payment, the number of executives and directors is considered according to each particular case. In spite of the limitation that CEOs' remuneration is underestimated, this is the best available proxy, as there is no information regarding the distribution of aggregate disbursements. And, at least this bias is consistent throughout the sample. In order to treat remuneration as a financial incentive, the annual change instead of the value itself is employed.

### 3.1.2.2. Control Variables

Since business performance not only relates to monetary incentives, as control variables CEOs' age, firms' size (natural logarithm of total assets), leverage (total debt over equity), companies' age (number of years since the firms have been established), and ownership concentration (maximum percentage of ordinary shares held by the same party), are used.

### 3.2. Descriptive Statistics

Table 1 shows average annual values for return on assets (ROA), from 2001 till 2012. These numbers fluctuate from minimum values of 10.50 per cent (2009- crisis year) and maximum values of 13.80 per cent (2006), being these differences statistically insignificant, except for 2009. The former result reflects the expected negative effect of the world financial crisis on Mexican firm performance. In addition, there is relatively more ROA volatility (which indicates greater entrepreneurial risk) from 2007 till 2009, when economic disturbances take place in the US. As the Mexican economy relies heavily on the American economy, this is not a surprising outcome.

**Table 1.** Return on Assets

Year	ROA		
	Number of Observations	Average	Standard Deviation
2001	10	0.132	0.065
2002	9	0.122	0.072
2003	39	0.117	0.065
2004	39	0.131	0.058
2005	43	0.135	0.063
2006	42	0.138	0.073
2007	45	0.130	0.082
2008	45	0.123	0.099
2009	45	0.105*	0.083
2010	46	0.120	0.073
2011	45	0.124	0.077
2012	36	0.132	0.078
Total	444	0.125	0.076

\*Average annual ROA value differs significantly compared to the rest of years, at 10% significance level.

In Table 2 average annual values of the explanatory variables are exposed. Mean values for the execution of executive stock options do not fluctuate significantly in the years considered. However, it is worthwhile to notice that in less than half of the cases CEOs exercised this right.

With respect to CEOs' remuneration, as in many other countries there is a clear ascending tendency throughout time. In Mexican companies this phenomenon started in 2003, and although

profits declined significantly during the crisis year (2009), on average chief executive officers did not share the losses. Nevertheless, there is comparatively more wage volatility during 2009, which highlights the greater business instability arising during the crisis. It is worth noticing that the ratio of CEO pay to average worker in Mexico is 47:1, one of the biggest for an OECD country (Business Insider, 2015).

**Table 2.** Monetary Incentives

Year	Executive Stock Options			CEO's Remuneration		
	Number of Observations	Average	Standard Deviation	Number of Observations	Average	Standard Deviation
2001	10	0.30	0.48	9	3.67*	5.54
2002	9	0.33	0.50	9	2.48**	2.53
2003	40	0.48	0.51	25	5.74	10.61
2004	39	0.46	0.51	24	6.93	12.71
2005	45	0.40	0.50	27	6.96	15.32
2006	43	0.51	0.51	26	8.68	18.97
2007	46	0.48	0.51	28	10.22	22.87
2008	45	0.44	0.50	32	10.13	21.89
2009	45	0.36	0.48	32	10.80	26.70
2010	46	0.39	0.49	33	10.93	24.20
2011	45	0.42	0.50	32	11.69	23.83
2012	39	0.41	0.50	30	13.54	25.49
Total	452	0.43	0.50	307	9.37	20.64

\*\*,\* Average annual values differ significantly compared to the rest of years, at 1% and 5% significance levels.

### 3.3. Methods

Given the characteristics of the database, it is possible to perform dynamic panel analysis. Panel data combines time series with cross sectional

information. Panel analysis has the advantage that it allows to control for unobservable variables such as differences (that do not vary over time) in business practices between companies, as well as taking into account variables that change over time but not

across firms (such as corporate law). As prior firm performance is an important determinant of current ROA (Tosi et al., 2000), dynamics is attained by including in the regression lagged (one period) return on assets.

