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Influence of the CEO Characteristics in Mergers and Acquisitions in the Pharmaceutical Industry

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ABSTRACT

It is the purpose of this study to make an analysis of the Mergers and Acquisitions, affected by the CEO characteristics and mediated by the Environmental Munificence. The motive of this paper is the high economic scope of the cross border M&A in the pharmaceutical industry. The characteristics to analyze would be the CEO's tenure, functional background and education. It is being recognized that a long tenure of the CEO is in direct relation to the M&A intensity. A last factor is the CEO education. It appears that there is a positive correlation of the education with the M&A performance.

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KEYWORDS: Managerial decision making, Firm decisions, Mergers and Acquisitions, CEO characteristics

INTRODUCTION

Poliomyelitis, smallpox, typhoid fever. Those are practically words of the past. But then cancer made its apparition. And then HIV came to hit the society. Sicknesses have changed, but still are sicknesses. And maybe worst, after a cure was found for an illness, another sickness came into the scenario. In one way or another, medical research is a never ending task. That is what the pharmaceutical companies do. Sometimes the cure is far away out of reach for the patients. And the pharmaceutical firms are those that would place the drugs available for the sick. The mission is to find a cure for the sick. And if a pharma company is not operating very well towards this mission, other firm surely would take over. That is when a Merger and Acquisition transaction would take place. Executives in charge of these operations must be extremely careful and skilled to perform successful M&A deals. That is what this study is about.

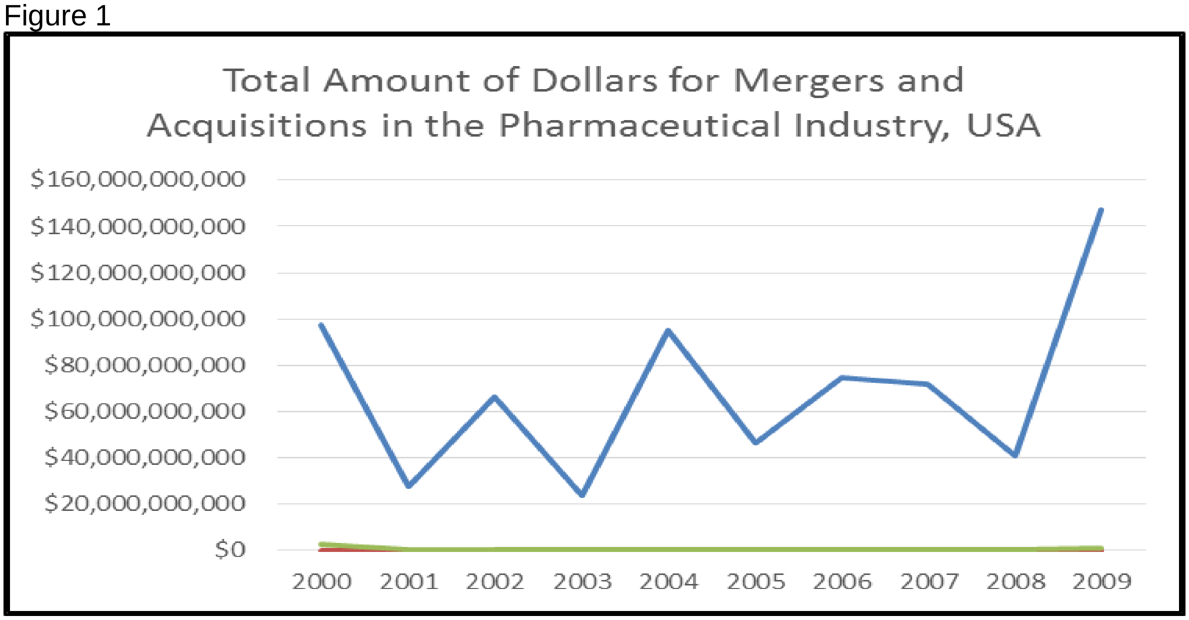
Taking care of the massive health of people requires high abilities in the pharma companies. There is a long path in regards to investments, research in patients and development, to the final marketing and availability for patients. From the perception of a cure, the research and development, to the testing, clinical trials and approval for market, According to Health Care M&A Information Source, July 2014, the Novartis Corporation acquired the oncology business from the GlaxoSmithKline Corporation for the amount of $16,000 Mill. Yet, this operation was not the only one among these two companies. GlaxoSmithKline plc acquired from the Novartis Corporation the global vaccine business for $5,250 Mill. The proper processing of these two operations would have required a super high amount of skills and knowledge in the CEOs of these firms.

