CORPORATE SOCIAL RESPONSIBILITY IN THE PHARMACEUTICAL INDUSTRY: BETWEEN TREND AND NECESSITY

by

Cecile Oger
BSc. (Honours) Chemistry with Business Administration
Kingston University London, UK, 1995

A thesis presented to Ryerson University
In partial fulfillment of the requirements for the degree of
Master of Business Administration
In the program of
Master of Business Administration

Toronto, Ontario, Canada, 2009

Your file Votre référence
ISBN: 978-0-494-59035-5
Our file Notre référence
ISBN: 978-0-494-59035-5

I hereby declare that I am the sole author of this thesis.

I authorize Ryerson University to lend this thesis to other institutions or individuals for the purpose of scholarly research.

_____ _____

Cecile Oger Date

I further authorize Ryerson University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

_____ _____

Cecile Oger Date

Corporate Social Responsibility in the Pharmaceutical Industry: Between Trend and Necessity

Cecile Oger

Master of Business Administration

Ryerson University, 2009

Abstract

Despite abundant references in the literature on Corporate Social Responsibility (CSR) and on the specific topic of ethics within the pharmaceutical sector, very little is provided on the general theme of Corporate Social Responsibility AND the pharmaceutical industry. The aim of this thesis was therefore to investigate CSR practices and reporting within the global pharmaceutical sector.

Secondary research was carried out on the top 65 global pharmaceutical companies. Their CSR activities and reporting were recorded and analyzed.

Results indicated that the pharmaceutical industry's CSR practices and reporting follow trends, models and theories observed in other industries and described in the literature. Further to demonstrating that most companies within the industry practice and report on CSR, the research proved that the size of the company, its country of origin, as well as the type of products manufactured (prescription medicine, generics, biopharmaceuticals) all influence the nature of the pharmaceutical company's CSR approach.

Acknowledgements

I am especially grateful to Dr. James Tiessen, my thesis supervisor, for his support, understanding and guidance during the course of this thesis. He took the time to meet with me on very regular occasions despite a very busy schedule, answer my numerous emails and provide me with directions, in particular with regards to statistics!

I would like to thank Ryerson University for the support provided, and for allowing me to defend the thesis remotely, thus accommodating my very particular situation. I would also like to thank the Ryerson MBA program for including a course on Corporate Social Responsibility and letting me discover this fascinating topic.

Of course, a very special thank you to Dr. Avner Levin and Dr. Dale Carl for their respective key input as second reader and chair and for the challenging and particularly interesting exchanges during the defense.

I am grateful to all those who in my career have helped me discover and understand the pharmaceutical sector from within, and thank the pharmaceutical industry for providing me with great material and data to work from, thus turning this thesis into a very intense, personal and motivating experience.

Finally, I thank my husband, family and friends from the bottom of my heart for their patience and support during this very intensive year at Ryerson. A particular thank-you to my parents, my son and my sister for bearing with me through the summer and to Andrea for our daily emails of support during the course of writing our respective theses!

Contents

Abstract iii
Acknowledgements iv
List of tables viii
List of figures viii
List of appendices ix
1. INTRODUCTION 1
2. THE GLOBAL PHARMACEUTICAL INDUSTRY 3
2.1 A simplified history 3
2.2 Current shape of the industry 6
2.2.1 What are the profiles of the companies? 6
2.2.2 Who are the top players? 7
2.2.3 Who are the stakeholders? 9
2.3 The pharmaceutical industry strategic framework 9
2.3.1 A very competitive environment 9
2.3.2 Industry strategic grouping 12
2.3.1 The strong influence of the external environment 12
3. CORPORATE SOCIAL RESPONSIBILITY: A LITERATURE REVIEW 16
3.1 Concept, history and definitions 16
3.2 Why do companies adopt CSR practices? 19
3.2.1 Compliance with regulations or guidelines 19
3.2.2 Doing well by doing good 20
3.2.3 CSR and consumer trust 21
3.3 How do companies approach Corporate Social Responsibility? 22
3.3.1 Theories and models 22
3.3.2 Observations and trends: influencing factors 25
3.4 Why and how do companies communicate their CSR activities? 29
3.4.1 Why do companies report their CSR practices? 30
3.4.2 What do companies report on? 31
3.4.3 How do companies report their CSR activities? 32
4. LITERATURE REVIEW ON ETHICS AND CSR IN THE PHARMACEUTICAL INDUSTRY 34
4.1 Drug development 34
4.2 Patients 38

4.3 Environment and safety 40
4.4 Social issues 42
4.5 Philanthropy 43
4.6 Business Ethics 44
5. HYPOTHESES 48
6. METHODOLOGY 50
6.1 Identifying the sector's responsibility concerns 50
6.1.1 Objective 50
6.1.2 Choosing the sample 51
6.1.3 Defining the information to review and collecting the information 51
6.2 Defining the industry's current CSR practices 51
6.2.1 Choosing the sample 51
6.2.2 Defining the data to collect 53
6.2.3 Coding the data 54
6.2.4 Choosing the source to code from 56
6.2.5 Analyzing the data 58
7. RESULTS: TRENDS IN CSR PRACTICE 60
7.1 General observations 60
7.2 CSR Reporting: H1 62
7.3 Effect of the size of the company on its CSR reporting: H2 63
7.4 Effect of the type of product on CSR reporting: H3 65
7.5 Effect of the country of origin on CSR reporting: H4 68
8. DISCUSSION: CONVERGENCES AND CONTRADICTIONS – ARE THE HYPOTHESES CONFIRMED? 79
8.1 H1: In the pharmaceutical industry, most companies practice and report on Corporate Social Responsibility 79
8.2 H2: The level of reported CSR activities is positively related to the company size 80
8.3 H3: The nature of the products manufactured influences the type of CSR activities 81
8.4 H4: The country of origin and the socio-political context influence the pharmaceutical company's CSR approach 82
8.5 Summary of discussions 84
9. LIMITATIONS – FUTURE DIRECTIONS 85
10. CONCLUSION AND RECOMMENDATIONS 87
Appendix A: Categories and fields used in the datasheet to collect and code the data 89

Appendix B: Lists of top 50 pharmaceutical companies 92
Appendix C: Compiled list of the 70 largest global companies – by alphabetical order 96
Appendix D: Foreign Exchange Rates 97
Appendix E: Binomial proportion statistical test for Hypothesis 1 98
Appendix F: Single Factor Anova calculation on the number of CSR activities per number of employees: 99
Appendix G: Single Factor Anova calculation on the number of CSR activities per type of product: 100
Appendix H: Single Factor Anova calculation on the number of CSR activities per country: Japan / EU / US / All Countries: 101
References 103

List of tables

Table 1: 2008 Top 20 pharmaceutical companies (2007 revenues) 8
Table 2: 2008 Top 10 biopharmaceutical companies (2007 revenues) 8
Table 3: 2008 Top 10 generic drugs companies 8
Table 4: Factors shaping CSR's future 25
Table 5: List of selected Industry Organizations 51
Table 6: Codes for Countries of Origin 54
Table 7: Codes for Regions of Origin 55
Table 8: Number / percentage of studied companies per number of regions operated in. 61
Table 9: list of companies focusing on one category of products 66

List of figures

Figure 1: The pharmaceutical industry competitive environment 10
Figure 2: Strategic groups within the pharmaceutical sector 12
Figure 3: Number of Companies per Represented Country 60
Figure 4: Percentage of companies per country 61
Figure 5: Correlation between number of employees and revenues 62
Figure 6: Reporting places 63
Figure 7: Average number of reported CSR activities per number of employees 64
Figure 8: Number of CSR activities vs. revenues – Logarithmic trend 65
Figure 9: Average number of CSR activities reported – By type of products - Corrected sample 67
Figure 10: Differences in CSR focus – per type of products manufactured 68
Figure 11: Type of CSR reporting – Differences in terms of country of origin 69
Figure 12: Differences in CSR focus – per CSR category - per country 70
Figure 13: CSR Focus within the "Drug Development" Category 71
Figure 14: CSR Focus within the "Patients" Category 72
Figure 15: CSR Focus within the "Environment" Category 73
Figure 16: CSR Focus within the "Social Issues" Category 74
Figure 17: CSR Focus within the "Philanthropy" Category 75
Figure 18: CSR Focus within the "Business Ethics" Category 76
Figure 19: CSR Focus in terms of Supply Chain 77

List of appendices

Appendix A: Categories and fields used in the datasheet to collect and code the data 89

Appendix B: Lists of top 50 pharmaceutical companies 92

Appendix C: Compiled list of the 70 largest global companies – by alphabetical order 96

Appendix D: Foreign Exchange Rates 97

Appendix E: Binomial proportion statistical test for Hypothesis 1 98

Appendix F: Single Factor Anova calculation on the number of CSR activities per number of employees: 99

Appendix G: Single Factor Anova calculation on the number of CSR activities per type of product: 100

Appendix H: Single Factor Anova calculation on the number of CSR activities per country: Japan / EU / US / All Countries: 101

1. INTRODUCTION

The pharmaceutical industry is among the most scrutinized industries. From the patient's reliance on the industry for cures, to society's demand for improving access to medicines in developed and developing countries, to pharmaceutical companies adopting "green" environmental policies for cost reduction purposes, and the condemnation of allegedly unethical clinical trials in developing countries, much is happening under the rather young topic of CSR activities within the pharmaceutical sector.