Regressions should also contain time effects (particularly the year 2009), to contemplate the business impact of the global financial crisis. For this purpose, a dummy variable is introduced, being 1 if the year under consideration is 2009, and 0 otherwise. Finally, in order to take into account the fact that ROA's reactions due to the execution of executive stock options and changes in CEO remuneration might not be immediate, these variables are lagged one period.

Corporate governance and finance literature argue the potential existence of endogeneity issues

in the relationship between ownership and performance (Demsetz and Villalonga, 2001), corporate governance (Pindado et al., 2011), among others. In fact, monetary incentives might impact ROA, but ROA might also influence financial incentives. In order to deal with the endogeneity problem, regressions are run through the Generalized Method of Moments (GMM), for which a first differences transformation is employed in order to remove cross-section fixed effects (which will drop for instance potential industry effects). GMM level instruments are obtained then through habitual Arellano-Bond methodology. Robust, white period weights (2-steps) are used to compute standard errors.

The following equation is tested:

$$Y_{it} = \alpha_i + \beta X_{it-1} + \gamma C_{it} + \delta Y_{it-1} + \zeta 2009_i + \mu_{it} \quad (1)$$

where,  $\alpha$  is a constant term for each firm  $i$ , which does not vary in time. As usual,  $Y$  is the dependent variable (in this case ROA),  $X$  refers to the array of independent variables (monetary incentives),  $C$  considers the control variables, and  $\mu$  is the random error term. The use of this specification allows obtaining an appropriate estimate of the real causality of CEOs' monetary incentives on firms' performance. For monetary incentives both the execution of executive stock options and the change in CEOs' mean remuneration are utilized. As control variables CEOs' age, firms' size, leverage, companies' age, and ownership concentration are employed.

## 4. RESULTS

### 4.1. Econometric Results

Econometric results for equation 1 are shown in table 3. Regressions are run using the complete sample, and also taking into account only cases when both financial incentives are present. For the latter, two conditions must be fulfilled: an increment in CEO's average payment and the execution of CEOs' stock options.

Table 3. Econometric Results

Variables	Complete Sample			Presence of Financial Incentives		
	Coefficient	Standard Error	P-Value	Coefficient	Standard Error	P-Value
Executive Stock Options (-1)	-0.01	0.03	0.98	-0.01	0.06	0.92
Log CEOs' Remuneration (-1)	-0.01***	0.00	0.01	-0.01***	0.00	0.01
CEOs' Age	-0.01**	0.00	0.02	0.00	0.00	0.62
Firms' Size	-0.01	0.02	0.87	0.01	0.02	0.37
Leverage	-0.02**	0.01	0.03	-0.01	0.01	0.27
Companies' Age	0.00	0.00	0.29	-0.01	0.00	0.17
Ownership Concentration	-0.01***	0.00	0.00	-0.01*	0.00	0.08
ROA (-1)	0.10*	0.06	0.09	0.15*	0.08	0.06
2009	-0.01	0.00	0.33	-0.01	0.01	0.55
J-Statistic	14.30			13.90		
Prob (J-Statistic)	0.58			0.31		

Presence of financial incentives refers to cases when both CEOs execute their stock options and CEOs' remuneration increases.

\*, \*\*, \*\*\* Significant at 10%, 5%, and 1%, respectively.

Dependent variable is ROA.

In order to deal with endogeneity issues, regressions are run through the Generalized Method of Moments (GMM).

From table 3 it is evident that increments in CEOs' remuneration do not constitute an effective monetary incentive; on the contrary, the average effect of the implementation of this motivation instrument on business performance (ROA) is negative and significant at 1% level. Specifically, a 1% change in prior remuneration is associated with a change in ROA of -0.01%. With respect to the execution of CEOs' stock options, there appears to be no impact on corporates' outcomes; in both regressions the relationship with ROA is negative, but not statistically significant.