Just by looking at the numbers, asymmetric information could be detrimental for the performance of a company. Keeping with the same source, Actavis plc acquired Forest Laboratories, Inc., for the amount of $25,000 Mill. As we see these figures, it is easier to understand why the Pharmaceutical companies are taking extreme measures into the positioning of their respective CEOs. These positions are highly visible, and any wrong action could end in a damaging M&A operation for the company. Yet, as we see, the companies are switching their business lines and this appears to be in the best convenient mode for them. Therefore, the CEOs still need to operate in the best interest of the companies.

The importance of the analysis of Mergers and Acquisitions cannot be neglected if the number of these operations is continuously increasing. The number of M&A from 1973 to 1979 was 789, compared to 1427 in the 80s, and 2040 in the 90s. These numbers account only to the USA. Also another factor to include is the growing trend to keep the M&A within the own industry. The percentage of M&A from 1973 to 1979 was 29.9% for the own industry, and then growing to 47.8% in the 90s. (Andrade, Mitchell and Stafford, 2014). How can a CEO acquire the talent and then utilize that skill to first recognize the market environment and make an enough out of risk assessment that he or she needs to proceed to a merger or Acquisition?

As we can see in the Figure 1, the total amount spent in M&A in the pharma industry in USA in 2009 was over $140,000 Mill. Data from Levine and Associates, Deals and Deals Makers. In these transactions, the intent to do more research and provide more drugs available for illness is present.

Figure 1



Data from Levine and Associates article. Deals and Deals Makers. A great increase from 2008 to 2009. Source; Health Care M&A Information Source, July 2014.

One aspect that may be worth to analyze is the increase of mergers and acquisitions increase in certain industries and an apparent decrease in other industries. The increase of the operations appears also to be related to a leading research. In the pharmaceutical industry, for example, the leading research is on the cancer, AIDS and Diabetes. In these regards, the authors want to expose the dynamic of the M&A operations in the global industry. By looking at the areas of

M&A, it can be seen that the Multinationals are looking for the trends in the needs of their customers, hence, the social media, real estate, energy and pharmaceutical.

Then, what appears to be an alignment of the Multinational with its own needs is in fact the response of the CEO to the needs of the customers. In other words, the Multinationals are focusing in the combination of maximizing their shareholder value and attaining their customer needs. Pfizer, one of the world pharmaceutical giants, in the brink of a splitting operation, decided to go back and instead manage the Innovative Health and Essential Health businesses. (www.marketwatch.com, 2016, 09/26). Hence, we can say that the M&A process is under a continuous education in the CEOs at the multinational level. Executives are learning what the customer needs and what the Multinational must do.

LITERATURE REVIEW

Upper Echelons Theory

The question of “Why do organizations act as they do?” (Hambrick and Mason, 1984)(p. 193), has opened a wide scope of items to discuss and solve. One of the sides in the answers is the dominance of the coalition on the managers. Yet, the upper echelon theory emphasizes the individual characteristics in the context of the organizational outcomes. Hence, a upper socializing skill in the management may also need to be included. The upper vision may not be exclusive of an individual, but it may be laterally shared. Yet, in order to share information in the management teams, these groups need to have certain characteristics (Nadolska and Barkema, 2013). Thus, they have to be homogeneous.

Also, by looking at the M&A total dollars in the later years in Figure 1, the question of the learning experience by the top management teams appears to have an answer. They learn from past experience, and the trend in the value of the operations is to increase.

Overview of Mergers and Acquisitions

Years ago, it was evident that firms were not taking the right path in regards to where to go when there was a need for merging and acquisition, this statement said because the great number of failed acquisitions, (Barkema and Schjiven, 2008). The trend of the “Merger mania” (Lubatkin, 1983) allured firms to proceed into this process, but the path they took may not be the right, if there was a real need for the merging or Acquisition. However, if the Environmental Munificence is providing support to a competitor, then it is obvious that the Munificence can sustain growth also to the CEO firm. Hence, we can assume with an acceptable degree of confidence that the major corporations in the pharma industry have been learning in how to proceed to the best M&A operations throughout the years, that lately these operations have become more profitable.

Haleblian et al (2009) provided a clear analysis for the beginning of the Acquisition process by listing the value creation and Managerial Self-Interest antecedents. The legitimate desire in the corporate for a market power due to the external competition leads the organization to the M&A. Haleblian mention the cases of the railroad industry and the airline mergers where the final outcome is the raise in stock prices or prices in routes. Even though the prices rose by a factor not disclosed, the “prices on routes serviced by merging firms increased relative to those of a matched sample unaffected by the merger”, quoting Kim and Singal, 1993. The service to the customer improved in a greater percentage than the prices.

