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MERGERS AND ACQUISITIONS IN PHARMACEUTICAL INDUSTRY AS A GROWTH STRATEGY: AN INVESTIGATION UPON PRACTICE

Abstract:

Until the begining of 1990s, firms had been looking ways to attain the competitive advantage and increase their profitabilites depending on it by realizing economies of scale or benefiting from market failure. Nowadays, with the impact of globalization, particularly great companies have started to purchase other firms or merge with them as a growth strategy. Pharmaceutical industry has the first place where the mergers and acquisitions occur mostly. Among the drives that leads pharmaceutical firms to mergers or acquisitions; high costs of research and development, economies of scale, motivation for new markets, efforts to improve the existing marketing possibilities, trying to keep up with competition can be counted. The aim of this study is to discuss mergers and acqusisitions in pharmaceutical sector and to evaluate global pharmaceutical industry in this terms.

Keywords:

Merger, Acquisition, Growth Strategy, Pharmaceutical Industry

JEL Classification: F23, G34, L65

INTRODUCTION

The merger, acquisition and strategic alliances offer various way outs to the companies in terms of the uncertainties brought by technological shocks, budgetary deficits that may occur due to innovativeness and the will of having commercial sovereignty (Mittra, 2007). With these strategic moves, the enterprises obtain positive returns such as decreasing the risks that may come across, overcoming the challenges in supplying fund and increasing the profit and market share.

In the health sector, the industry that is the first thing come to mind in terms of company mergers and acquisitions is the pharmaceutical industry. Until last twenty years, the understanding of getting benefit from scale economy and turning the market inconveniences into advantage come to the forefront in obtaining competitive advantage for pharmaceutical companies. Nowadays, proliferation of globalization and increase of the competition day by day have lead to occurrence of issue of that the pharmaceutical companies are not able to gain sufficient profit as a significant problem. Therefore, the effort of high income and dominating the market in the global market through mergers and acquisitions has become popular among the pharmaceutical companies (Lodorfos and Boateng, 2006). With the effect of this popularity, many companies in the world have started to try merger and acquisition methods as a dominant growth way (Demirbag et al., 2007).

The object of this study is to take the issue of company merger and acquisitions in the pharmaceutical sector and assess the pharmaceutical sector in general terms within the frame of mergers and acquisitions. Within this context, first theoretical information concerning to merger, acquisition and merger methods and the merger strategies in the pharmaceutical sector will be mentioned and then assessments will be done concerning to merger/acquisition activities in the global and Turkish pharmaceutical sector.

I. CONCEPTUAL FRAMEWORK

The economical mergers may be reviewed under three titles as horizontal, vertical and mixed (conglomerate) mergers (Evans, 2000). The mergers of which main object is to increase the market price by decreasing the competition between the companies that manufacture and/or sell the same products are referred to as horizontal mergers (Clougherty and Duso, 2009: 1368; Pilsbury and Meaney, 2009). At the same time, the object in the horizontal mergers may be also to wipe the competitive companies away from the market and increase its market share. Also, it is seen that the companies tend to horizontal mergers due to their scale economies (Sarıca, 2012). The mergers in which the companies that take place in different stages of the same industry in spite of that they are in the same industry is referred to as vertical mergers. As follows; if the product that is produced by any of the merged companies in other words the output is the input used by the other company, mergers of these companies is referred to as vertical mergers (Arnold, 2010). The vertical mergers may be resulted from the factors such as increasing the profitability, obtaining cost advantage, being strong in the competitive environment, adapting to the changes in the market and/or demands, accessing the raw material at desired quality and amount on time and appropriate conditions and getting benefit from the effect of synergy in the marketing function (Harrigan, 2003). In the mixed mergers, the companies merged do not compete with each other in the market and the output produced by any of them is not used as the input in the production of other (Church, 2008). Therefore, the revulsions resulted from the merger are not observed in the markets in which merger companies are because there is no competition and production relation between the merger companies (Wang and Chiu, 2013). The mixed merger is rather made in order to enter new business districts and increase the financial capacity at the highest rank (Morresi and Pezzi, 2014). On the other side, the managers may consider the mixed mergers as a way of risk diversification and decrease for decreasing the dismissal risk in the companies in which there is no dominance of any shareholder in the management as a result of that number of the shareholder is to many and accordingly there is rather professional managers in the company management (Amihud and Lev, 1981). In general, the mergers and acquisitions have also disadvantages in terms of enterprises such as possibility of culture and interest conflicts, expansion of control area and not able to creating expected synergy whereas its advantages such as decreasing unit cost through scale economies, easy access to finished products and markets, increase market share, access to the technical information and new technologies, being able to find liability and synergy (Haberberg and Rieple, 2008; Anderson et al., 2013; Depamphilis, 2012).

