CEO characteristics comparison by region in the pharmaceutical industry: 2001 – 2018: Why do Japanese pharmaceutical firms have the low sales growth rate in 18 years?

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This study examines chief executive officer (CEO) characteristics by world regions in the pharmaceutical industry. Using a sample of 318 CEOs of 158 international ethical pharmaceutical firms in 21 countries from 2001 to 2018 from Capital IQ and their own firm websites, the result shows that Japanese pharmaceutical firms rarely choose their CEOs with a master of business administration (MBA) degree while other international pharmaceutical firms have CEOs with MBA degrees.

These publicly listed pharmaceutical firms were roughly divided into 6 regions, such as Europe, USA, Japan, South Korea, India and the others. CEO tenure was twice as long in Japanese, South Korean and Indian pharmaceutical firms than European and USA firms. No correlation was found between the compound annual growth rate (CAGR) for sales and the number of CEOs with MBA degrees although Japanese firms have the lowest CAGR from 2001 to 2018 among Europe, USA and Japan. No correlation was found either between CAGR and CEO tenure.

This study still indicates the CEO characteristics of Japanese pharmaceutical firms clearly differ from the ones in Europe and USA, which can be one of the reasons of why the Japanese pharmaceutical industry has a harder time to gain higher CAGR compared with the other regions.

Keywords: CEO Characteristics, Upper Echelon Theory, Pharmaceutical Industry, Japan

1. Introduction

Organizations are a reflection of their leaders, as Hambrick and Mason (1984) proposed in the upper echelon theory. Many researches has done to study the relationships among chief executive officer (CEO) characteristics, top management team diversity and the firm performance, following the theory, and there is no right answer on these arguments while it gave us numerous indicators to analyze the organizations.

The ability to manage the firm is also depending on its dominant logic, which consists of “a mindset, experience, the administrative tools to accomplish goals and making the decisions in the business” (Prahalad and Bettis, 1986). To survive the changes in the industry, evolution of the dominant logic in the firm is occasionally required to reorient the strategy. In that sense, CEOs must be able to scan industry future scenarios so that timely decisions can be made, following the firm’s dominant logic, which is developed over their experience.

Then what kind of the CEOs can be the best? Hambrick and Mason (1984) presented the indicators to find the firm performance, such as CEO age, functional tracks, other career experiences, education, socioeconomic roots, financial position and group characteristics. The range of indicators were extended by many others. Besides these indicators above, CEO origins
Managerial characteristics of CEOs were examined as well. CEOs with a master of business administration (MBA) degree were analyzed, and the result showed they tended to choose in higher level of capital expenditures, hold more debt and pay less dividends. (Bertrand and Schoar, 2003) CEOs with MBA degree also had a positive association with corporate environmental performance (Slater and Dixon-Fowler, 2010).

Although CEO characteristics and the firm performance have been studied in many ways, the comparative study on CEOs including Japanese firms has not done many. The diversity in the organization did not have the clear definition until recently and still has been discussed (Arimura, 2008). The studies of the diversity in the Japanese top management is still hard to find.

When we look at the pharmaceutical industry and market analysis, the sales growth of Japanese pharmaceutical firms is not as big as the ones of the other countries in the past 18 years.¹ There might be some relationship among CEO characteristics and the market situation Japanese pharmaceutical firms are facing.

Focusing on the pharmaceutical industry, this paper examines whether the relationships exist among the CEO characteristics (MBA holders and CEO tenure), CAGR, and the industry characteristics (firm age and firm size) sorted by six divided world regions to see the difference among them and Japan.

2. Pharmaceutical Industry, 2001 to 2018

Pharmaceutical firms need a long term business strategy of research & development and investment to develop an innovative drug. The industry is stable, however the overall economic, regulatory, social and political conditions can affect their performance. The market and people’s lifestyles influence their performance as well as the expiration of their drug patents. An innovative drug that holds a long term patents will mostly turn into a blockbuster drug. It earns the annual sales of at least $1 billion for the firm (Hannigan, Mudambi and Sfekas, 2013).