The CEO functional background may be significant due to the roll playing in the growing number of Mergers and Acquisitions within the same industry. Firms are performing more M&A in the same field of specialty and there is a trend to minimize the out of field M&A. Firms are merging in their area and are diversifying products within their market. The organizational outcomes are being seen as parameters of the knowledge of the main human elements in the Firm, (Hambrick and Mason, 1984). As the merger or acquisition is an outcome of the organizational operation, this action is a product of the CEO performance.

And to continue with this concept analysis, it may become important to explore as an antecedent also Schoenberg (2003), “Individual companies can have a wide range of motives for making an acquisition. These may broadly be classified into three groups: strategic motives, financial motives, and managerial motives”, Therefore, assuming the election of a new CEO in a firm, with the Environmental Munificence supporting capability to the competition, this new CEO will see that the firm has one or several combinations of motives for a Merging. The characteristics of the CEO to be able to visualize these needs would have to depend on the tenure, or time in the firm and the functional background. As an additional factor, the gender of the CEO is also included in the analysis.

Need of new content in cross border mergers and acquisitions

According to Lubatkin (1983), following the three FTC classifications, there is not enough evidence to support the synergy association with the size, type and experience of the Firm because the studies that have been performed are more of surveys with Executive opinions instead of actual performance data. Furthermore, the base study of Kitching (1967) has a small sample size that does not support the generalizability of the results.

The Kitching (1967) study appears to open a need for solving the issue of conglomerated mergers. Lubatkin (1983) is proposing an analysis of a large sample of mergers. Hence, the main obstacle in this regards may lie in the fact that conglomerated mergers are not in great numbers that could supply enough statistical information. Furthermore, the suggestion of the use of the Capital Asset Pricing Model inherently implies a merging immobility for the acquiring firms (Lubatkin, 1983) that render available data unfit for the research analysis.

Deepak et al, (1992), found the evidence of a decreased wealth for the bidding firm shareholders when the merging takes place among multiple bidders and conglomerate acquisitions. This finding is in line with the Supply and Demand Law. It is obvious that at more bidders, the final bidding Firm would be the one with the higher proposal, implying a reduction in dividends. This evidence may open the opportunity for an analysis of the Agency Theory in the Mergers and Acquisitions model.

Larsson and Finklestein (1999), findings are clear in the correlation of the synergy realization construct with the Merger Performance. Considering the construct of Synergy, in the analysis they performed, the inclusion of the Combined Potential, Organizational Integration and Employee Resistance; it appears that the concept of Leadership may be a common factor for those three elements in the Synergy construct. This study may have to be performed to cover the need of Leadership in the merger operation. And Leadership may be a rare competence in an environment where for both bidder and target firms; management does not have a full communication across the companies.

Cartwright and Schoenberg (2006), highlights the need for meta-analyses that may study the M&A, making a link of the performance of the models with the human and organizational insights from behavioral studies. Their analysis recognizes that the actual research is not complete nowadays in this field. As an example, Stahl and Voight (2004), p.14, remains with the lack of explanation for a high variance.

A final gap in the research lies in the lack of a deep analysis in the explanation of the high acquisition failure rates. Rostand (1994) reported failure rates of 44-45%, and Kitching (1994) reported 46-50%. As it can be seen, both analyses are congruent in the numbers. The question then could be, to propose a model that would make a good fit for a successful acquisition. One of the obstacles may lie in the repeatability with following acquisitions. Under this gap lies also the fact of the negative average returns. (Agrawal and Jaffe, 2000), (Gregory, 1997). A model with a map analyzing the path taken from the value or values involved in the acquisition may be helpful to clarify the lower returns.