The pharmaceutical and biotechnology industry has become more concentrated day by day. For example; while the share of 10 biggest companies in the word carrying on business in the pharmaceutical sector in the middle of 1980s was 20%, this ratio has reached to 50% in the beginning of 2000s. The company mergers may be shown as the most significant reason of this situation (Danzon et al., 2007). The value of company mergers and acquisition within the relevant dates exceeded 5000 billion dollars (Danzon et al., 2007). The merger, acquisition or co-marketing agreements concluded between the pharmaceutical companies occur as a result of capacities of the relevant companies in terms of completing each others. For example; when a small pharmaceutical company of which sale marketing capacity has not developed sufficiently develops a new drugs, it may put its new drug on the market by merging with a big pharmaceutical company that has a wide sale distribution network or concluding definite period agreements (Karanpuria, 2014).

The merger that is most frequently seen in the pharmaceutical company (along with the acquisitions) is the horizontal mergers (Katsanis, 2015). Another merger type that is rather less frequently seen in the pharmaceutical sector is the vertical mergers. In the sectors outside the pharmaceutical sector, the vertical merger is preferred due to the reasons such as decreasing the production costs, easing access to the raw material, accessing the distribution channels more easily and increasing the profitability. In the pharmaceutical sector, the factors such as decreasing he production cost, easing access to the raw material, access to the distribution channels more easily or increasing the profitability are nor among the driving reasons; because the most significant input used in the pharmaceutical sector is the chemical or biotechnological knowledge. For a company that knows how any drug will be produced, the cost of access to the raw material or production cost is not high. The most significant reason that directs the pharmaceutical companies to the vertical mergers is to access the distribution channels more easily and therefore increase their profitability (Neirinckx, 2000).

Also, it is discussed in the pharmaceutical sector as well as the mergers that a company may acquire another company. As seen in the below table, the eight of biggest ten company merger in pharmaceutical sector within the years of 1998-2014 was put into life through acquisition.

Table 1: Big Mergers and Acquisitions in the Pharmaceutical Sector Within the years of 1998-2014

Firms	Merger/Acquisitions	Value (Billion $)	Year
Pfizer/Warner Lambert	Acquisitions	90,3	1999
Sanofi/Aventis	Acquisitions	73,5	2004
Smithkline/Glaxo	Merger	72,4	2000
Pfizer/Wyeth	Acquisitions	68	2009
Actavis/Allergen	Acquisitions	66	2014
Pfizer/Pharmacia	Acquisitions	60	2002
Merck&Co/Schering-Plough	Acquisitions	47,1	2009
Roche/Genentech	Acquisitions	44	2008
Medtronic/Covidien	Acquisitions	42,9	2014
Astra/Zeneca	Merger	30,4	1998