The literature is rather abundant in terms of ethics and the pharmaceutical industry (especially in terms of clinical trials, drug development, marketing and pricing etc.), and very rich in terms of Corporate Social Responsibility across a wide range of industries. Yet very little is provided on the specific topic of Corporate Social Responsibility AND the pharmaceutical industry. The aim of this thesis is therefore to specifically address and characterize CSR in the pharmaceutical industry, identify its purpose, its commonalities and its differences both within the sector and when comparing with other industries.

The objective is really to understand if the pharmaceutical industry is embracing corporate social responsibility as a business trend, like many other industries, and/or because it is driven by the sheer nature of the environment that the industry and the companies evolve in. This thesis will assess if practice joins theory in the pharmaceutical industry, i.e. if the CSR practices of the sector match the literature models and findings that have been developed and are available now.

To do so, this thesis will examine, evaluate and quantify current CSR activities, policies and tendencies across a range of leading companies on a global basis. It will assess if the intensity and efforts put into CSR activities are reflecting a trend across the industry and will evaluate if differences in approach can be found. Particular attention will be given to investigating if the size of the company, its country of origin and the products developed and manufactured have or do not have an impact on the nature and the amount of CSR activities reported.

First, the thesis will provide a snapshot of the pharmaceutical sector in terms of history, current environment, issues and strategic framework and this, in order to give the reader the necessary and sufficient data to understand the issues at stake for the sector. It will then explore the topic of

Corporate Social Responsibility through a literature review that will provide models and theories explaining the rationale for companies to adopt CSR policies and report on their actions. In essence, the literature review will address the universal "whys" and "how" of Corporate Social Responsibility. This will be completed by a literature review of the pharmaceutical industry's ethics and CSR concerns, which will be done by reviewing communication from within the industry and its environment (companies, institutions, trade associations etc.), as well as from outside publications. By grouping and organizing the identified concerns, the fields which, within the pharmaceutical industry, most likely lead to the implementation of CSR activities will be identified. From the information and understanding provided by these first three foundation chapters, four hypotheses will be developed pertaining to CSR practices within the pharmaceutical sector.

The second half of the thesis will aim at providing the answers to the questions raised in the four hypotheses, by analyzing and making sense of data collected from a range of written material (namely corporate web sites, CSR reports and Annual Reports) from the top 65 international pharmaceutical groups. This second half will first detail the methodology used to address the topic, collect the data and analyze the results. It will then provide the results of the research through the use of graphs, figures and statistics and their analysis. From these results, the hypotheses will be proved or refuted, and a match or mismatch between theory and practice will be demonstrated.

The thesis will finally address any further research needed and conclude by depicting the nature of the corporate social responsibility activities of the pharmaceutical sector as it can be understood now from the research conducted in this thesis.

2. THE GLOBAL PHARMACEUTICAL INDUSTRY

The aim of this chapter is to give a basic overview of the pharmaceutical sector in 2009, in order to understand the general environment that pharmaceutical companies evolve in and the issues at stake. What is the industry like in 2009? Who are the players? What are the issues? Who are the stakeholders? What drives the industry's overall CSR activities?

2.1 A simplified history

Although the history of pharmacy dates back to as far as 3000 BC when the Sumerians, a people who inhabited Lower Mesopotamia, are believed to have used plant drugs, wound washing, plasters and bandaging (Court, 2005), the historical information that is given hereafter focuses on the last 100 years, when the pharmaceutical sector became an industry, with a closer look at the last few decades which shaped the industry as it is known today. This chapter retraces the important milestones in the recent history of the pharmaceutical industry with the aim of understanding the current issues and the reasons that lead pharmaceutical companies to practice CSR.

The birth of an industry

Most of today's major pharmaceutical companies were founded in the late 19th and early 20th centuries and emanated from the chemical industry, predominantly in Germany (in the Upper Rhine Valley, with companies such as Hoechst, Bayer and Merck…), Switzerland (in the Basel area, with the founding companies of today's firms such as Hoffman-Laroche and Novartis), and in the USA (Eli Lilly, Upjohn, Abbott etc.). The major growth of the industry followed the Second World War (Anderson, 2005), when pharmaceutical manufacturing evolved from domestic to industrial and international. The extension carried on into the sixties, thanks to a high number of discoveries and prosperous economies, particularly in the West.

The need for regulation

The sixties and the seventies marked the emergence of tighter regulatory controls, in part following major disasters and scandals such as the one linked to Thalidomide, a sleeping tablet

previously believed to be innocuous that was recommended to pregnant women and later found to have affected tens of thousands of infants worldwide with major neuropathic side-effects (Anderson, 2005). Numerous acts and legislations in various countries started to be enforced, in order to prevent drugs from being marketed until their "benefits and risks had been exhaustively examined" (Appelbe, 2005). From that point on, in most countries, pharmaceutical companies were required to prove the efficacy and potential side-effects of new drugs through clinical trials. The regulations also applied to the manufacturing and distribution of generic drugs. The idea of permanent patents was revised and fixed-period of patent protection for branded products was established, varying from 17 to 20 years. One of the effects that the tightening regulations had on the industry was to increase the costs involved in putting a new product on the market. As a consequence, the industry had to globalize in order to sustain these costs (Wood & Anderson).

A maturing industry

The eighties were a decade that was very profitable for the large pharmaceutical companies thanks in part to the introduction of innovative blockbusters. However, although a period of great business for the large groups, the decade saw most national companies no longer being profitable. Smaller companies developing niche products started to appear (Wood & Anderson). The number of biotechnology companies as well as generics manufacturers blossomed. The eighties were also marked by the fast emergence of AIDS and the rapid need for appropriate treatments.

Acquisitions, mergers and takeovers were the dominant feature of the nineties (Wood & Anderson) with an increasingly concentrated industry as the direct consequence of the vast amount of capital needed to fund new drug development using innovative research. The funding of healthcare was also an influencing factor, especially in the developed countries. Pharmaceutical groups were seen as making too large profits and governments acted to reduce consumer costs by promoting the use of generic drugs. Large pharmaceutical groups absorbed (or entered into partnership with) small biotechnology companies which had difficulties covering their costs.

A changing model

Another consequence of the tightening of legislation coupled with the rising costs of developing drugs and the explosion of the generics market was the rapid emergence of Contract Research Organizations (or CROs) appointed by pharmaceutical group to carry out part or all of their Research and Development, as well as their clinical trials. Contract manufacturing in places with cheaper labor costs like India or China also began to taking over and changed the traditional in-house manufacturing scheme. Pharmaceutical companies started selling off their production facilities to smaller players, or to contractors, in an effort to reduce their overhead costs. Contracting, a new branch of the industry, started building up, giving rise to increasingly large global sub-contracting companies, growing from the acquisitions of production sites previously owned by "big-pharmas".

The 1990s also saw the traditional model of Prescription Only Medicines shifting towards more and more Over the Counter drugs (OTC). The rise of the internet also opened the door to the on-line purchasing of drugs, with the advantage of lowering distribution costs. However, some drawbacks developed, including the emergence of counterfeit drugs, and higher risks of patients taking the wrong medication. In terms of marketing, pharmaceutical firms' ethics have been questioned and in particular their methods for getting practitioners to prescribe their products. This topic will be discussed in greater detail further on into this paper.