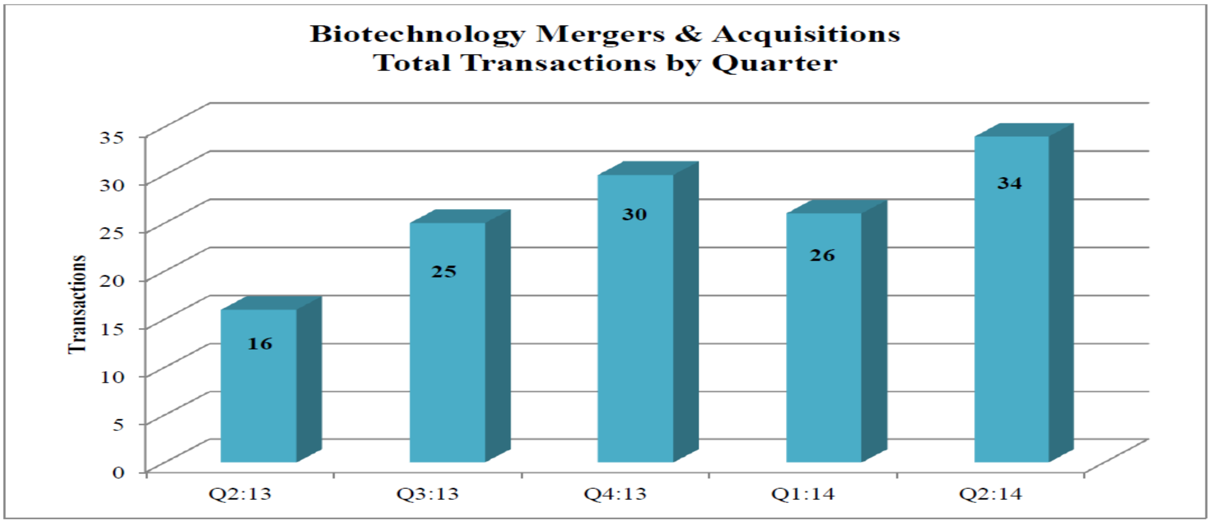
An idea that kept appearing in the search is the relation between the intensity of the mergers and acquisitions and the proper development of the country in the study. Other leading analysis in the merger and Acquisition intensity is the uncertainty. The uncertainty is not necessarily related to the environment munificence. The munificence could be supporting the merged company enough for growth, but the uncertainty can at the same time be a hindrance for a major development in the firm. The last aspect of the analysis is the Executive characteristics as a role in the Merger and Acquisition process. Gosh et al (2014) suggested already the connection between the development of a country and the intensity of the merger and acquisitions. There could be two sides to this section of the analysis: the own development of the country provides the opportunity for the firm to look for the Merger, or the firm see the trend and then look to grow by this means. The munificence of the environment is a factor in the Merger and Acquisition (Sofka and Grimpe, 2010), (Dickson et al, 2013).

Absorptive capacity

The level of the firm to engage in a merger for a target company will be depending also in the absorptive capacity, the slack on resources and the opportunities outside of the firm. As the firm grows, the risk associated with the growth will have a lower cost (Johanson and Vahle, 2009). At this moment, a Small or Medium Size Company (SME) will be looking forward to the growth. And one of the most viable ways of growth is throughout the internationalization. Dickson, Weaver and Vosikys (2013) made an analysis of the external factors leading to the internationalization.

In Figure 2, we can see the increase of transactions from 2013 to 2014.

Figure 2



Source: Health Care M&A Information Source, July 2014

Number of M&A in second quarter 2014. Source; Health Care M&A Information Source, July 2014.

A factor to consider is the characteristic of the Firm as a strategic buyer (De Leew, 2009). In The strategic buyer there must be a need for investment, hence, the choice between a new investment and an investment in merging. (Bittlingmayer, 1996). In these conditions, the tenure of the CEO is a key factor for the decision. Even though some research shows that there has been some disastrous results, (Nadolska and Barkema, 2014), if we take a look at the merging and acquisitions in the Pharmaceutical Industry, we can see that these kinds of operations have been mostly successful. Therefore, we must take a look at the CEO characteristics in the field to be able to see what it takes from the CEO to be a good performer. The need of power (Ravenpor, 1993) is not only in the CEO, but it may be an extension on this position of a characteristic of the firm. The firm must always be looking for a balance for the external competition power, because this is a continual force towards the firm. One of the most effective ways to keep back competition is to perform strategic buys or mergers that would close the way for the competition. Therefore, we come to the assumption that the absorptive capacity may also depend in the economic capacity of the firm.

Synergy

Once the CEO and the Board of Directors of the Firm are making the decision for a Merging or Acquisition, it can be useful to turn to the findings of Kitching (1999, p. 91): “The sum of the managerial competence in the parent company plus that of the acquired company fails to equal or exceed the demand of the management tasks found in the newly merged organization”, hence, it is critical for the CEO to make an objective assessment of the synergy that can be obtained with the resources togetherness. If the CEO makes the right decision to envision the total managerial competences after the merging, and if these competences are above the necessary, then the merging will be successful. The total amount of Managerial Capabilities must be superior to those required to lead the organization. After this stage, then, begins the learning experience.

Even though there is not enough research in who learns from organizations, (Nadolska and Barkema, 2014), the learning in the firm after the Merging and Acquisition may go far beyond that just the CEO. We can take the example of a manufacturing firm, after the acquisition of a smaller company. The transfer of physical resources and knowledge will necessarily affect the chain command. It is clear that after the operation, the acquiring company will be learning from the top down to the lower management levels from the operation performed. This scope of improved knowledge can be an asset for the CEO to keep on targeting other companies.
The Absorptive Capacity (Cohen and Levinthal, 1994) may not necessarily be only in a technological field. This capacity may also include the power of the firm to move when the market conditions change to a more favorable scenario. These changes may include lower taxes, incentives, and labor or raw materials availability.