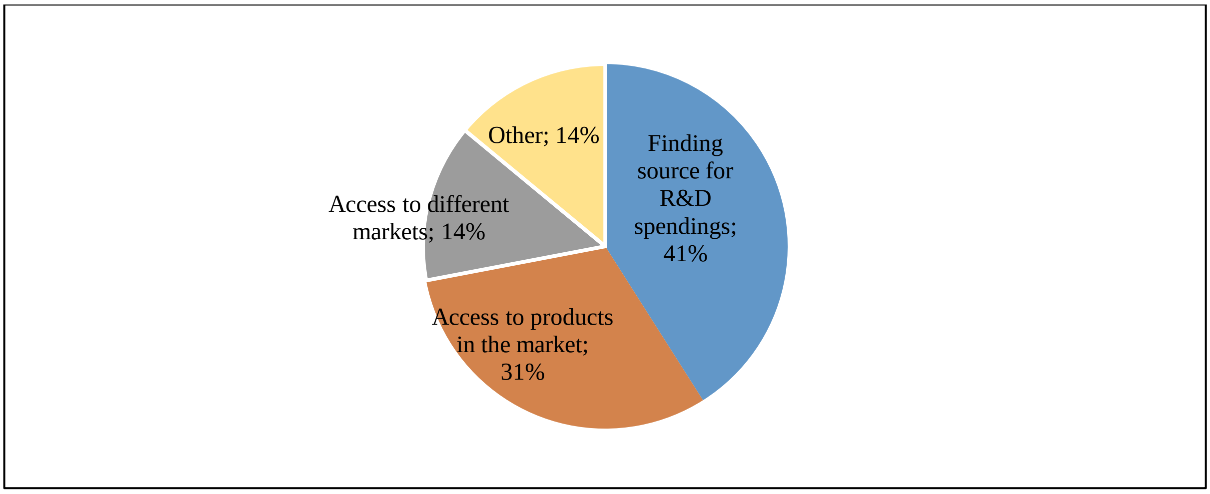
Source: Spickernell, 2015

Achieving the scale economies, providing fund to the R&D activities and increasing the marketing opportunities may be shown among the factors that drives the companies to the company mergers in the pharmaceutical sector (Danzon et al., 2007). The dense competition pressure especially in the pharmaceutical sector compels the companies to merger or acquisitions that carry on activity in this market (Demirbag et al., 2007). Another factor that drives the pharmaceutical companies to mergers or acquisitions is the synergy. The synergy may be defined in the way that the value of merger of two independent companies under a single roof is much more than the values that companies may obtain independently (Demirbag et al., 2007). The synergy observed among the companies merged may occur in various ways. For example; the companies merged may obtain the market power; the mergers or acquisitions may increase the work efficiency; may decrease the unnecessary investments and enterprise costs or may be seen as external corporate management mechanism in order to discipline the inefficient managers (Zhu and Hilsenrath, 2015).

For the pharmaceutical companies, the most significant merger cause observed among the companies merged is that a pharmaceutical company does not want to solely undertake the R&D activity expenses that require high amount of fund (the cost of developing an original drug has approached to 900 million dollars since 2011)

(Ernst, Young, 2011). It may be said that in the recent years, the most significant sustainable benefit that may be obtained in the short term through company merges in the pharmaceutical sector is the patents obtained through innovations and R&D activities in the field of technology. The benefits that may be obtained from company mergers that does not have the aim of increasing the innovations strategically is short term and these kinds of merges may be harmful by wearing their market positions that the companies has had before the merger (Jung, 2002).Total value of company mergers that companies carrying on activity in the pharmaceutical sector in 2014 made among themselves exceed 200 billion dollars. This amount is more than two times of annual average business volume in last ten years (Ernst, Young, 2015). As seen in graphic 1, the object of 41% of the merger and acquisition procedures as 500 billion dollars and higher in the pharmaceutical sector in 2012 was to access to new molecules/products in R&D stage. As the companies that come together through merger may make higher expenses, it is possible for these companies to produce new drugs in global scale and as a result of this, they may obtain higher profitability (Tjandrawinata and Simanjuntak, 2012). According to the graphic, other objects that come to the forefront in the mergers and acquisitions are to access to the products in the market (31%) and access to the markets in the different regions.