The challenges ahead

Today, pharmaceutical groups are still facing major obstacles: major blockbusters' patents are expiring and becoming subject to competition from generics manufacturers, there aren't enough promising products in the pipelines and, furthermore, regulators impose more stringent conditions and request longer and more thorough clinical trials before accepting new drugs on the market. As a solution, external growth through mega mergers is back. In 2009, the mergers of Wyeth and Pfizer, Merck and Schering Plough and Roche and Genentech were all based on strategies of consolidation, product pipeline extension and diversification, as well as cost saving.

These alliances will probably not solve the longer term issue which is that, overall, companies' products pipelines are not expected to generate enough blockbusters for the future. Advances in

biotechnology and the human genome project are expected to bring better targeted medications and change the pharmaceutical sector model as it is known today. Another foreseen difficulty for the sector is that, although it is not currently possible to copy a biopharmaceutical product, legislations as well as technology are expected to soon allow it. Further strategic alliances and consolidations might be required once biotechnology products are subject to generic competition. The pharmaceutical model is therefore expected to drastically change in the not so distant future.

2.2 Current shape of the industry

2.2.1 What are the profiles of the companies?

Today, as touched upon in the previous section, the industry is very different to what it was only a few decades ago. The landscape has changed, the industry is global, the competition is fierce and new actors are entering the arena.

The global pharmaceutical companies are led by the "big pharmas" or the top 20 global companies (in terms of revenues), which mainly resulted from large mergers and takeovers in the last 15 years. Representing the traditional pharmaceutical industry, their activities range from R&D to manufacturing to distribution of drugs, with still, sometimes, the now "odd" in-house production of active ingredients. The "traditional" pharmaceutical world also encompasses "smaller" firms which manage to compete internationally, usually with smaller portfolio (Cephalon, Pierre Fabre Medicaments, Recordati S.p.A., Servier Industries, to name just a few), and even more rarely, small, family owned, "one product" companies.

The generics companies are the second type of organizations making up the pharmaceutical landscape. They provide drugs once patents expire, once the marketing rights are exhausted. Many of the generics companies are "market authorization holders". They do not own their production facilities, nor laboratories, but outsource the development as well as the production of the drugs to contract organizations. It is interesting to note that most big pharmas also manufacture and market generic drugs.

Biotechnology companies are the newcomers and promise to be more and more present in the not so distant future. Their therapies are based on biology and developed from proteins as opposed to chemical molecules for the traditional drugs. Biotech companies are of various sizes, from very small to very large. Most of the big pharmas have biotech facilities and products. There is currently no "biogenerics", although legislations are changing and should allow it soon.

Biotechnology companies are also accompanied by firms that study and decode the human genome. Mapping the human genome will enable scientists to target the causes of diseases rooted in molecular structures. Gene transfers to patients will be used for therapeutic and diagnostic purposes with the aim of compensating a genetic anomaly, modifying the way a cell functions, or inducing the death of a malfunctioning cell. Finally, cell therapy will be used in preventing, treating or lessening the effects of specific diseases. These companies will not be part of the study, due to their comparatively smaller size.

Further from the types of companies mentioned above, another group that was touched upon earlier in this paper is made of the contract companies whether Contract Research Companies (CROs) or Contract Manufacturing Companies (CMOs). They emerged in the 90s and have grown in terms of number and size (Patheon is an example). They will not be addressed here as they do not commercialize the products they conduct clinical trials on or manufacture.

2.2.2 Who are the top players?

Financial news and reviews report on the pharmaceutical sector on a daily basis. Restructuring and mergers have constantly taken place and it sometimes gets difficult to know which company does what, which company has "disappeared", which company is now the largest. For the purpose of this research, three separate tables are therefore given below listing the major players by type of product (prescription medicine/OTC, biopharmaceutical products, generic drugs).

As can be seen, several companies such as Pfizer, Novartis or Sanofi-Aventis are listed in more than one table, indicating that they are not only active in many sectors or types of products, but also leaders within these specific fields.

	COMPANY	REVENUES Million US$		COMPANY	REVENUES Million US$
01	Pfizer	$44,424	**11**	Bristol-Myers Squibb	$15,622
02	GlaxoSmithKline	$38,501	**12**	Abbott Laboratories	$14,632
03	Sanofi-Aventis	$38,452	**13**	Schering-Plough	$12,773
04	AstraZeneca	$28,713	**14**	Bayer Schering	$12,294
05	Merck	$26,532	**15**	Boehringer Ingelheim	$11,103
06	Novartis	$25,477	**16**	Takeda	$10,626
07	Johnson & Johnson	$24,866	**17**	Astellas	$8,530
08	Roche	$21,998	**18**	Daiichi-Sankyo	$7,382
09	Eli Lilly & Co.	$17,638	**19**	Eisai	$6,250
10	Wyeth	$17,179	**20**	UCB Group	$4,370

Table 1: 2008 Top 20 pharmaceutical companies (2007 revenues) - (Roth, 2009)

	COMPANY	REVENUES Million US$
01	Amgen	$14,311
02	Genentech	$9,443
03	Novo Nordisk	$7,696
04	Merck Serono	$6,111
05	Baxter BioScience	$4,649
06	Biogen Idec	$3,063
07	Genzyme	$2,764
08	CSL Ltd.	$2,327
09	Allergan	$1,212
10	Elan	$446

Table 2: 2008 Top 10 biopharmaceutical companies (2007 revenues) – (Roth, 2009)

COMPANIES (alphabetical order)
Apotex
Bayer
Mylan
Novartis (Sandoz)
Pfizer (Greenstone)
Ratiopharm
Sanofi-Aventis (Winthrop)
Stada
Teva
Watson

Table 3: 2008 Top 10 generic drugs companies - (Piribo, 2008)

2.2.3 Who are the stakeholders?

According to Domènec Melé (2008), "stakeholders are groups and individuals who benefit from or are harmed by corporate actions". Stakeholders vary according to the type of industry, activity, firm or products.

In the pharmaceutical sector, in addition to the shareholders, the employees, the suppliers and contractors, the larger group of stakeholders also encompass the public and society at large: patients, patient associations, NGOs, the environment, healthcare professionals who prescribe the medicines, as well as healthcare payers and policy makers, the government and regulatory bodies (Weber, 2006).

Depending on their structure or their markets, pharmaceutical companies will address and meet the needs of the above mentioned stakeholders with varying emphasis.

2.3 The pharmaceutical industry strategic framework

A closer look at the industry's strategic environment will help to understand the changing forces that are shaping and influencing the pharmaceutical sector today. It should highlight factors that can then be reconciled with the type of CSR activities that pharmaceutical firms adopt. The main focus here is to assess the sector using a Porter's 5 Forces Model, a PEST analysis as well as defining the strategic groups within the industry.

2.3.1 A very competitive environment

Within a specific industry, Porter's 5 forces model looks at the competitors, the threat of potential new entrants and substitute products, and the bargaining powers of the suppliers and the buyers. It helps assessing if the threats are high or low and therefore the scale of their impact on firms. Figure 1 summarizes the pharmaceutical industry's competitive environment as it is today.

The industry has become very competitive, particularly within the "traditional sector" and this, due to the fierce competition between the big pharmas. The competition is also high amongst generics manufacturers, especially those acting globally, but less so among the biopharmaceuticals producers who tend to develop specific products, aimed at treating specific diseases, and therefore with less risks of competition.