Role of Environment in Mergers and Acquisitions

The environment plays an engulfing factor around the firm, affecting positively or negatively the performance of the company (Dickson, Weaver and Vosikis, 2013), (Mezias, Park and Choi, 2008). The environment's characteristic is a factor that the CEO only in a few occasions may be able to change, but most of the time, he or she must be forced to act in the conditions dictated by the munificence of the environment. With the solid assumption that the CEO cannot change the environment, therefore, the CEO is the one that must adjust the innovations searching strategies (Sofka and Grimpe, 2010), (Abebe et all, 2011) in order to dig into the environment for opportunities for the firm. Another assumption is that the environment plays the same importance for any firm that stays in touch with the surrounding conditions. The proposition that some companies may not have the same environment effect will not be considered for this analysis. Then, if the environment conditions are equal, hence, the question, why some companies proceed to a merging, or acquisition, or even leave the market, while other firms continue to operate under those conditions?

In order to proceed with the most accurate possible analysis, the economic assumption of "Ceteris Paribus" can be embedded into the inside the firm organizations, Therefore, we will be making the assumption that all CEOs in any company under the influence of the same environment, they all will have the same executive characteristics. From this point, then, the conclusion is that the Environment must have a dynamic behavior. This behavior would have a moving resource capability, giving to the resources certain mobility in the background of the company. However, there are different levels and optics to see the mobility of the environment. In the first scale, we have the munificence at the positive side, and the uncertainty in the other side. Gosh, Bhowmick and Guin (2014) identified two types of levels: the static dimension and the simple-complex dimension. The linkage or explanation of the environment behavior to the executive performance may lie due on the assumption that the characteristics of the environment are not always afloat in the exposed surface of the surrounding factors. Instead, the opportunities may come out and then hide, or the risk and threats may also have a similar behavior. Under this condition, the CEO must have the executive vision well open for the signs of threat or opportunity in the environment. Sometimes those signs may appear in a shadowy pattern and it may be difficult to spot a munificent environment or an uncertain condition.

Executive characteristics in the Mergers and Acquisitions

Overconfidence

It may appear that the overconfidence is a subtle feeling in the CEO, but further research suggests a deeper reason in the executive for this behavior. A quick analysis in some literature will be supporting the fact that the CEO overconfidence is based in the knowledge of facts that are unknown to the rest of the participants or observers in the Merger and Acquisition. Bouwman, Fuller and Nain (2002) found the relation of the stock market with the Mergers and Acquisitions intensity. In their research, the quantity of these operations increased at the higher-valuation market seasons; however, the performance of the acquisitions during high-valuation markets was lower to those acquisitions on lower-valuation markets. Their conclusions are taking us to the finding that CEOs aim to perform more mergers and acquisitions when the target company has a higher value. What is the reason behind this behavior? The cause of the purchase for a higher value may be in the taxing reasons.

Another section of the Bouwman, Fuller and Nain (2002) paper is the Herding behavior, however, The Herding behavior, as per Milbourn, Boot and Thakor, (1999), propose the cause of a desire of an outstanding CEO position, 'involving banks that increase size and scope despite a dissipation of shareholders wealth". In the opposite side, the M&A decision at the acquiring company would hardly depend on the CEO only (Nadolska and Barkema 2014). This decision will usually be on the Top Management. And as we know, in the Top Management Teams, the CEO positions sometimes rotate or are taken from inside the group. So we can make the assumption that the Top Management Teams have CEO characteristics that are similar among the group.

Upper echelons theory

The theory of the tenure of the CEO would give to this position a leader power. This power is supported by the upper echelons theory. Hambrick and Mason, (1984) and Hambrick and Snow, (1977) propose the concept of the field of vision of the CEO, based in that from this position, the CEO may not be able to see in detail everything that is happening in the firm. But the CEO, with the functional background or experience, together with the time in the position, can be able to make an assessment of the Munificence around the firm. The common factor in the decision maker's cognitive base is the knowledge; hence, knowing about the future, alternatives or consequences is the most important skill in the CEOs for the performance in the Firm, when the mergers and acquisitions would be performed.