While there are three kinds of ethical pharmaceutical firms in general, this study is focusing on the firms that needs the long term business strategy including manufacturing and distributing their products. This kind of firms is called the mainline pharmaceutical firms. They develop new innovative drugs, and spend a huge amount on R&D, and have variety of drugs in their pipeline. Some of them have various divisions that handle OTC and animal drugs.³

Besides the mainline pharmaceutical firms, there are the research and development pharmaceutical firms, and the generic pharmaceutical firms. These three types of pharmaceutical firms have a different range of R&D investments and the resources. The R&D pharmaceutical firms focus on research to develop a new drug while being invested in by some other firms as well. The generic pharmaceutical firms do not need to spend a long time nor the large cost to develop their drugs.

Most of the mainline pharmaceutical firms prepare various strategies before the patent expiry of their blockbuster drugs. The popular strategies such as mergers and acquisitions,
co-marketing, sales partnerships and licensing are taken while they invest enormous amounts on R&D to find the next blockbuster drug. The world’s top class of pharmaceutical firms never stop challenging these actions until they find a new drug that can extend its long patent retention. Keeping a patented blockbuster drug continuously is a matter of survival for the pharmaceutical industry.

It looks as if Japanese pharmaceutical firms also have been struggling to grow their performance more than other countries. When we look at the sales ranking of the world’s top 20 pharmaceutical firms in 2001, there were eight Japanese firms listed in the ranking. Takeda Pharmaceutical was ranked in top 10. Following Takeda, Astellas Pharma, Shionogi, Kyowa Hakko Kirin, Eisai, Chugai Pharmaceutical, Mitsubishi Tanabe Pharma, and Sumitomo Dainippon Pharma were ranked in top 20.

However, the number of Japanese firms on the list has decreased every year. As a result, there are only three firms listed in 2018 (Figure 1). Takeda Pharmaceutical was ranked in top 14. Astellas Pharma was in top 18, and Otsuka Holdings was in top 19. European firms increased their numbers, and USA firms stayed as it is. There are two Chinese firms from 2016.

Why did the number of the Japanese firms in top 20 decrease in 18 years? What is the difference between Japanese firms and others? There can be tons of reasons, however there will be no right answer. Fewer firms in the top 20 ranking do not mean that their sales dropped in the 18 years. Actually, the sales of all the firms increased rather than dropped or stayed the same. Then why did the pharmaceutical firms in other countries grow more than Japanese pharmaceutical firms?

While business strategies can be different for each firm, the assumption is that there can be cultural difference in the business strategies by each region. The management team can differ as well.

A CEO can influence a critical organization decision. These outcomes reflect the top managers and their decisions. (Chaganti and Sambharya, 1987; Hambrick and Mason, 1984) CEO selection decisions have been studied in various areas of organization theory and strategic management (Datta and Guthrie, 1994). However, there is not much research that focuses on CEOs in the pharmaceutical industry with a stable business environment, compared by countries and regions. This paper attempts to find out the regional CEO characteristics by looking over the industry for 18 years.

Figure 1 Number of the Pharmaceutical Firms by Region Listed in World Top 20 Sales Ranking

*Source: SPEEDA

A possible reason why these Japanese pharmaceutical firms did not grow as good as the one in the other regions period from 2001 to 2018 is that the Japanese firms were not able to manage the “2010 problem.”

In Japan, the pharmaceutical industry rapidly developed from 1975 to 1995. (Thomas, 2005) The economic bubble also pushed the expansion of other industries in Japan as well as the pharmaceutical industry. Table 1 shows the first year of approval of a well-known blockbuster drug as well as its patent expiry. The countries listed in the table are the USA, Europe and Japan. After the patent expires, the price of the drug become almost 70% of the original price, then it drops every year until it becomes about 50%. Generic drugs also will be released and take more or the market share. Therefore, the sales of the pharmaceutical firms always depend on the profit of their blockbuster drugs before the patent expiry.