Regarding control variables, generally speaking CEOs' age, leverage, and ownership concentration are negatively associated with ROA. Child (1974)

argues that younger CEOs have greater physical and mental strength and are better equipped to comprehend innovative ideas and to adopt a new outlook. More mature CEOs are more conservative and may demand more information and time in order to reach a decision (Bertrand and Schoar, 2006), while their younger counterparts may be more skilled at assimilating information and at taking good decisions without delay. Moreover, mature executives are more entrenched, and for older CEOs job security is an important issue, which may lead them to avoid risks that might affect their job stability (Carlsson and Karlsson, 1970). These considerations could impair the company's financial performance. With respect to leverage, as it

increases, so does the exposure to shocks and the amount of agency costs of debt (Berger and Bonaccorsi di Patti, 2006). Leverage implies higher risk levels and vulnerability, particularly during turbulent periods, which pushes performance further down. Finally, ownership concentration can be detrimental to ROA, as it increases the possibilities to exploit private benefits in favor of controlling shareholders, which is prejudicial for companies' value (di Donato and Tiscini, 2009; Fich and White, 2003).

According to the J-Test, the model fits the data well. Nevertheless, multicollinearity might be

present in the prior econometric results. It implies a linear relationship among some or all control and explanatory variables; hence, multicollinearity makes it difficult to estimate the parameters with precision and determine the effect of each individual variable. Under multicollinearity large standard errors, and therefore low t-statistics, are obtained; therefore, coefficients tend to be not significant. Although regression analysis is still useful when non-perfect multicollinearity is present, some goodness of fit values tend to be higher than otherwise. It is possible to check for multicollinearity through the following correlation matrix:

**Table 4.** Correlation Matrix

	<i>CEOs' Remuneration</i>	<i>Firms' Size</i>	<i>Companies' Age</i>	<i>Executive Stock Options</i>	<i>Ownership Concentration</i>	<i>CEOs' Age</i>	<i>Leverage</i>
CEOs' Remuneration	1.00	0.41	0.34	0.30	0.26	0.04	0.02
Firms' Size	0.41	1.00	0.48	0.19	0.00	0.13	0.13
Companies' Age	0.34	0.48	1.00	0.34	0.00	0.45	0.22
Executive Stock Options	0.30	0.19	0.34	1.00	-0.38	0.08	0.24
Ownership Concentration	0.26	0.00	0.00	-0.38	1.00	0.11	-0.18
CEOs' Age	0.04	0.13	0.45	0.08	0.11	1.00	-0.15
Leverage	0.02	0.13	0.22	0.24	-0.18	-0.15	1.00

The greatest correlations are between companies' age and firms' size (0.48), and among companies' age and CEO's age (0.45). Both for companies' age and firms' size the variance inflation factors are greater than 5, which indicate multicollinearity. Nevertheless, this problem is not particularly present in the variables of interest, those related with monetary incentives: changes in CEO's remuneration and execution of executive stock options.

#### 4.2. Robustness Checks

For robustness checks, equation 1 is run using as dependent variables return on equity (ROE) and price earnings ratio (P/E), instead of return on assets (ROA). Results are exposed in table 5. Although ROA and ROE are both performance ratios, they are the same only when companies have no liabilities. Regarding the price earnings ratio, it is calculated as the closing stock price over earnings per share. Therefore, it indicates market value instead of book value.