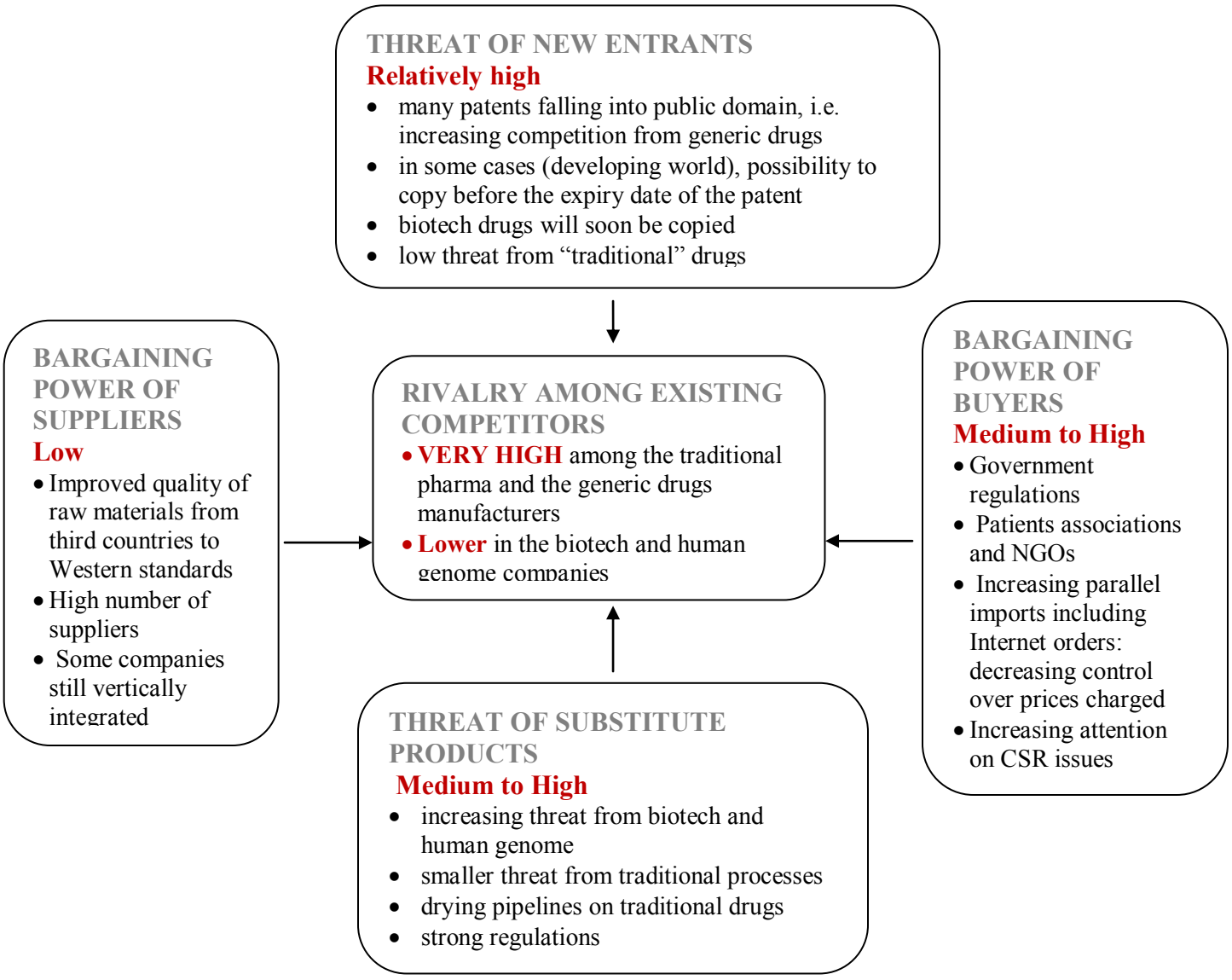


Figure 1: The pharmaceutical industry competitive environment

Even if they have lost some leverage, pharmaceutical manufacturers do still benefit from a strong position within the sector. They are at a strong advantage with their suppliers, as the number of

suppliers of quality raw materials (active ingredients and excipients) has improved, specifically from countries like China and India. Concurrently, the number and variety of service providers, Contract Research Organizations (CROs) or Contract Manufacturing Organizations (CMOs) has expanded. Pharmaceutical companies thus have many sources to choose from and can better negotiate the cost of their raw materials, their development, their production etc.

The biggest threat for "traditional" pharmaceutical companies comes from generics manufacturers. As explained in Chapter 2.1, many drugs patented in the last few decades are now falling into the public domain and are no longer covered by patents. They are prone to competition from generics manufacturers. A pharmaceutical company can lose most of its market shares in the space of a few weeks after its patent has expired. This will in the near future affect the biopharmaceutical sector, which is currently still immune from generic copying.

The buyers in this model are represented not only by patients but also by practitioners, governments and associations. They all can pressure companies into lowering their prices or adapting them to specific markets, and thus have a relatively strong power over pharmaceutical companies, especially in the case of products for which industry competition exists. Regulators and governments have a particularly strong hold on the industry. For instance, no new product can be marketed unless thorough clinical trials have been conducted. Health agencies can also impose a global recall of a product based on an incident or the suspicion of a potential harmful effect of the drug on patients.

Finally, the threat of substitution is one that is strongly increasing. The traditional pharmaceutical model, based on molecules developed through chemical processes, addressing a range of diseases with sometimes a long list of side effects, is surely being replaced by biotechnologically developed drugs, which focus on a particular affection, target the cells to treat and induce fewer side-effects. The threat also still comes from regulators which tend to request more and more clinical trials and more and more proof of quality, effectiveness and safety before allowing a new product a marketing license.

All these factors contribute to making the pharmaceutical sector a very competitive environment and one that sees its main players, boundaries and models change at a steady pace.

2.3.2 Industry strategic grouping

It seems important for the purpose of this research to understand the strategic grouping within the industry as rivalry tends to be greater among firms that are similar and this might give useful information in the assessment of firms' CSR activities.

Figure 2 was elaborated to provide a quick snapshot of the main groups within the industry. What must be added is that, although Figure 2 provides a clear cut of the different types of companies, the reality is somewhat different as many companies are active in several sectors. For instance, among the top 10 global pharmaceutical groups, most manufacture prescription and OTC (Over the counter) drugs, but also generics (sometimes of their own patented drugs), as well as biopharmaceuticals.

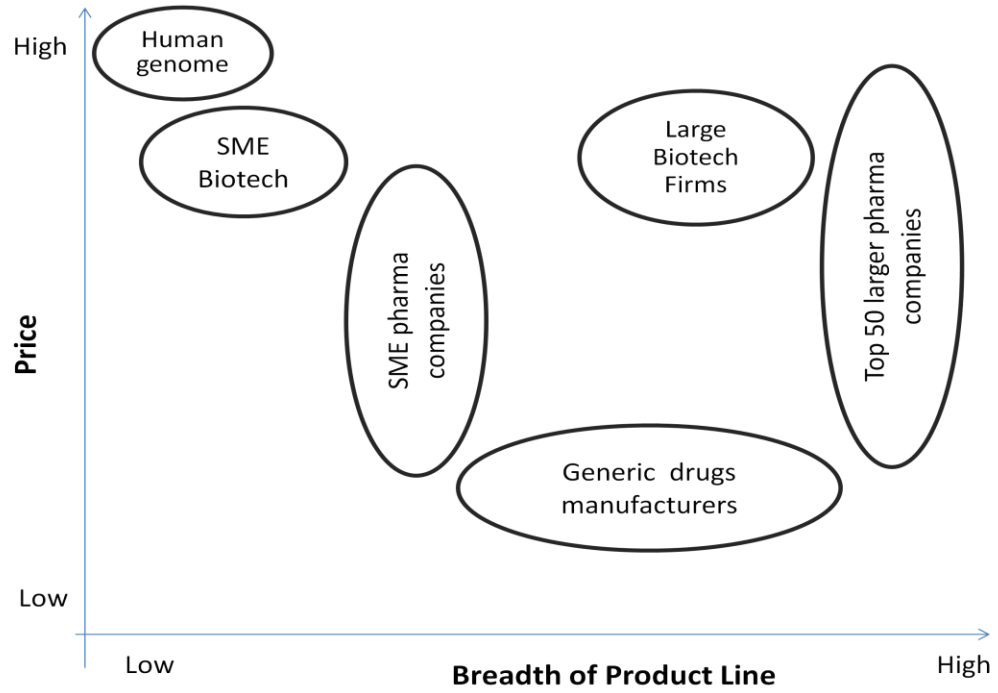


Figure 2: Strategic groups within the pharmaceutical sector

2.3.1 The strong influence of the external environment

The pharmaceutical industry is very much influenced by its surrounding social, political, legal, economic and technological factors. Without going into too much detail, an overall look at some

key factors provides relevant information necessary to grasp their interconnectivity with the strategies and CSR path that a pharmaceutical company might choose. For instance, it might help in highlighting and understanding the reasons why a pharmaceutical firm might put its CSR focus on environmental actions rather than on social involvement.