Graphic 1: Accrual Objects of Mergers and Acquisitions (>500 Billion Dollars) in Pharmaceutical Sector in 2012



Source: Türkiye Ekonomi Araştırmaları Vakfı [TEPAV], 2015

II. MATERIAL ANDMETHOD

2.1. Object

Main object of this study is to assess the sale incomes of mergers and acquisitions in the pharmaceutical sector and their effects on the R&D expenses. Within this scope, pre and after sale incomes and R&D expenses of the enterprises were compared.

2.2. Population and Sampling

The population of study is formed from the pharmaceutical companies that have entered into merger and/or acquisition process in the pharmaceutical sector. In the study, the sampling was not selected and merger of the pharmaceutical companies that offer enough data to reflect the general tendency by years based on the R&D and sale incomes were taken into hand. Within this scope, the data belonging to Roche/Genentech, Merck&Co/Schering Plough and Sanofi/Aventis companies were used as only these data were accessed. This is also a limitation.

2.3. Data Collection Tool, Method and Analysis

In this study, the data belonging to pharmaceutical companies reviewed in terms of merger and/or acquisitions (R&D expenses and sale incomes) were obtained from their own annual financial declarations of the companies. Some of these data obtained from financial declarations that pharmaceutical companies published were stated in the currency of Swiss Franc (Roche) and Euro (Aventis and Sanofi). With the aim of making comparison and assessment, these data were transformed into American Dollar by using the currency rates of Swiss Franc/American Dollars (CHF/$) and Euro/American Dollars (€/$) within the years stated. Microsoft Excel was used in the analysis of study.

III. FINDINGS

The effect of mergers and acquisitions on the enterprise performances may be analyzed by reviewing the changes such as sale incomes, profitability, etc. before and after the company mergers. The data belonging to Roche/Genentech, Merck&Co/Schering Plough and Sanofi/Aventis companies that take place among the biggest ten company mergers/acquisitions in the pharmaceutical sector within the years of 1998-2014 were taken into hand and given below due to their accessibility and comparability by years.

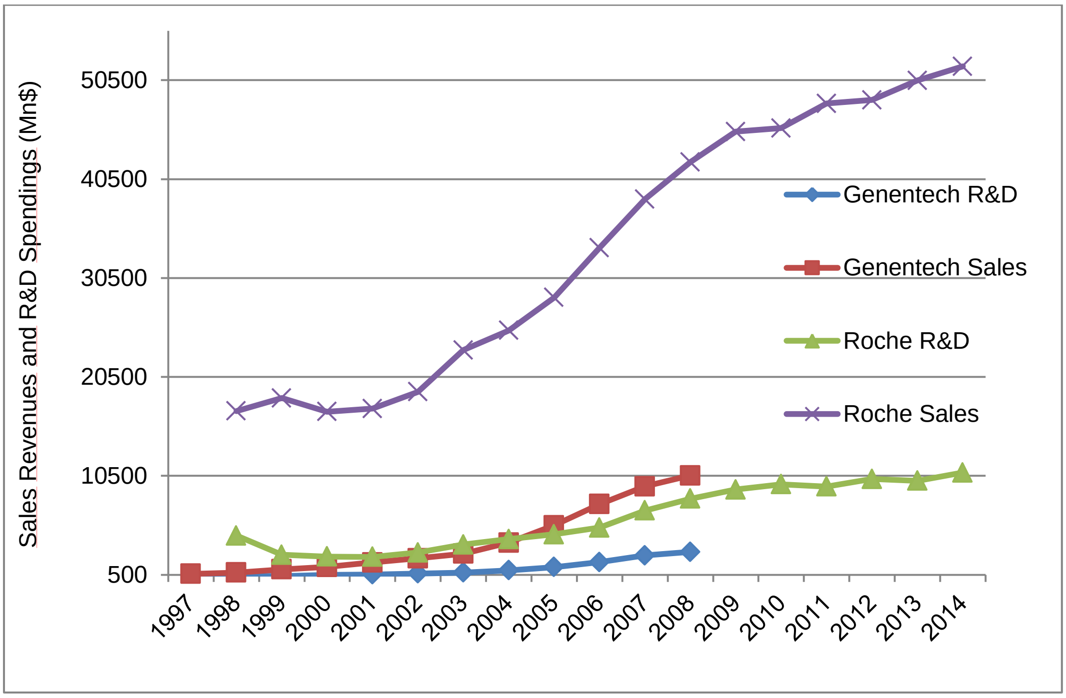
Table 2: Sale Incomes and R&D Expenses of Some Pharmaceutical Companies Before and after Acquisition Activity (Million Dollars