**Table 5.** Robustness Checks - Different Performance Measures

Variables	<i>Dependent Variable: ROE</i>			<i>Dependent Variable: P/E</i>		
	Coefficient	Standard Error	P-Value	Coefficient	Standard Error	P-Value
Executive Stock Options (-1)	0.03	0.06	0.66	-0.01	0.00	0.22
Log CEOs' Remuneration (-1)	-0.01*	0.01	0.07	-0.01	0.00	0.58
CEOs' Age	-0.01**	0.00	0.01	-0.01**	0.00	0.01
Firms' Size	0.01	0.04	0.73	0.00	0.00	0.48
Leverage	0.04**	0.02	0.01	-0.01**	0.00	0.00
Companies' Age	-0.01	0.01	0.44	0.00	0.00	0.44
Ownership Concentration	-0.01**	0.00	0.00	-0.01**	0.00	0.00
ROE (-1)	0.03	0.05	0.55			
P/E (-1)				0.01	0.05	0.84
2009	0.01	0.01	0.36	-0.01**	0.00	0.01
J-Statistic	13.95			17.09		
Prob (J-Statistic)	0.60			0.38		

\*, \*\*, Significant at 10% and 1%, respectively.

In order to deal with endogeneity issues, regressions are run through the Generalized Method of Moments (GMM).

Table 5 confirms the previous findings. Increments in CEOs' mean remuneration have a significant adverse influence on corporates' performance. This result is mainly present when considering ROE as the dependent variable; the effect on price earnings ratio although negative, is not noteworthy. Moreover, the execution of CEOs' stock options does not indicate a significant connection with companies' outcomes, measured both by ROE and P/E.

A final robustness test is performed by including the crisis year 2009 as a moderator variable for the relationship between CEOs' financial incentives and firms' performance. By doing so, it is possible to identify differences in the association between the former according to the economic conditions (crisis vs. normal times). Table 6 presents these results, which corroborate the prior findings and provide new insights. During normal times, the impact of changes in CEOs' remuneration



on firms' performance is either negative (when considering ROA) or insignificant (for ROE and P/E). Wald tests are performed in order to analyze the effect of this monetary incentive on companies' results during 2009. It is tested if the sum of the coefficient for normal times ((log CEOs' remuneration (-1)) and the interaction between it and the crisis year ((log CEOs' remuneration (-1))\*2009)) is significantly different from 0. Wald tests are executed for each of the three dependent variables (ROA, ROE, and P/E), obtaining the following coefficients and p-values: ROA- value= -0.01, p=0.57; ROE- value= -0.05, p= 0.55; P/E- value= 0.00, p= 0.47.

Then, for the crisis year it is possible to determine that there is no significant consequence of wage changes on companies' outcomes. This might reflect the greater controls imposed to CEOs by majority shareholders during crisis times, which can mitigate the negative impact of flat monetary rewards on performance measures such as return on assets. Regarding the execution of CEOs' stock options, it appears it is not related with firm performance neither during normal nor crisis periods of time (Wald tests for 2009- ROA: value= 0.02; p=0.50; ROE: value= -0.13; p= 0.47; P/E: value= 0.00, p= 0.42).

**Table 6.** Robustness Checks – Crisis Year 2009 As Moderator Variable

Variables	Dependent Variable: ROA			Dependent Variable: ROE			Dependent Variable: P/E		
	Coefficient	Standard Error	P-Value	Coefficient	Standard Error	P-Value	Coefficient	Standard Error	P-Value
Executive Stock Options (-1)	0.02	0.03	0.45	0.00	0.06	0.99	0.00	0.00	0.85
Executive Stock Options (-1)*2009	0.00	0.01	0.87	-0.13	0.16	0.41	0.00	0.00	0.26
Log CEOs' Remuneration (-1)	-0.01**	0.00	0.05	-0.01	0.01	0.51	0.00	0.00	0.46
Log CEOs' Remuneration (-1)*2009	0.00	0.01	0.52	-0.04	0.08	0.65	0.00	0.00	0.17
CEOs' Age	-0.01**	0.00	0.03	0.00	0.01	0.41	0.00	0.00	0.37
Firms' Size	-0.01	0.02	0.45	0.01	0.09	0.90	0.00	0.00	0.63
Leverage	-0.02*	0.01	0.07	0.02	0.03	0.47	-0.01**	0.00	0.02
Companies' Age	0.00	0.00	0.39	0.00	0.01	0.76	0.01*	0.00	0.08
Ownership Concentration	-0.01***	0.00	0.00	0.00	0.00	0.13	-0.01***	0.00	0.00
ROA (-1)	0.08	0.06	0.19						
ROE (-1)				-0.04	0.09	0.67			
P/E (-1)							-0.07	0.08	0.37
2009	-0.01	0.01	0.39	0.17	0.24	0.46	0.00	0.00	0.38
J-Statistic	11.26			10.62			15.80		
Prob (J-Statistic)	0.73			0.72			0.40		