Most of the drugs in the table were developed and launched in 1990’s, which is the time of Japanese bubble economy. When we look at the years of patent expiry, it shows the expiries happened right before and after 2010. That is called “2010 problem of the Pharmaceutical Industry” in Japan.  

This paper examines CEOs in 18 years from 2001 to 2018. It means that we can review the CEOs before and after the patent expiry rush. The firms would have difference performances before and after, while it may grow well in the expiry rush, and some may not.

4. CEO Characteristics: Review

4.1 Upper Echelon Theory

In the upper echelon theory (Hambrick and Mason, 1984), there are seven characteristics

<table>
<thead>
<tr>
<th>First Yr of Patent Expiry</th>
<th>Product Name</th>
<th>Active Ingredient</th>
<th>Company</th>
<th>Country</th>
<th>First Yr of Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 Norvasc</td>
<td>Amlodipine</td>
<td>Pfizer</td>
<td>USA</td>
<td>1990</td>
<td></td>
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<tr>
<td>2010 Paxil</td>
<td>Paroxetine</td>
<td>GSK</td>
<td>England</td>
<td>1992</td>
<td></td>
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<tr>
<td>2008 Prograf</td>
<td>Tacrolimus</td>
<td>Astellas</td>
<td>Japan</td>
<td>1993</td>
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<tr>
<td>2009 Takeprone</td>
<td>Lansoprazole</td>
<td>Takeda</td>
<td>Japan</td>
<td>1995</td>
<td></td>
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<tr>
<td>2011 Lipitor</td>
<td>Atorvastatin</td>
<td>Astellas</td>
<td>Japan</td>
<td>1996</td>
<td></td>
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<tr>
<td>2012 Diovan</td>
<td>Valsartan</td>
<td>Novartis</td>
<td>Switzerland</td>
<td>1996</td>
<td></td>
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<tr>
<td>2012 Plavix</td>
<td>Clopidogrel</td>
<td>Sanofi</td>
<td>France</td>
<td>1997</td>
<td></td>
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<tr>
<td>2013 Rituxan</td>
<td>Rituximab</td>
<td>Biogen/Roche</td>
<td>USA/Switzerland</td>
<td>1997</td>
<td></td>
</tr>
<tr>
<td>2010 Adoair Diskus</td>
<td>Fluticasone/Salmeterol</td>
<td>GSK</td>
<td>England</td>
<td>1998</td>
<td></td>
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<tr>
<td>2013 Remicade</td>
<td>Infliximab</td>
<td>JJ/MSD/Tanabe Mitsubishi</td>
<td>USA/Japan</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>2012 Enbrel</td>
<td>Etanercept</td>
<td>Amgen/Pfizer/Takeda</td>
<td>USA/Japan</td>
<td>1998</td>
<td></td>
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<tr>
<td>2012 Viagra</td>
<td>Sildenafil</td>
<td>Pfizer</td>
<td>USA</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>2010 Aricept</td>
<td>Donepezil</td>
<td>Eisai</td>
<td>Japan</td>
<td>1999</td>
<td></td>
</tr>
<tr>
<td>2011 Actos</td>
<td>Pioglitazone</td>
<td>Takeda</td>
<td>Japan</td>
<td>1999</td>
<td></td>
</tr>
<tr>
<td>2008 Radicet</td>
<td>Edaravone</td>
<td>Tanabe Mitsubishi</td>
<td>Japan</td>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>2016 Humira</td>
<td>Adalimumab</td>
<td>AbbVie</td>
<td>USA</td>
<td>2002</td>
<td></td>
</tr>
<tr>
<td>2019 Avastin</td>
<td>Bevacizumab</td>
<td>Roche</td>
<td>Switzerland</td>
<td>2004</td>
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</tr>
</tbody>
</table>

* source: own research
presented such as age, functional tracks, other career experiences, education, socioeconomic roots, financial position and group characteristics. Expanding the theory, there is various studies on the CEO characteristics. CEO age is related with the frequency of acquisition activity. Younger CEOs in 20’s is 30% less likely to pursue acquisition (Yim, 2013). Herrmann and Datta (2002) examined CEO position tenure, educational level, functional background and international experience as CEO characteristics to determine decisions when they expanded the business outside of their origin country.