Tenure

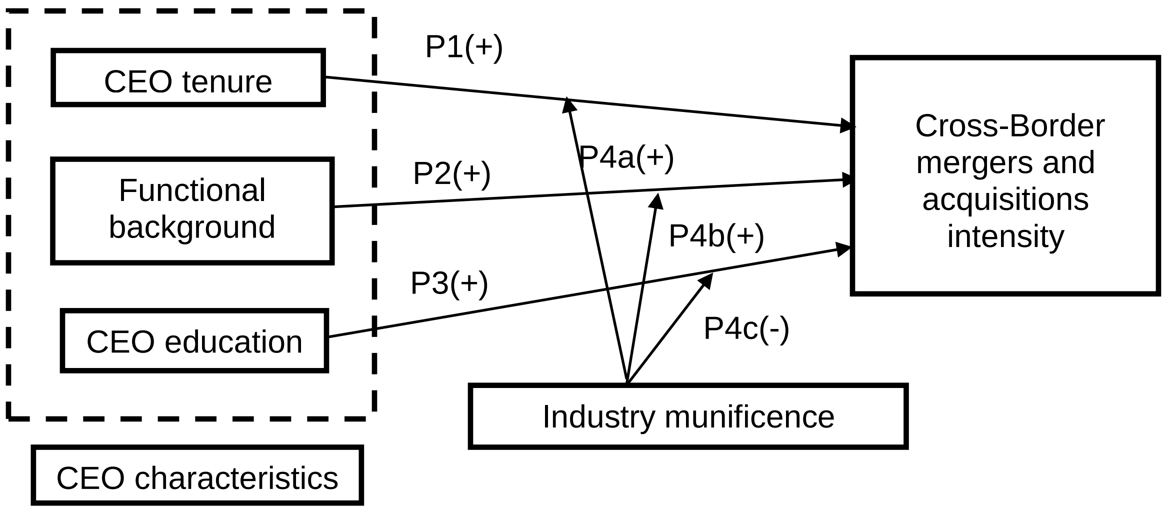
Hambrick and Fukutomi analyzed the CEO tenure time towards the performance in the firm. It appears that the performance follows an inversed U shape, with a sharp higher number of M&A at the middle time of the tenure, then following a decline in performance. Their study is based in previous research by Eitzen and Yetman, (1972).

We see this topic as an interesting approach to analyze how the CEOs steers to the M&A operations. We cannot assume that the CEO performance is related to the pharma company performance in the long period of time, because we have data for 3 years, due to the availability of their tenure years. In order to analyze for more years, the number of CEOs would be more than one for the period of time, or we would have to analyze fewer companies with the longer tenure of the CEOs. Therefore, the 3 years period appears to be a benchmark data for the CEO performance.

THEORY AND HYPOTHESIS DEVELOPMENT:

Model and Propositions

Figure 3



Model and Propositions

Propositions

Proposition 1:

Previous studies (Dikolli, Mayew and Nanda, 2014) found that the CEO tenure is in direct relation with the Firm performance. The CEO earnings are also in an inverse relationship with the CEO turnover. Some findings show that performance from the CEO is positively related whit low to moderate tenure and then the relation becomes negative with greater tenure from the CEO.

P1 (+) Tenure of the CEO will be positively related to the Mergers and Acquisitions Number

Proposition 2. Functional Background.

There are some discrepancies in the studies in regards to the relationship of the background to the intensity of M&A. Some papers argue that the background affects directly the intensity of M&A, while others found that there is no true connectivity of the background to the M&A, however, the significance of some findings that highlight the lack of relation of the educational background with the CEO current performance cannot be neglected. One important skill on the background of the CEOs with a successful performance could be the “leadership and interpersonal skills that are necessary for high –level managerial success” (Gottesman and Morey, 2010, p. 79).

Proposition 2 (+) Functional Background of the CEO will be positively related to the Mergers and Acquisitions number.

The perception of the gender participation in the Merger and acquisition may appear to be downsized or silenced. “The men have their own business language”, (Tienari, 2000), hence, this area may have been underexplored. 20 years after the Glass Ceiling Commission study of the barriers for women and minorities, (Johnson, 2013), the scenario appears to be changing. However, the barriers may not be just vertical, because the apparent obstacles for women to move horizontally to key decision positions. But inside our hypothesis may be an apparent scenario typical to some firms, and that is the effect of the women inside the boards. While the women may not have the leading position, still they may be exerting an authority force behind the board table. Some firms Boards have a more diverse members and the relation of the women to the outcome of M & A will be analyzed in this hypothesis.

Proposition 3

P3 (+) Education of the CEO will be positively related to the Mergers and Acquisitions Number.

P4a (+) The Tenure of the CEO in a more munificent environment will increase the Number of M&A.

Proposition 4

P4b (+) The Functional Background of the CEO will be positively influenced by a more munificent environment to perform a greater intensity of M&A.