	Firms											
	GENENTECH		ROCHE		S.PLOUGH		MERCK&CO		AVENTİS		SANOFİ	
Years	R&D	Sales	R&D	Sales	R&D	Sales	R&D	Sales	R&D	Sales	R&D	Sales
1997	471	585			847	6745	1684	13972	1464	15496	634	6449
1998	396	718	4454	17045	1007	8027	1821	15095	1416	14688	655	6494
1999	367	1039	2519	18361	1191	9116	2068	17294	1564	13354	966	5671
2000	489	1278	2340	16988	1333	9815	2344	20010	3201	20519	869	5486
2001	526	1743	2309	17296	1312	9762	2456	21199	3098	20417	918	5774
2002	624	2164	2744	18986	1425	10180	2677	21446	3098	20417	1157	7076
2003	722	2621	3543	23209	1469	8334	3178	22486	3249	19591	1500	9175
2004	948	3749	4104	25202	1607	8272	4010	22973	3333	20309	9319	18804
2005	1262	5488	4584	28535	1865	9508	3848	22012			5015	33866
2006	1773	7640	5259	33559	2188	10594	4783	22636			5626	36034
2007	2446	9443	6994	38481	2926	12690	4883	24198			6261	38712
2008	2800	10531	8189	42234	3529	18502	4805	23850			6725	40525
2009			9119	45301			5845	27428			6416	41028
2010			9642	45657			10991	45987			5809	40107
2011			9425	48146			8467	48047			6703	46745
2012			10182	48499			8168	47267			6327	45082
2013			10001	50471			7503	44033			6440	44484
2014			10821	51903			7180	42237				

Kaynak: Genentech, 2015. Access Date: 24.12.2015 http://www.gene.com, Roche, 2015, Access Date: 24.12.2015 http://www.roche.com/index.htm, Scherıng-Plough Corporatıon, 2015, Access Date: 24.12.2015, http://media.corporate-ir.net/media_files/IROL/89/89839/reports/01annual.pdf Merck&Go, 2015, Access Date: 24.12.2015, http://www.merckgroup.com/en/index.html, Sanofi, 2015, Access Date: 24.12.2015, http://en.sanofi.com/