The characteristics mentioned above can influence the strategic choices, according to the upper echelon theory. Eleven choices are considered, including product innovation, acquisition, plant and equipment newness, forward integration, financial leverage, and administrative complexity. These influence profitability, variations in profitability, growth and survival.

Datta and Rajagopalan (1996) reported that industry structure influences the characteristics of the CEO successor. The research indicates that the higher industry growth rate, the shorter organizational tenure and age of the CEO successor. Firm size, growth rate and industry concentration would affect CEO age, position tenure, and background, especially in the larger product differentiation.

4.2 CEO Position Tenure

Eitzen and Yetman (1972) analyzed the basketball team to find the best length of the leader’s tenure. It showed that the team performance dropped rapidly after 13 years while the longer period of leadership could have the great team success. To analyze the reason of why the team performance dropped after 13 years, Hambrick and Fukutomi (1991) analyzed it in the top management team by finding five phases of CEO tenure. It showed extremely short and extremely long CEO tenures would be harmful. Miller (1991) found that the negative impact likely happened when a CEO left after the long tenure. The next CEO usually had difficulty accomplishing their new goals.

On the other hand, the short CEO tenure also gives a negative impact on their performance (Shen and Canella, 2002). When the firms replace their CEOs in a short term, the new CEO is not able to build trust in the organization. Pharmaceutical firms need a long-term strategy while increasing R&D spending. Hambrick and Fukutomi (1991) also pointed out that a CEO reduces the range of industry interest, or narrows the information preference. The above arguments suggest that the CEO tenure in pharmaceutical firms should not be short while the longer tenure may not have needed changes and product development.

4.3 CEO with MBA degree

It is often discussed that CEOs have an important role in firm’s performance and innovations in the industry (Agre et al., 2006; Darmadi, 2011). CEOs with an administrative education degree like an MBA are studied empirically to check their performance (Gottesman and Morey, 2006). There are also critics for MBA (Mintzberg and Lampel, 2001). Basically, no matter the arguments whether an MBA is positive or not, the CEO with an MBA has never diminished an existing firm. They still exist - meaning the firms find some kind of benefits by having such a CEO.

According to “The Best-Performing CEOs in the World 2018” by Harvard Business Review, there were 32 MBAs out of 100 CEOs in the list. 21 are from USA, 10 from Europe, and 1 from
Hong Kong. There were 4 Japanese CEOs in the list, but none of them had MBA. The list indicates that MBA is one of the important factors to evaluate the success of a CEO.

As mentioned, in Japan, MBA is under estimated in the firm. The list predicted that there would be not many MBAs in Japanese pharmaceutical firms. A CEO with an administrative degree is often involved however, in the pharmaceutical industry, the business is also a matter of innovation, R&D, patents, and life science. In the business strategies, the possibility of a CEO with various kinds of degrees may be selected. The CEOs in the pharmaceutical industry may show some characteristics similar to other industries.

5. Method

5.1 Sample and Data Sources

This study was based on 318 CEOs in 158 mainline pharmaceutical firms from 21 countries out of 328 firms, that were listed in SPEEDA. These firms were publicly listed, and had at least 20% of sales of prescription drugs (not in generic drugs), according to SPEEDA industry categories. It means that prescription drug sales and R&D were the main business focus of the firm. Firms in socialist countries were excluded such as China and Vietnam. This study focused on 18 years from 2001 to 2018, which spans the 2010 problem of the pharmaceutical industry.