P4c (-) The education of the CEO, in a more munificent environment, will be positively related to the intensity of the M&A.

METHODS

Firms Research

For this research, it is being proposed to collect data in Firms that have been performing the most Mergers and Acquisitions from 2010 to 2014 year. The data is being obtained from the Mergent database. We are obtaining a list of 468 firms, however, only the companies with 10 years or more of age will be considered. Also, in the database downloaded, somehow it filtered a couple of firms that may be in the SIC 2834, but with most of the activities in other area, like in the Energy or Petroleum industry. Those companies are not included.

Other data that is also being considered to eliminate firms is the number of employees in 2014. Those with a 0 number of employees on the year 2014 are not being considered. Thus, from 468 firms, after the data filtering, we are obtaining a list of 202 companies in the pharmaceutical industry, with activities in the merging and acquisitions, with employees in 2014 and active in the industry.

Other missing information was in the number of employees in some years, mostly in 2014 and 2015; hence the companies with no employees in those years have to be eliminated. The total amount of companies that did not have the employee’s number was 108. This deduction reduced our sample to 94 companies.

Method

The following factors are in the research:
1. Intensity of the Cross Border Mergers and Acquisitions. Dependent Variable. Number of operations. We are going to use the cross border merging and acquisitions quantity.
2. Tenure of the CEO. Independent Variable. Years
3. Age of the CEO. Independent Variable. Years.
4. Functional Background. Independent Variable.
5. Environment Munificence. Independent Variable. Measured by the percentage increase of the sales from the previous year.

Intensity of the Mergers and Acquisitions

Quantity

The purpose of this research is to gather information in the number of M&A operations that the Firm has performed under the same or late CEO in the position. We are looking to assemble data Cross Border operations from 2012 to 2014. This variable would be giving the first idea of the intensity of M&A.

Number of shares of the Firm before the operation

How many shares the acquiring firm had before the operation. This number would supposedly be lower than after the operation.

Tenure

Time in the position in years

Background.

Education:

Does the CEO has the following schooling?
1. No bachelor
2. Bachelor
3. Master Degree
4. MD or Ph.D.
5. MD and PhD

Some CEOs may only have a bachelor degree and there are some examples were the CEO does not have a bachelor degree.

Munificence

Percentage of sales increase per year. The data obtained were from the years 2012, 2013 and 2014.

RESULTS

The major findings in the research are that the older companies perform the M&A operations more frequently. However, from the major companies, some companies do not engage in these operations so much, or less than the competition, and they obtain higher sales percentage. Therefore, the M&A operations involve a risk that the major companies are facing. However, in return of the risk, the companies are acquiring overseas business units with important research included. Then we could say that the M&A operations are linked to the research, but the risk is more inherent to the research itself. This finding is in line with the risk taking behavior of the CEOs. To expand on this matter, the M&A operations have the risk located in the research and development divisions linked to the movement.

DISCUSSION AND CONCLUSIONS

CEO characteristics

In conclusion, in regards to proposition 1, the low to moderate term in the tenure is being proposed to be in the 3 years, as an average for the 5 years, to 7 years. Within this period, it appears that the performance of the CEO is being positive for the company and that after that period of time, apparently there is a consensus between the company and the CEO that this position must be renewed by other person.

In regards to the functional background, it appears that there is not enough support for the proposition 2 for the direct relation of the functional background to the performance in regards to M&A. This finding appears to be congruent with the answer provided by Warren Buffet if from upper Universities CEOs produce better financial performance. According to Mr. Buffet, the answer is no. Gottesman and Morey (2010), Hymowitz (2006), Wall Street Journal, However, the question is about the background. Yet, in this paper, the background seems to be non-related to the performance of the CEO. Some pharma companies have CEOs from completely different fields. And they still are doing a significantly good performance. Nevertheless, as we see the data and the changes in the CEOs, the notion of a deeper information interchange appears to surge in this environment. A future gap in this field may be the need of more research about the connection of the CEOs with the company. It appears that there is a connection of the good performers CEOs with the best performers companies.

What can be seen from the background analysis may remain inconclusive due to the specific discipline of the pharma industry. The CEOs must have a Medical career included in the background. A mixture of academic research with business acumen and advanced Medicine knowledge are essential tools for CEOs in the pharma industry. The inconclusiveness lies in the possibility of CEOs with other background. This scenario is not very common.