Political and legal factors

The pharmaceutical industry, as seen earlier, is very affected by the legal and regulatory systems under which it is framed. It is an industry that is heavily regulated, on national as well as international levels.

The cost effectiveness of treatments has become a major issue, as already mentioned. In an effort to tackle ever increasing health expenditure, regulatory bodies and governments are putting in place a number of actions: they are, for instance, encouraging practitioners to prescribe generics, supporting pharmacists into substituting prescription medicine for their generic equivalent, and in developed countries, increasingly using Health Technology Assessment (HTA) to assess the cost-benefit ratio of treatments and decide whether a drug should or should not be covered by a country's health system.

Laws can differ from one country to another. This is illustrated for instance by India where patent laws differ from Western countries' law, allowing for generic drugs to be marketed.

The strong dependence of the industry on decisions from health authorities and government decisions therefore has an impact on pharmaceutical companies. They must demonstrate good behavior to higher authorities in order to be allowed to market their products, particularly in countries where drugs are covered by publicly financed health insurance. In terms of CSR, this will have a particular impact on issues such as corruption and transparency.

Social factors

The World's population is growing at a rate of 1.167% per year (2009 estimate) and is aging (Central Intelligence Agency, 2009). These demographics are affecting the type of drugs and the quantities of drugs that will be needed in the future, especially in developed countries, chronic and degenerative diseases being prevalent in aging populations. In developing countries where

the birth rate is high, it is the young populations who are in greater need of medicine (vaccines for instance).

Other social factors that should not be neglected when looking at the potential impacts on the pharmaceutical sector are employment and labor issues and this for two main reasons. First, in some developed countries, governments are giving incentives to, or putting pressure on companies not to delocalize their production to third countries with cheaper labor, in an attempt to avoid unemployment at home. This is a particular trend in the current difficult economic situation. The second reason is that, when companies do outsource or delocalize their production, they have to be aware of the labor laws of the country they're producing their products in, and have to make sure they comply with international labor laws for instance. More will be detailed on this later in the section on CSR within the pharmaceutical industry.

Technological factors

Of course, technology and science play, as they always have, a major role in the pharmaceutical industry. Today, the traditional chemical drugs are no longer the panacea, the pipelines are drying up, and research is moving fast towards biotechnologies and the mapping of the human genome. Eventually, it can be foreseen that drugs as we know them today will become obsolete, gone with their side effects and ineffectiveness and replaced with targeted treatments. This change will affect the pharmaceutical industry, not only in terms of marketing, but also in many other areas, including the manufacturing sector. It takes a whole different set of skills to work in a biotech production facility. A much higher educated workforce is going to be needed, and overall production quantities will lessen (since treatments will be better targeted), thus leading to a very different production landscape.

Economic

The vast differences in wealth among countries remain a major issue facing the pharmaceutical world, and in particular in the way it addresses the distribution, availability and pricing of its products. As mentioned previously, government spending on health is being tightened everywhere. The current global crisis will most probably also affect access to medicine for many people worldwide, especially in countries with no health coverage.

Furthermore, it is important to note that by contribution of size, the pharmaceutical industry is dominated by the US, Europe and Japan. “Led by these markets, the total world consumption in sales of pharmaceutical products has displayed strong growth and is expected to grow further with expanding populations in emerging markets” (Aruvian Research, 2009).

In conclusion to this chapter, what can be said is that the pharmaceutical industry is a mature industry, which is constantly being reshaped. This is due to a number of factors of which intense competitive, financial and market pressures, the need for new technologies and new business models to face the shortcoming of new “traditional” drugs, and of course the toughening regulations which have a very strong influence on the industry and its leverage.

The following chapter will now address the topic of Corporate Social responsibility as depicted in the literature. It will not look at CSR from a “pharmaceutical” standpoint, but rather from a more general perspective. It will state academic work and review current theories and models, across a wide range of industries.

3. CORPORATE SOCIAL RESPONSIBILITY: A LITERATURE REVIEW

The aim of this section is to state the most important academic works throughout the past decades on the topic of Corporate Social Responsibility (CSR). This chapter depicts the concept of CSR, its evolution, as well as the various theories, models and trends that have been studied and defined over the years. It addresses CSR within various cultural and business environments.

3.1 Concept, history and definitions

The concept of Social Responsibility can be traced back through centuries, dating back as far as the Middle Ages with the Medieval Chivalry or later on with the aristocracy's *Noblesse Oblige* (Marrewijk, 2003). Companies too have long been concerned with their stakeholders, be they governments, customers, owners, or even legislators (Dahlsrud, 2008). However, the topic of Corporate Social Responsibility only really emerged between 40 (Tom McManus, 2008) and 60 years ago (Andrew Crane, 2008). Early models of CSR referred to responsibilities above and beyond economic and legal obligations and CSR was mostly synonymous with philanthropy (Meehan, Meehan, & Richards, 2006), with the difficulty of sometimes differentiating business philanthropy from individual philanthropy (Carroll, 2008).

The 1960s saw the proliferation of the concept when scholars started paying closer attention and tried to formalize and define what CSR entailed. Philanthropy was met with improvements in terms of employee as well as customer relations (Carroll, 2008). The following decade mainly emphasized the role of management, the need to forecast, plan and organize CSR as well as assess social performance. During the 1980s, a series of ethical scandals shook the public opinion. No longer the topic of discussion only among academic circles, CSR (or the lack of it) was brought to the street lights into the public eye. The 1990s brought growth and acceptance of CSR, as well as the emergence of companies' reputation for (good) CSR practices (Carroll, 2008).

Despite the efforts and attention given to Corporate Social Responsibility in the past five to six decades, it is still considered a rather emergent topic. The more acute attention it has recently been receiving is due to globalization, the extension of global multi-national enterprises "MNEs"

(Williams & Aguilera, 2008), and the overall context of tightening regulations, intense competition, public scrutiny and expectations in which companies now operate. CSR is now described not only as a highly significant trend but also a growing business strategy that companies are "embedding" in their core operations (Franklin, 2008). With such rising attention, and despite some persisting reluctance from management to fully embrace the concept (Kakabadse, 2007), CSR is foreseen to further develop in intensity and importance, becoming a fundamental management issue of the 21st Century (Andrew Crane, 2008) and eventually a part of standard business theory and practice (Tom McManus, 2008).

Yet, despite all the attention, no clear cut, consensual and consistent definition of Corporate Social Responsibility has so far been decided upon (Williams & Aguilera, 2008). When looking at the literature, CSR even appears as a fought over and disputed concept. In his analysis of 37 definitions of CSR written from 1980 to 2003 in the USA, Europe, India and Canada, Alexander Dahlsrud identifies five dimensions (environmental, social, economic, stakeholder, voluntariness) that consistently (but not systematically) appear in CSR definitions, and finds that, although most definitions are congruent, there is still a lot of confusion as to how to define CSR, as different definitions are "often biased towards specific interest" (Dahlsrud, 2008).

Van Marrewijk goes further by stating that, based on the nature of the subject, it will not be possible to reach one single "all-embracing" definition applicable to all cases, but rather that the aim should be to develop specific definitions according to various contexts and expectations. In his opinion, one of the reasons for so many different definitions lies in the lack of common acceptance of whom an organization is responsible to: the shareholders, the stakeholders or the society. More is detailed on this aspect in the section on models of CSR.

Therefore, for this thesis, since no "one-fits-all" definition is currently agreed upon, several rather "universal" definitions extracted from the study by Dahlsrud (2008) are given below, as well as one other definition from a CSR guide addressed at Canadian business and issued by the Government of Canada (Industry Canada, 2006). The five definitions have all been chosen as they were thought to be easily and widely applicable, more or less regardless of the context, the company or the industry:

- A first definition, rather wide and almost generic, was developed by the Commission of the European Communities in 2001. The Commission views CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (Dahlsrud, 2008).
- Business for Social Responsibility in 2000 defined CSR as "business decision- making linked to ethical values, compliance with legal requirements and respect for people, communities and the environment" (Dahlsrud, 2008).
- The ideas of transparency and benefit for the business are brought by IBLF in 2003 in its definition of CSR as "open and transparent business practices based on ethical values and respect for employees, communities and the environment, which will contribute to sustainable business success" (Dahlsrud, 2008).
- A more detailed definition and perception by the UK government summed it up in 2001 by stating that "corporate social responsibility recognizes that the private sector's wider commercial interests require it to manage its impact on society and the environment in the widest sense. This requires it to establish an appropriate dialogue or partnership with relevant stakeholders, be they employees, customers, investors, suppliers or communities. CSR goes beyond legal obligations, involving voluntary, private sector-led engagement, which reflects the priorities and characteristics of each business, as well as sectoral and local factors (Dahlsrud, 2008).
- Finally, Industry Canada defines CSR as "generally understood to be the way firms integrate social, environmental and economic concerns in their values, culture, decision making, strategy and operations in a transparent and accountable manner and thereby establish better practices within the firm, create wealth and improve society" (Industry Canada, 2006).