CEOs of each firm in 18 years were studied at S&P Capital IQ Platform (hereinafter referred to Capital IQ) and the firm’s own website. The names of 318 CEOs were found, and data was collected about their CEO starting with age, educational background and tenure.

The data of the firm’s age, size (as the number of employees), and CAGR of 18 years were gathered as well from Capital IQ and firm website. The 158 firms were divided into 6 regions; Europe, USA with Canada and Australia, Japan, Korea, India and the others including Malaysia, Indonesia and Egypt, to see any characteristics by regions.

Sorting out the data by each region, the firm and CEO data were analyzed.

5.2 Measures and Variables

While Hambrick and Mason (1984) mentioned CEO age, functional tracks, other career experiences, education, socioeconomic roots, financial position and group characteristics, this paper selected firm age, firm size to see the characteristic of the pharmaceutical industry, CAGR for sales to see its performance, and CEO tenure and CEO MBA education as the CEO characteristics.

In order to find out possible explanations for any discovered relationship, measures for variables were described as follows;

Firm Age

To find out the firm age, 2018, was subtracted from the founded year. The firms in the list were from various regions mixing of developing and developed countries. Depending on the regions, the history of their pharmaceutical industry could be different. Evans (1987) reported that the firm age determines of firm dynamics.

Firm Size (Employees)

The number of employees was often used to see the firm size in the organizational learning study. (Gordon et al., 2000) It is also proper to see the amount of property, sales, and new employments such as from M&A. (Yasuda, 2005) The number of employees was collected as data together with the firm age in 2018 Some
of the firms might have gotten bigger or smaller by M&A or liquidation in 18 years, therefore the number in 2018 was taken to represent the latest firm condition.

CAGR (Compound Annual Growth Rate) for Sales

The CAGR from 2001 to 2018 was examined. The performance of the CEO in 2000 would have been represented at the balance of 2001. Therefore, this study made the balance of 2001 as the starting period of CAGR. CAGR was calculated as below.

$$\text{CAGR} = \left( \frac{\text{Ending balance}}{\text{Beginning balance}} \right)^{\frac{1}{n}} - 1$$

(C) Number of Years

When the firm did not have the balance in 2001, the balance of the year they started was used. The CAGR of each firm was calculated, then combined and averaged by regions.

CEO Tenure

The CEO tenure was calculated by subtracting the year beginning as CEO from the year of resigning as CEO.

CEO MBA Education

In this study, the number of CEOs with an MBA was counted in their educational background.

6. Results and Findings

Table 2 provides minimum, maximum, means and standard deviations of each variable. It shows variety of the firm age and size. The oldest firm was Fresenius SE & Co. KGaA, Germany, founded in 1462. The youngest firm was Abbvie, Inc, USA, founded in 2012.

The longest CEO tenure was 49 years. Four Japanese CEOs had their position for over 30 years. Four of South Korean CEOs had their position for over 40 years. Three out of 4 were founders of the firm. Three Indian CEOs had their position for over 30 years. They were all founders of the firm.

Table 3 shows sorted data by each region. There were 64 firms in South Korea, while USA area had only 10 firms. South Korea firms were younger over all, as well as smaller. (Employees ≤468) It suggests that the firms in the USA merged and grew while the firms in South Korea remained in the stage of a developing market. While the firms in South Korea had a higher CAGR, Indian firms had really lower rate of -12%. It might have indicated the Indian firms were still in the stage of R&D investing rather than making bigger sales since most of the firms were founded less than 50 years. In 2018, there was no well-known new drug developed in South Korea or India. Most of the top sales drugs in the world developed by firms in Europe, USA or Japan.