In regards to the education, the results may be different of the Gottesman and Morey (2010) findings. A probably significant addition done in this paper is the advanced education degrees from the CEOs. A substantial aspect arises when the CEOs have a PhD, or even more if they speak different languages. These characteristics are significantly positively correlated to a good performance of the firm, in regards to the M&A operations. Hence, the combination of multilingual skills, MD, and PhD from a related discipline appears to be determinant of a successful performance as CEO. Another characteristic that must be considered is the Law studies in the CEOs. Apparently, the pharma companies are including these CEOs in their boards to be prepared for patent contingencies, very common in this area.

We would suggest for future studies, an interesting detail that appeared in the data. Some pharma companies were going thru the M&A process, simultaneously within. Each company is acquiring a branch of the other company. The acquisitions have been an ongoing research with an already marketed product, or a segment of the company. However, the number of these operations is not great enough to analyze, but the economic amount is high. We do not know how the pharma companies decide to do this type of “castling” movement. Due to the fact that only a few of the best pharma companies are doing these operations, the probable best way to analyze these movements is by the inclusion of other type of companies, doing the same type of operation. This analysis may open the door to how the CEOs in the greater companies operate together for their advantage and the advantage of the customers.

Upper echelons theory

Another conclusion that could be adapted from the important contribution of the Hambrick and Fukutomi (1991) model, (p. 195) is the possible inclusion of the mediating effect of the surrounding boards or groups that the CEO belongs to. This model clarifies the process for the decision making in the CEO. Thus, a possible addition to this model could be the external input for the decision. This external input may not necessarily belong to the environment. In other words, the environment itself for the organization may be affected significantly by the CEO, being more notorious at the change of the CEO.

REFERENCES

Abebe, M. A., Angriawan, A., & Liu, Y. (2010). CEO power and organizational turnaround in declining firms: does environment play a role? *Journal of Leadership & Organizational Studies*, 1548051810385004.

Bebchuk, L. A., Cremers, K. M., & Peyer, U. C. (2011). The CEO pay slice. *Journal of Financial Economics*, *102*(1), 199-221.

Bittlingmayer, G. (1996). Merger as a Form of Investment. *Kyklos*, *49*(2), 127-153.

Bouwman, C. H., Fuller, K., & Nain, A. S. (2009). Market valuation and acquisition quality: Empirical evidence. *Review of Financial Studies*, *22*(2), 633-679.

Castrogiovanni, G. J. (1991). Environmental Munificence; A Theoretical Assessment. *Academy of Management Review*, *16*(3), 542-565.

Deals and Dealmakers. The Health Care M&A Review, Second Quarter, 2014, Vol. 19, No. 2, 2014. Irving Levin Associates Publications and Services.

Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative science quarterly*, 52-73.

Dikolli, S. S., Mayew, W. J., & Nanda, D. (2014). CEO tenure and the performance-turnover relation. *Review of accounting studies*, *19*(1), 281-327.

Ferris, S. P., Jayaraman, N., & Sabherwal, S. (2013). CEO overconfidence and international merger and acquisition activity. *Journal of Financial and Quantitative Analysis*, *48*(01), 137-164.

Fung, S., Jo, H., & Tsai, S. C. (2009). Agency problems in stock market-driven acquisitions. *Review of Accounting and Finance*, *8*(4), 388-430.

Gottesman, A. A., & Morey, M. R. (2010). CEO educational background and firm financial performance. *Journal of Applied Finance (Formerly Financial Practice and Education)*, *20*(2).

Hambrick, D. C., & Fukutomi, G. D. (1991). The seasons of a CEO's tenure. *Academy of management review*, *16*(4), 719-742.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, *9*(2), 193-206.

Hymowitz, C. (2006, 09, 18). ‘Any college will do’ Nation’s top chief executives find path to the corner office usually starts at State University. Retrieved from: http://www.wsj.com/articles/SB115853818747665842, on Feb 15, 2015.

Kitching, J. (1967). Why do mergers miscarry? *Harvard Business Review*, *45*(6), 84-101.

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of financial Economics*, *89*(1), 20-43.

Nadolska, A., & Barkema, H. G. (2014). Good learners: how top management teams affect the success and frequency of acquisitions. *Strategic Management Journal*, *35*(10), 1483-1507.

Sinkovics, R. R., Zagelmeyer, S., & Kusstatscher, V. (2011). Between merger and syndrome: The intermediary role of emotions in four cross-border M&As. *International Business Review*, *20*(1), 27-47.

Sofka, W., & Grimpe, C. (2010). Specialized search and innovation performance–evidence across Europe. *R&d Management*, *40*(3), 310-323.

Stahl, G. K. (2004). Getting it together: The leadership challenge of mergers and acquisitions. *Leadership in Action*, *24*(5), 3-6.

Tienari, J. (2000). Gender segregation in the making of a merger. *Scandinavian Journal of Management*, *16*(2), 111-144.