Given the above, it is apparent that a definition of CSR should encompass social and environmental concerns, voluntarism, compliance with legal requirements, sustainability and, more widely, concerns for all stakeholders' interests.

Because of these definitions, CSR is very often linked to the concept of the Triple Bottom Line (TBL), an accounting term that emerged in 1997, where economic, environmental and social values must be evaluated in order to measure organizational performance (Hubbard, 2009).

3.2 Why do companies adopt CSR practices?

As touched upon in the previous paragraph, there are a number of reasons which today influence the decision for corporations to pursue CSR strategies. According to Van Marrewijk, companies either "feel obliged to do it, are made to do it or want to do it" (Marrewijk, 2003).

A guide from the Government of Canada (Industry Canada, 2006) describes that implementing a CSR approach brings potential benefits in many aspects of the business such as risk anticipation and management, competitiveness and market positioning, ability to recruit, develop and retain staff, operational efficiencies and cost savings, access to capital and improved relations with regulators, to name just a few.

While there seem to be a plethora of potential benefits, the following sub-sections only concentrate on several extensively researched reasons or triggers leading companies to adopt CSR objectives and practices. It addresses the available literature in terms of the "pressures" leading to the adoption of socially responsible behavior, as well as the potential impact on finance, competitive advantage and company's image.

3.2.1 Compliance with regulations or guidelines

Laws, norms and regulation are powerful incentives for companies to develop CSR policies and practices. As Williams and Aguilera (2008) explain, "laws and policies that governments enact send a strong signal about the importance of a subject". For instance, environmental regulations do persuade corporations to adopt greener or more environmentally friendly attitudes and processes. Similarly, changes in labor laws can act as forces for better labor conditions.

An identified need to comply to a new guideline (such as ISO26000 for example) or global organizations initiatives (such as for instance the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the International Labour Organization Commitments etc.) results in changes in company policies and behavior. A study of the impact of the UN Global Compact on the telecommunications industry (Runhaar & Lafferty, 2009), for instance, demonstrates a degree of influence of the initiative on the telecom companies' CSR strategies.

This is further highlighted in a study on the role of public policy and NGOs activism in the US and Europe, where Doh and Guay (2006) proved how differences in institutional environments (government policy, corporate strategy, and non-governmental organization (NGO) activism towards specific issues involving the social responsibilities of corporations) affected expectations about corporate responsibilities to society and therefore affected what CSR strategies companies will adopt.

In heavily regulated industries such as the pharmaceutical industry, the adoption of good practices certainly has an impact, especially with regards to how regulators view the company and put pressure on it. Relations with regulators matter, and a responsible approach is recommended.

3.2.2 Doing well by doing good

The debates over the financial implication of CSR have been raging for years. Since the 1970s and the illustrious statement from Milton Friedman that the only responsibility of a firm is to increase profits and shareholder value (Friedman, 1970), there have been discussions about the role, cost and benefits of CSR. 40 years on, there is still skepticism over the existence of financial gain from being a "good citizen".

A study from firms in the UK (Balabanis, Phillips, & Lyall, 1998) on the correlation between CSR and financial performance concluded that a combination of high CSR performance and high disclosure had positive effects on firms' overall profitability. In contrast, low CSR disclosure combined with good CSR performance or high CSR disclosure combined with poor CSR performance were found not to be economically-rewarding strategies.

An empirical study by Mc Williams and Siegel (2000) examined the previous research and concluded that the impact of CSR on financial performance is neutral, while a recent study confirmed a link between CSR and financial performance, but found the link much weaker than previously thought. Nellin and Webb (2009) even conclude that the only aspect of CSR driven by stock market performance is employee relations and that CSR benefits "appear to manifest themselves in forms unrelated to financial performance".

Overall, firms see a case for engaging in CSR activities and if the impact is not easily measurable in terms of financial performance, the negative impact of not taking the "responsible path" would most probably be even stronger.

3.2.3 CSR and consumer trust

When reviewing the literature and various surveys that have been conducted on consumers, there appears to be evidence that the trust that consumers put in companies is related to the firms' behavior and perceived ethics (Dacin & Brown, 1997; Sen & Bhattacharya, 2001; Maignan & Ferrell, 2003; Pivato, NicolaMisani, & AntonioTencati, 2008).

That trust then translates into consumers being more willing to buy the products from the responsible company rather than from its less responsible competitors. There is therefore a clear incentive here for companies to "do good" in order to grab market share from their competition and gain competitive advantage. This is especially true for corporations whose products can be very similar in taste, look, feel and packaging (Dacin & Brown, 1997).

CSR activities at a more local level can also help a corporation understand the market and the competition and help the company to cater more closely to the needs of the local consumers, this again having an impact on its competitive advantage. There is evidence in the literature that consumers of different countries evaluate corporate responsibilities differently (Maignan & Ferrell, 2003). This research can be used by corporation to better address various markets.

On the other hand, it is thought that consumers will penalize companies perceived as either hypocritical or insincere, meaning that endorsing a socially responsible attitude does not necessarily bear fruits. The tobacco and oil industries, for example, which extensively report their CSR adoption, are heavily criticized by opposed NGOs and pressure groups that identify in these industries a dangerous tendency to confuse CSR and PR (Palazzo & Richter, 2005).

3.3 How do companies approach Corporate Social Responsibility?

There are many models, theories and trends that can be used to look at CSR, at how it is structured, at how similar firms act in similar fashion. The following sub-chapters address various theories and models, as well as observed trends and facts which can be linked to what Carol Adams (2002) defines as the "corporate characteristics" (size, industry grouping, financial/economic performance, price and risk) and "contextual factors" (country of origin, time, specific events, media pressure, stakeholder and social, political, cultural and economic context) of a firm.

3.3.1 Theories and models

There is an abundance of CSR theories and models described in the literature. However, it would be impossible to list all of them. For the purpose of this thesis, the aim is therefore to point at the major theories and models and/or at the ones that are seen as most applicable to the pharmaceutical sector.

Corporate philanthropy, risk management and competitive advantage

According to Franklin (2008), CSR is made of three broad layers which sit one atop the other. The first one is the traditional corporate philanthropy, which consists in giving money to charitable causes in the hope that the action will be perceived as "doing the right thing".

This layer is no longer sufficient and is being complemented with what he describes as "CSR as a branch of risk management". Such practices started being implemented by firms following several environmental disasters in the chemical and pharmaceutical industries as well as the social and labor scandals that the clothing and apparel industry faced in the 1990s.

The third layer is based on the idea that CSR can create opportunities and good CSR can bring competitive advantage to a company. The fashionable phrase is "doing well by doing good", and in the jargon, companies talk about "CSR being part of the corporate DNA" (Franklin, 2008).

Shareholder, stakeholder and societal approaches

Marcel van Marrewijk (2003) records three approaches of CSR. The first one is the shareholder approach which was touched upon in the previous sub-section. In line with Milton Friedman's view, this view claims that the sole responsibility of business is to increase profits, and that social responsibility is a task that belongs to governments, not to business. In that approach, CSR is only worthwhile if it contributes to increased profits.

The second approach is the stakeholder approach in which organizations are accountable to the shareholders, but moreover to all their stakeholders. Stakeholders are hereby defined as "groups and individuals who benefit from or are harmed by corporate actions" (Melé, 2008). They can include employees, suppliers, community, customers etc.

Lastly, the societal approach is the view that CSR has a broader reach and scope. Corporations are seen as an integral part of a society.

Implicit vs. Explicit CSR

Matten and Moon (2008) address the question of how and why corporate social responsibility (CSR) differs among countries and how and why it changes, by looking at the differences between CSR in the United States and Europe and extending their findings to other parts of the global economy.