Table 3 also shows the comparison of CAGR by each region. The CAGR of Japanese firms was one of the lowest after Indian firms. It could explain the reason why Indian firms had such low CAGR because they were still medium sized, young and not having new drugs in the global

| Table 2 Descriptive Statics (N=158) |
|-------------------------------|--------|--------|--------|--------|
| Firm Age                      | N=158  | Minimum| Maximum| Mean   |
| Employees                     | N=137  | 6      | 556    | 79.9   |
| CEO Tenure                    | N=103  | 1      | 49.0   | 12.4   |
| Valid N (listwise)            | 89     |        |        |        |
top sales. However, it is hard to assume why Japanese firms had one of the lowest CAGR, especially compared with the big two regions, Europe and USA.

Japanese firms were well-established, around 120-year-old on average, which was older than firms in USA. The firm size, as the number of employees, was actually eight to ten times smaller than the ones in Europe and USA.

CEO tenure of Japanese firms was not the longest but there were two groups clearly; one was Europe and USA, the other was the rest of world. An average of 7 years of CEO tenure and average 13-15 years of tenure, which was twice as long than in Europe and USA.

The CEO in the regions other than the Europe and USA had longer tenure, and CAGRs in these countries were not as high as the Europe and USA. The countries in the “others,” included Egypt, Saudi Arabia, Malaysia and Indonesia, had higher CAGR compared with Japan, South Korea and India. Consequently, Japanese firms had the lowest CAGR and the longest CEO tenure in the three big pharmaceutical markets, Europe, USA and Japan.

Table 4 shows the number of CEOs with an MBA degree by each region. In Japan, there was only 7% of CEOs who had an MBA degree, which was extremely low compared with other regions. The highest rate of CEO with an MBA degree was 44% in the USA. The next highest was 25% in the Europe, then the other regions had around 20%.

Japanese firms had the lowest rate of MBA holders. However, Indian firms had the lowest CAGR with 25% holders of an MBA. As mentioned, the industry environment of Japan and India could be different since India was still developing in the pharmaceutical industry.

Table 5 shows the correlation of these vari-
variables to examine any relationship with CAGR, CEOs with MBA degree and CEO tenure. Unfortunately, there was no correlation among these variables. As the firm became older, the size got bigger, then there would be more chances to have CEOs with MBA. Therefore, there was no surprise that the amount of MBA holders had a correlation with the firm’s age and size. As well as CEO tenure, the older firms had a more chance for CEOs to have longer tenure.

7. Discussion

There are five findings that we can compare. One is the number of the pharmaceutical firms in each region, the other is CEO tenure by region, the next is the numbers of MBAs in each region, then the CAGR by region, and the last is that no correlation was found among these variables.

Firstly, there were 64 South Korean firms out of 158 pharmaceutical firms, 23 in India, and 30 in Japan, while 20 in Europe, and only 11 in USA with Canada and Australia and all were public-listed. This allocation of the number of the firms might indicate the pharmaceutical market structure. Obviously, the firms in USA were acquired and merged, and the size grew. According to Japan Pharmaceutical Manufacturers Association (JPMA), there were 19 pharmaceutical firms in the USA in 1990’s. In 30 years towards 2018, it turned into 9 firms. It means that it is likely Japanese, South Korean and Indian firms will be acquired or will merge gradually in the future, similar to the USA pharmaceutical industry.

Secondly, there was a clear difference in CEO tenure between Europe and USA on one side, and the others. The first two regions had around 7 years’ average, while the other regions had around 14 years. The average of CEO tenure in all region is 12.09 years. It supports what Hambrick and Fukutomi (1991) discussed. The team performance drops rapidly after 13 years, so firms have no choice but to replace the CEO to keep the performance (Eitzen and Yetman, 1972).