\*, \*\*, \*\*\* Significant at 10%, 5%, and 1%, respectively.

In order to deal with endogeneity issues, regressions are run through the Generalized Method of Moments (GMM).

## 5. DISCUSSION AND CONCLUSIONS

This study provides evidence on the negative relationship between CEOs' flat monetary incentives and firm performance, taking into account an emerging market context. This association is particularly observed during normal periods of time; for crisis episodes no significant impact was detected, which suggests the greater controls imposed to CEOs by majority shareholders during crisis episodes. This result contradicts the evidence for countries such as the US and the UK, where it has been widely documented that during crisis periods there are greater expropriation opportunities for CEOs, which are reflected (among others) in higher flat monetary compensations and at the same time lower firm performance (Bebchuk and Weisbach, 2010). It adds to the existing literature by introducing the Mexican experience, considering CEOs instead of staff or managerial level employees, and by pursuing panel data analysis instead of more conventional cross-sectional experiments. The research concludes that greater CEOs' compensations, which are not particularly based on goals, do not constitute effective corporate governance schemes for non-financial companies listed in the Mexican Stock Exchange. Furthermore, other types of monetary incentives based on results, such as the attainment of shares through the execution of CEOs' stock options, are not related with firms' performance; generally the sign appears negative, although statistically not significant. These findings contrast most of the empirical evidence for

western economies, and suggest that Mexican CEOs are driven by other types of motivators.

The negative relationship between firm performance and monetary incentives, in line with the Self-Determination Theory and the crowding-out effect, has been corroborated basically for flat monetary incentives (Bender, 2004; Deci et al., 1999; Fehr and Gächter, 2000; Gneezy and Rustichini, 2000; Van Herper et al., 2005; Bonner et al., 2000; Frey and Jegen, 2001; Frey, 2012). This is not necessarily the case for other types of monetary incentives, which are related to results (such as the shares attained through the execution of stock options). On the other hand, the positive relationship between monetary incentives and companies' financial results, as predicted by the Agency Theory, applies basically for variable monetary incentives (Aguinis et al., 2013; Bhagat et al., 2009). The fact is that 70-80% of CEO payments in Mexico are fixed, being one exception the shares acquired from the execution of CEOs' stock options. When the CEO has the option to purchase a given number of shares at a particular future time period, at a price fixed today, he/she will be motivated to increase firm value, earning the difference between the stock price in the contract and the stock price in the market at the future time period, in addition to acquiring the shares. Then, CEO stock options are an incentive in order to look after higher firm performance. When the option is executed, it means that the goal was achieved, tying the incentive with performance.

In Mexico listed companies are not asked to report separately the fixed and the variable payment



quantities. In addition, there is no public information on the amount and value of shares attained through the execution of stock options (only if the option was executed or not). Testing if flat remuneration negatively relates with firm performance has been done before; what is not so common is to find that this negative impact applies only to normal periods of time (which contrasts the evidence for western economies) and that other types of monetary incentives (based on results, such as the execution of stock options) are not associated with firm performance. This paper contributes to the literature in this regard, by introducing a different context (non-western economy) and the CEOs instead of other employees.