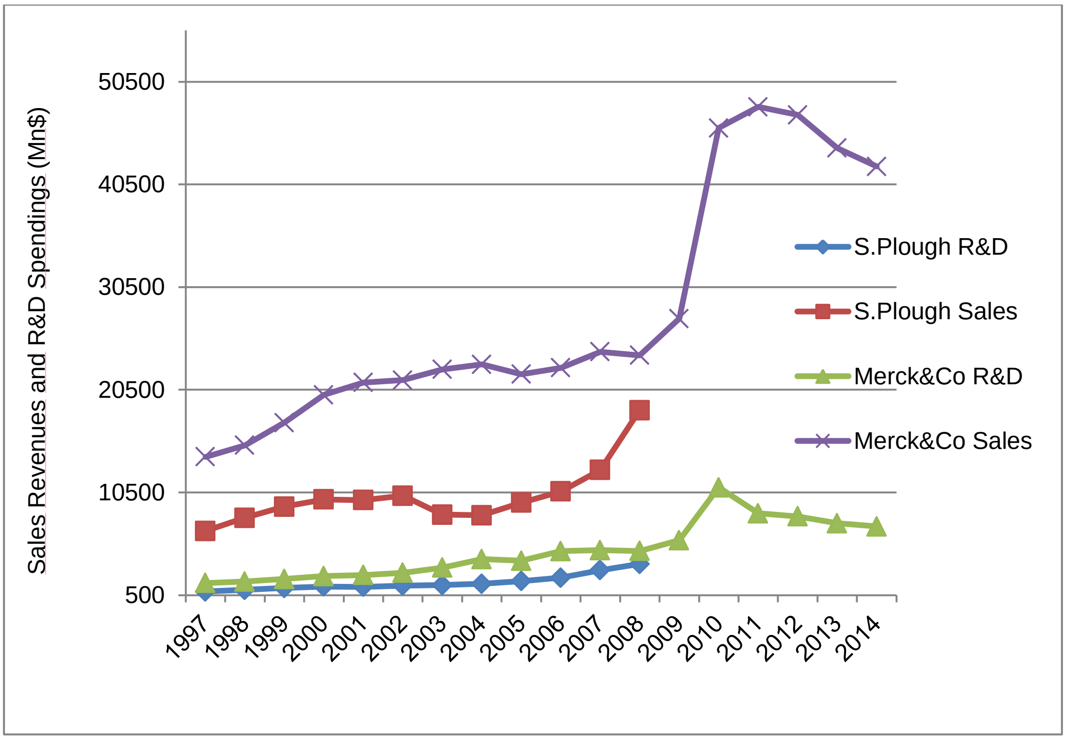
In the below graphics, an assessment was made on R&D expenses and sales of some companies before and after the acquisition and the effect on mergers and acquisitions were reviewed.

Graphic 2: Sale Incomes and R&D Expenses of Genentech and Roche Companies



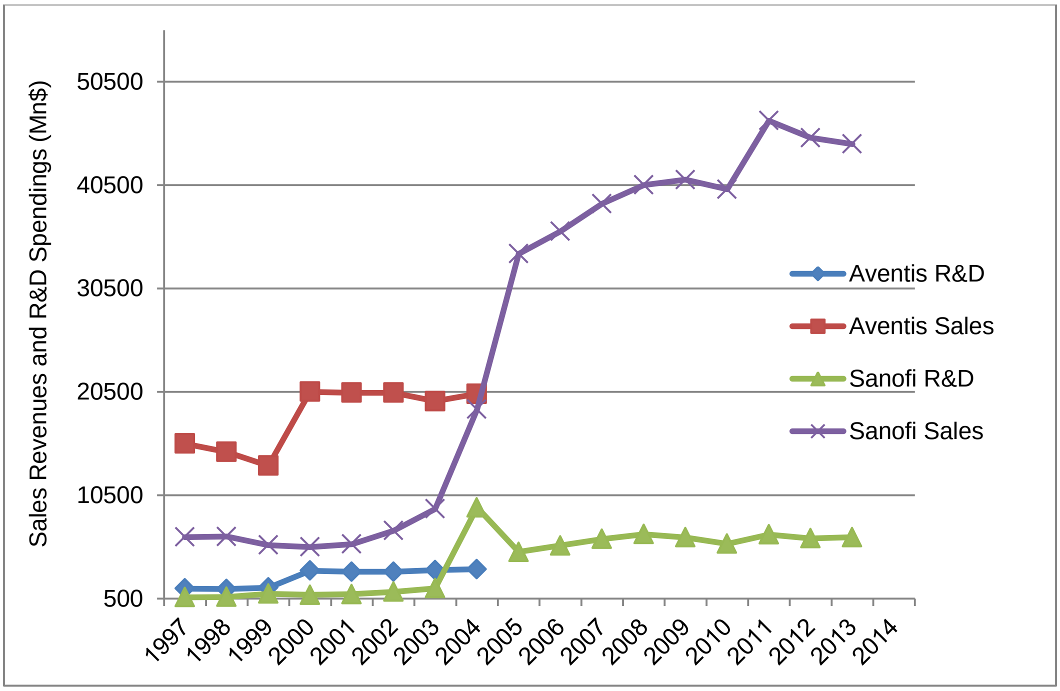
Roche company acquired Genentech company with the amount of 42,9 billion dollars in 2008. It may be said that total R&D expenses that two companies made solely in the years before acquisition procedure tend were in a tendency to increase. As seen in Table 3, total R&D expenditure that two companies made solely before the acquisition procedure was 5846 in 2005, 7032 in 2006, 9940 in 2007 and 10989 million dollars in 2008 which was the acquisition year and in other words, there was an increase. Total R&D expenditure of Roche company after the acquisition were 9642 in 2010, 9425 in 2011, 10182 in 2012, 10001 in 2013 and 10821 million dollars in 2014. As seen; while tR&D expenses of Roche company increased in some years after the acquisition, it decreased in some years. In other words, increase tendency of Roche in the current sales maintained at the same level in general (Graphic 2).