<table>
<thead>
<tr>
<th>Table 5 Correlations</th>
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<tr>
<td>AGE</td>
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<tr>
<td>Pearson Correlation</td>
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<td>Sig. (2-tailed)</td>
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<td>N</td>
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<td>Pearson Correlation</td>
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<td>Sig. (2-tailed)</td>
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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Thirdly, the number of MBA holders were clearly different among these areas. Europe and USA had over 30% of MBA holders as their CEOs, around 20-25% in South Korea, India and the other region, and only 7% in Japan. Firms in Europe and USA might have encouraged their shareholders and investors by replacing the CEO occasionally, and increasing their CEOs with MBA degrees, as a management professional. In contrast, Japan had only 7% as CEO with MBAs and the average CEO tenure was around 14 years. It might indicate that the Japanese firms were still running as family businesses, and did not consider how to encourage their shareholders. An MBA degree does not help to be promoted nor their salary in Japan, while MBAs in USA are paid better than non-MBAs. Underestimating the managerial education of CEOs in the organization can be one of the reasons why the Japanese pharmaceutical firms have been losing their presence over the past years.

Fourthly, the CAGR by region indicates that Japanese pharmaceutical firms lost their standing in 18 years from 2001 to 2018 when compared with European and USA firms. Japan had been decreasing in firms in top 20 sales in the world since 2001. Although their CAGR was still above 3%, it was not as much as the firms in Europe and USA.

Lastly, no correlation was found relating Japanese firms with negative CAGR and CEOs with MBA degrees and longer CEO tenure. It indicates that there may be other reasons for Japan’s low CAGR. The research should be continued.

8. Limitations and Future Research

This study focused on the pharmaceutical industry, and the data was sorted by firms and regions while 318 CEOs examined. While CEO characteristics by region were identified, the characteristics of each CEO of 18 years were not compared individually. If the performance of each CEO in their tenure could be studied, the educational background data may be more persuasive.

In addition, in upper echelon theory, there were other CEO characteristics listed, such as functional backgrounds and career roots. Since there were another difference beside the number of MBA, the other characteristics could be different indicators of the CEO.

There can be the difference of CEO criteria and the business strategy among Japanese firms and the firms in the other regions, as the result of the number of CEO with MBA holders. As mentioned, some of Japanese firms may be run by family so that they focus on keeping the firms as it is not on making the firm grow by taking the risk of developing blockbusters.

Regarding the firm size, the number of employees in 2018 was compared in this study as the result of 18 years. However, some of the firms had M&A in the period, and the CEOs who made the decision could have been specified. The comparison of these CEO characteristics will be needed to find out which CEO characteristics move into M&A.

9. Conclusion

The question of this study, “why Japanese pharmaceutical firms have low growth rate in 18 years,” was not clearly answered by examining the relationship among CAGR, the number of CEO with MBAs and the CEO tenure. However, there was an obvious difference of CEO characteristics in three big regions of the pharmaceutical market – Europe, USA and Japan. The CEOs in Japanese firms rarely had MBA
degrees, which could improve a management professional. The CEO tenure was twice as long as the other two regions, which also might have indicated Japanese firms preferred not replacing the CEOs often to present a better image to shareholders although performance was not always good.

As a result, these two findings could be the reasons of why the Japanese pharmaceutical firms did not have higher performance in these 18 years.

Notes
1. According to “The Global Use of Medicine in 2019 and Outlook to 2023” reported by IQVIA Institute, Japan’s overall growth will be the slowest among the developed markets, and it also was from 2014 to 2018.
3. According to the data on this page, the population growth will never go down as well as aging population. It means that the pharmaceutical market never shrinks as long as there are patients. Most of the drug sales will be increased in years, following the aging population.
4. The innovative drugs produced by the mainline pharmaceutical firms are also called “brand name drugs.”
5. These two are from Shanghai and Hong Kong. Both are the mainline pharmaceutical firms, however they make the most of the sales from generic drugs and their distribution. The reason of being in the list is not because of their blockbuster drugs but because of the economics of scale. (Tou and Kanayama, 2015)
7. Capital IQ: A technology and financial services company that acts as the research division of Standard and Poor’s, https://www.capitaliq.com/
9. Nine firms in USA, 1 in Canada, and 1 in Australia.

References


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