Latin American corporates are characterized by high ownership concentration in family hands (Sáenz-González & García-Meca, 2014). As external corporate governance mechanisms tend to be weaker than in developed nations (La Porta et al., 1999), in order to reduce agency costs concentrated proprietorship constitutes an important internal corporate governance scheme. Majoritarian shareholders protect their interests by close monitoring CEOs, which diminish the possibility for managerial entrenchment actions, as for instance excessive remuneration (Khanna and Palepu, 2000). As such, financial incentives can be seen as potential motivating devices in order to align the interests of executives and shareholders, and not as part of the agency problem (Bebchuk and Weisbach, 2010). By including in the study only companies with external CEOs (those who are not members of the controlling families), the principal-principal conflict is excluded (Jiang and Peng, 2011), which allows to consider the classical Agency Theory approach.

Due to the fact that during normal times a negative relationship between higher fixed payments to CEOs and financial performance is obtained, together with no association (both for crisis and normal periods) between other monetary stimuli and firms' results, some attention should be paid to the assumptions behind the Agency Theory in this particular context. The classical view, as exposed by Berle and Means (1932), contemplates executives as opportunistic people, selfish, unreliable, and solely motivated by monetary gains. There are alternative economic theories, such as Positive Corporate Governance and Stewardship Theory that coincide in that executives are well-intended individuals acting on the basis of incentives other than money, often by intrinsic enthusiasm, and who value the opportunity to meet their self-esteem and happiness needs within the companies (Arthurs and Busenitz, 2003; McConvill, 2005a). The ambition to succeed, which is a characteristic feature of a CEO, his (her) desire to win and passion for competition, have little to do with monetary incentives but with his (her) own personality and intrinsic motivation (Hendry, 2012). High monetary incentives can rather cause the executive to be distracted from his (her) work and focus only on money, limiting corporate's results (Pierce et al., 2003; Powdrill, 2012).

It is in the psychological arena where social scientists have been more successful in modeling human behavior and motivation. The Self-Determination Theory (Deci and Ryan, 1985) manifests that motivation is obtained through intrinsic and extrinsic incentives (such as monetary

rewards), which not always add to each other. It is argued that flat economic incentives (those not related to particular goals), threats and deadlines deteriorate internal motivation, decrease productivity, the sense of autonomy, and job satisfaction (Bender, 2004; Frey and Jegen, 2001). Under these circumstances executives report more stress, less effort, lower self-esteem, more narcissistic and depressive behaviors, as well as higher materialistic values and resignation rates. And, as intrinsic motivation allows CEOs to perform better complex activities and decision-making processes (Gottschalg, 2004), these types of incentive schemes instead of favoring, can hurt business outcomes. Therefore, efforts should be directed in order to motivate and encourage the participation of desirable people in the firms: the establishment of goals, support, respect, power and recognition, autonomy, security and labor flexibility, the ability to maintain a balance between work and personal life, creating an atmosphere of trust and cooperation, are some of these extrinsic non-monetary factors favoring productivity and hence business performance.

The current empirical findings are closer to the conclusions provided by the Self-Determination Theory than to the classical Agency Theory predictions. Contrary to the classical Agency Theory view, CEOs should be appreciated as honest and decent people, with strengths and virtues and whose actions, behaviors and motivations are positive and focused on companies' prosperity. Under this framework, the current corporate governance system should be modified in order to move towards the development of CEOs, strengthening their autonomy instead of promoting mostly monetary incentives for achieving alignment of objectives. This is particularly relevant for the design of appropriate human resource practices that take into account less materialistic societies such as Latin America, and Mexico in particular. Mexican companies should hire intrinsically motivated CEOs, together with testing different extrinsic rewards (neither flat nor stock options) in order to attain additive effects on intrinsic motivation. Human motivation is much more complex than assumed by the classical Agency Theory. It requires an understanding of the executive as a person and not just as an economic agent. As so, continuing to promote mostly monetary recompenses as a means of good corporate governance could lead to more disappointing results. It is time to change the paradigm.

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