They argue that national differences in CSR can be explained by historically grown institutional frameworks. They view the US as practicing "explicit" CSR where companies address social issues through their CSR policies, as opposed to Europe where social issues are part of the legal requirement, and therefore CSR there is "implicit" (Williams & Aguilera, 2008).

They conclude that the explicit model is gaining ground among multinational companies in Europe, due to the evolution of the European institutional framework which "provides incentives to adopt corporate-level managerial solutions".

Inward vs. Outward CSR

In an article in *Strategic Direction*, two approaches to CSR are defined: the outward-looking approach which is said to concentrate on the expectations of the stakeholders, and the inward-looking alternative, which focuses on internal issues, aligning philanthropic activities with core competencies (Strategic Direction, 2007). The author recommends that for CSR to be worthwhile, it should encompass both directions, benefiting society as well as company.

This is in some way a similar approach to Michael Porter and Mark Kramer's view which goes further by recommending companies to carefully choose the social issues they address and to select the ones that intersect with their business, expertise and know-how, arguing that "when a well-run business applies its vast resources, expertise, and management talent to problems that it understands and in which it has a stake, it can have a greater impact on social good than any other institution or philanthropic organization" (Porter & Kramer, 2006).

Global vs. Local CSR

Husted and Allen (2006) looked at Multi National Enterprises (MNEs) and identified two types of CSR activities from them: global and local CSR. Global CSR concerns issues that, first, go beyond national boundaries and, second, are viewed in a somehow consensual pattern. Such issues will, for instance, be the respect of human rights, environmental protection and the acceptance of and compliance with schemes such as the UN Global Compact.

Local CSR, on the other hand, addresses the firms' obligations towards local communities. CSR response will therefore address local issues and will be driven by differences in terms of stakeholders, the nature of the local markets and the "host governments" among the countries the MNEs reside in. Local CSR is therefore more common among multi-domestic and transnational MNEs than among global MNEs.

They conclude that MNEs are more likely to manage CSR according to institutional pressures rather than a strategic logic.

Alan Muller (2006) goes further by pointing at the positive and negative outcomes of centrally coordinated, global CSR strategies vs. decentralized local CSR strategies. He looks at both

rationales, presenting the opposite views of those who consider "local engagement in host countries as the optimal form of proactive CSR", against those considering that the "global nature of many social and environmental issues necessitates globally integrated strategies".

He points out that a global strategy, regardless of its efficiency, might lack ownership and legitimacy at the local level and warns against the potential flaw of local decentralized CSR strategies which, depending on the country in question, might be based on lower local standards and therefore might not comply with the corporation's understanding of CSR.

3.3.2 Observations and trends: influencing factors

In addition to the various models that have been described, it is interesting to address the factors that influence the emergence of CSR. William C. Frederick (2008) summarizes these factors in the Table 4, reproduced from the *Oxford Handbook of Corporate Social Responsibility*:

FACTORS	DESCRIPTION OF INFLUENCE
Firm Size	MNE/SME differences Scale and magnitude of corporate social impact Comparative resource capability Competitive pressures and market strength
Politico-governmental system	Government-sponsored social programs Private business-sponsored CSR activities
Economic development stage	CSR affordability in developed nations Marginal CSR focus in developing nations
Geopolitical events and transitions	North-South prosperity/ poverty gap East-West religio-political tensions Development pressures on resources and environment
Diverse societal value systems	Differential commitment to utilitarian-instrumental values Historical experience with market-centered business practice
Environment and natural forces	Climatological disasters Human habitat preservation Viral pandemics

Table 4: Factors shaping CSR's future (Frederick, 2008)

Consistent with this, there is abundant evidence in the literature that CSR is influenced by the type of industry and the societal culture that the company evolves in (Williams & Aguilera, 2008). Similar socio political traditions call for similar CSR approaches. Anglo-American understanding and practices of CSR are, for instance, often compared and assessed against their Continental European and Japanese counterparts. The influence of size, country of origin and industry on CSR will therefore be addressed hereafter.

CSR activities vary according the different industries

There are many reports and studies addressing CSR within specific industries such as the alcoholic drink industry, the mining industry, the pharmaceutical industry, the telecom industry, the tobacco industry, the financial industry etc, leading to the conclusion that various industries must address CSR from various angles and with various objectives.

Williams and Aguilera (2008), in their comparative perspective of CSR, report evidence in the literature of the influence that a profession or an industry has on the type of CSR a firm implements.

A study of Corporate Social Responsibility and economic performance in the top British companies suggests that environmental concerns and subsequent CSR practices are very dependent on the type of industry the company operates in (Balabanis, Phillips, & Lyall, 1998). They identify industries in terms of their impact on environment, respect for people, respect for life etc. For instance, companies within an industry that is a potential polluter can be expected to address their CSR role probably partially along the lines of environmental protection, adopting stringent environmental policies etc. while companies manufacturing alcoholic or tobacco products will most probably address social issue and education in their CSR policies.

This is perfectly illustrated by an article on the alcoholic drinks sector in Australia (Rundle-Thiele, Ball, & Gillespie, 2008). The study points out the fact that "to fulfill their economic responsibilities, marketers of products such as alcohol must simultaneously increase volumes sold, gain efficiencies in production or achieve sales growth and cost efficiencies". In stable markets with little population growth, increasing sales equals consumers drinking more, thus increasing certain health and social risks. In this research, a beer marketer acknowledges that

"minimizing the potential negative impacts of alcohol is a shared responsibility" with a stated aim "to ensure that products are in all cases enjoyed responsibly by informed adults" (Rundle-Thiele, Ball, & Gillespie, 2008).

Finally, the implication of the statement from Hartman, Rubin and Dhanda (2007) that a company's history may impact the way it communicates its CSR leads to think that similarly, an industry's "tainted" activities and past can heavily impact on how it must communicate an image of good corporate citizenship and therefore on how it must approach CSR as a whole. These industries may adapt their CSR activities to "prove" their "good intentions", and not to be viewed as hypocrites. They might also choose to temper and lessen their reporting in order not to appear inauthentic and gain (or regain) credibility.

Different countries or cultures view CSR in different ways

The question as to whether different countries or cultures view CSR in a different way has been quite extensively covered in academic literature. There seems to be no shortage of surveys, studies and comparisons between countries, groups of countries, continents, regions etc.

Williams and Aguilera (2008) concentrate on the differences among cultures, countries or even continents. Based on previous articles and research, they explain that similarities in CSR approaches can be found in countries with similar socio-political traditions and backgrounds. Companies in the UK and the USA are in some studies associated and said to have an Anglo-American (as opposed to Continental European) approach to CSR. More recent studies, however, view that the UK's approach offers more similarities with Europe than with the United States of America.

The "explicit vs. implicit" model that was described earlier is also a good illustration of this split between various approaches and provides legal and institutional reasons for the differences. Similarly, and as mentioned earlier, the study from Doh and Guay (2006) emphasizes the differences in expectations and behaviors in the USA and Europe, led by differences in the process of policy making and the way business is viewed.

Hartman, Rubin and Dhanda (2007) state that culture likely plays a role in how an organization decides to communicate its CSR activities as well as how stakeholders view such

communication. For example, it is quite possible that a firm whose organizational culture strongly supports economic rationales would be seen by stakeholders as betraying their primary responsibilities when choosing a citizenship approach to CSR.

One of the reasons that can explain why US and European companies are approaching CSR in a different way is the fact that in Europe, individuals and companies alike pay much higher taxes than in the US, and in return expect their governments to meet a number of responsibilities (Kakabadse, 2007). This in turn creates a perspective that companies are "owned" by the community, and politicians expect companies to embrace an array of social responsibilities that many U.S. companies would dismiss as not making economic sense. Molded into the essence of companies in Europe is an expectation that they will embrace CSR over and above economic rationalism.

Although its focus is on sponsorship rather than overall CSR, a comparative study of corporate sponsorship in Asia and Europe by Wei Shen (2004) brings some interesting perspectives and proves that practices are different in different cultures. Shen finds that Asian and European corporations do display some common patterns in their practice such as their interest in addressing sectors such as the environment, education and humanitarian aid. However, he also finds that there are also differences that can be qualified as major, in terms of focus. In Asia, the main focuses are on education (partnership with universities, scholarship programs, grants, internship opportunities) and staff involvement and voluntarism (fund-raising activities, charity events, community work). In Europe, companies focus their sponsorships on humanitarian assistance (HIV/AIDS, Human Rights, Public Health, Social issues) which culturally is highly valued in corporate philosophy, as well as on the arts and the cultural heritage sectors.