Graphic 3: Sale Incomes and R&D Expenses of Schering Plough and Merck&Co Companies



Merck&Co company acquired Schering Plough company in 2009. After the acquisition procedure, a significant increase was seen in total sales of Merck&Co company (especially in 2010 and 2011). Along with that as seen in Table 3, total R&D expenses that both enterprises made solely before the acquisition procedure were 5.173 in 2005, 5.971 in 2006, 7.809 in 2007 and 8.334 million dollars in 2008 which was the acquisition year and showed a stable increase. After the acquisition procedure, Merck&Co company made R&D 10991 million dollars R&D expenditure in 2010, 8467 in 2011, 8168 in 2012, 7503 in 2013 and 7180 in 2014. After the acquisition, the R&D expenses that Merck&Co company made showed decreases by years (Graphic 3).

Graphic 4: Sale Incomes and R&D Expenses of Aventis and Sanofi Companies



Another acquisition procedure among the pharmaceutical companies was that Sanofi pharmaceutical company acquired Aventis pharmaceutical company in 2004. The sales of Sanofi after the acquisition significantly increased compared to its sales before the acquisition. The increase tendency in sales of Sanofi company continued until 2010; following the small decrease in 2010, the sales leaped forward and showed small decreased in 2012 and 2013. Along with that R&D expenses of Sanofi pharmaceutical company showed a significant increase in 2004 which was the acquisition year, the expenses decreased in 2005 and showed periodical increases and decreases in the following years (Graphic 4). The total R&D expenses of Sanofi and Aventis companies solely made before the acquisition were 4070 million dollars in 2000, 4016 million dollars in 2001i 4255 million dollars in 2002 and 4749 million dollars in 2003. After the acquisition, Sanofi company made 5015 million dollars R&D expenses in 2005, 5626 million dollars in 2006, 6261 million dollars in 2007 and 6725 million dollars in 2008 (Table 3). As seen; R&D expenses of Sanofi company showed periodical increases and decreases after the acquisition.

In the data obtained; it was determined that there was an increase tendency in after acquisition total incomes of Roche company that acquired Genentech pharmaceutical company, Merck&Co company that acquired Schering Plough pharmaceutical company and Sanofi company that acquired Aventis pharmaceutical company and there was a decrease tendency in their R&D expenses compared to their total R&D expenses that they solely made before the acquisition (except for Sanofi).

IV. CONCLUSION

In general, the studies that were made on mergers and acquisitions indicated that the pharmaceutical companies decreased their unit costs by getting benefit from scale economy and increased their total sales and their total R&D expenses after the merger and acquisition will be less than the total R&D expenses that both enterprises solely made before the merger (Haberberg and Rieple, 2008; Anderson et al., 2013; Depamphilis, 2012). Within the light of information obtained in this study; there was an increase tendency in after acquisition total incomes of Roche company that acquired Genentech pharmaceutical company, Merck&Co company that acquired Schering Plough pharmaceutical company and Sanofi company that acquired Aventis pharmaceutical company and there was a decrease tendency in their R&D expenses compared to their total R&D expenses that they solely made before the acquisition. As a conclusion, it was seen in the acquisition samples reviewed that the mergers and acquisitions may provide convenience for the enterprises in terms of finding fund for their R&D expenses tat bring a high cost.

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