With respect to developing countries, William and Aguilera (2008) report that some governments might "ignore corporate irresponsibility" or even refuse to improve standards of labor or environmental law in an effort to be as open as possible and attract foreign investments.

Size matters

In terms of the size of the companies, very different patterns of CSR activities can be found, especially when comparing giant corporations with Small and Medium Enterprises (SMEs).

SMEs indeed display very different types of CSR activities than large corporations, simply because their focus and their resources are very different. The type of CSR activities that large companies put in place cannot just be downsized and achieved at a smaller scale by the smaller companies. Smaller structures do not have dedicated staff nor dedicated time for CSR.

Corporate Responsibility is, however, a necessity for SMEs in order to become and remain successful locally as well as in the global economy (Enderle, 2004). SMEs usually adopt a more informal approach (Industry Canada, 2006) and tend to adapt their CSR activities to the needs of their immediate stakeholders (employees, suppliers, customers) and community (Fassin, 2008). One of the most common socially responsible activities that SMEs see themselves practicing is their role as a local provider of employment.

While the emphasis in SMEs is on implementing good business practices rather than on reporting on their good deeds, they also see their actions simply as good management, rather than a tribute to CSR (Fassin, 2008). They see their actions as a way to help them keep up with the economy and the competition and as a tool to remain sustainable businesses.

3.4 Why and how do companies communicate their CSR activities?

In 2001, Peter Frankental from Amnesty International argued that CSR is only a PR invention, and would remain so until a certain number of paradoxes are properly addressed (including the fact that effective CSR must embrace all stakeholders) (Frankental, 2001). Even if this view is not universally accepted or followed, the ad-hoc literature does display clear evidence that communication is a very important factor of CSR.

In a similar fashion to the fact that intrinsic factors (size, industry, country etc.) affect the type of CSR practices that a company undertakes, a study in 1998 from Adams, Hill and Roberts on 150 Annual Reports from 6 European countries (Adams, Hill, & Roberts, 1998) indicates that "company size, industrial grouping and country of domicile all influence corporate social reporting patterns", in terms of the amount of information disclosed (larger companies disclose more), the type of information disclosed (depending on the country where the company is domiciled, or depending on the industry) and the way the information is reported (the reporting

tend to be country specific). They also add that the type of information reported can be very much the results of "fashions", with shifting foci.

Although reporting is on the rise, a company, depending on its socio-political and economic environment, might not yet have reached the point when communication is on top of the agenda. In some places like India for instance, reporting can be seen as a "luxury that stakeholders are not yet demanding" (Thomas, 2001). Overall, the literature details that the country that reports the most on social commitments is the UK, teaming up with the rest of Europe to rank first. Japan is in second position, far ahead of the USA (Williams & Aguilera, 2008).

The following sub-sections look in more detail at the topic of CSR and communication, and assess why companies choose to report (or why maybe, they sometimes should choose not to report) on their CSR activities, whether patterns can be found and what the trends are in terms of the way CSR activities are being reported.

3.4.1 Why do companies report their CSR practices?

As discussed in previous paragraphs, there are mounting pressures on corporations to engage in CSR practices. There are equally mounting pressures from shareholders and stakeholders, demanding companies to be accountable and transparent, in terms of corporate governance as well as environmental, social and financial sustainability (Kolk, 2008). These growing requests for information from increasingly knowledgeable and demanding stakeholders are the driving force behind the fact that companies do report more and more on their CSR activities (Idowu & Papasolomou, 2007).

Furthermore, and aside from the fact that companies report because they are "pressured into it", a study of UK companies found that CSR reporting was viewed as a good PR exercise, which could lead the company to be perceived by stakeholders (customers, suppliers, creditors, environmentalists and investors alike) as a ''caring'' organization (Idowu & Papasolomou, 2007).

In return, companies expect that the reporting of their CSR activities will bring some positive benefits such as " increased customer loyalty, more supportive communities, the recruitment and retention of more talented employees, improved quality and productivity", just to name a few (Idowu & Towler, 2004).

Interestingly, Idowu and Towler (2004) also describe that studies have found a major drawback from reporting on CSR activities. Rather than placing them at a positive advantage, some companies feel that the reporting led to fingers being pointed at them, accusing them of not practicing what they said they were. The reporting drew attention to their actual behavior, ended up being scrutinized, with the result of having the reverse effect to the one expected.

Finally, it is important to know that SMEs do not view reporting in the same way. SMEs are defined as being organised less formally and as putting themselves under less administrative burden than large companies (Fassin, 2008). Furthermore they usually do not have dedicated staff, nor time to report on their good behavior. This does not mean that they do not act ethically, or perform CSR activities. It just implies that they do not report.

3.4.2 What do companies report on?

Hartman, Rubin and Dhanda (2007), looked, through cross cultural lenses, at CSR reporting in both the USA and the European Union. They concluded that there are significant differences in terms of CSR practice reporting between American and European corporations. They found that in Europe, CSR reporting focuses on sustainability commitments, as well as on financial commitments, contradicting earlier views that Europe only focuses on citizenship or moral commitments. They also concluded that US corporations focus more heavily on financial justifications than their European counterparts, but that US companies also report on their sustainability commitment, contradicting again earlier views that US corporations solely used economic justifications to substantiate their CSR activities. These differences in communication not only denote different practices, focuses and expected outcomes from companies' CSR practices, but are also indicators of different perceptions and expectations from the "audience to whom the communication is addressed" (Hartman, Rubin, & Dhanda, 2007).

A study of reporting amongst Asian companies shows discrepancies as well as change and evolution in terms of reporting. Countries with more mature economies like Japan, South Korea and Hong Kong are ahead of China, India or other Asian countries in terms of reporting. Japan leads in terms of numbers of reporting while South Korea and Hong Kong are increasingly reporting, but with limited sophistication and an emphasis on environmental issues (Thomas, 2001). The expectation is that, since Asian companies are moving towards more transparency, disclosure should be on the rise, not only for fiscal performance but also on environmental, health, safety and social issues.

Additionally, a study based on 90 European organizations put forth seven major themes that companies report on, namely: "operational efficiency, maximum safety, environmental protection, quality & innovation, open dialogue, skill development, and responsible citizenship" (Perrini, 2005).

3.4.3 How do companies report their CSR activities?

In 1998, Adams, Hill and Roberts (1998, p1-21) listed the media that corporations use to report their CSR activities as "interim reports, newspaper advertisements, press releases, discussions and meetings with financial analysts and journalists, separate reports on environmental activities, human resources or charitable activities", the predominant medium being the Annual Report. Idowu and Towler (2004) concluded that there were great discrepancies in terms of how companies in the UK reported their CSR activities, from very sophisticated, complete sustainability reports, to a mere few lines in an Annual Report.

Today, most corporations report their CSR activities through their website, whether it be the corporation website or a dedicated website. This communication is aimed at the general public as well as stakeholders, investors and shareholders. In terms of the format that corporations use, the trend is for separate specific sustainability or CSR reports, or as an integral part of the company's Annual Report. When CSR is reported in Annual Reports, the section is separate (Kolk, 2008).

One issue in terms of communication and evaluation of CSR practices is that, given the extent of the differences in the way companies report, there is a strong need for some common reporting practices or standards (Thomas, 2001; Idowu & Towler, 2004; Andrew Crane, 2008). Audits should be prevalent in order to standardize and make comparison of reports, and therefore of practice, more accurate. Benchmarks of CSR activities across corporations will only be possible thanks to consistent reporting frameworks.

In summary, reporting of CSR practices has become a must do exercise for many reasons. However, it has to be clearly and strategically defined, bordered and decided upon, in order to address the appropriate audience, and pass on the right messages.

In conclusion to this chapter, CSR is a well studied, well defined topic which has drawn and still draws a lot of attention from academic researchers in all sectors and all over the globe. It is a field that has been studied from various angles and through the use of various samples. Models and theories have been developed and can be used to characterize and understand the CSR practices of a company. They also help in assessing why companies adopt different approaches, or on the opposite, why some companies with similarity in their profiles approach CSR from similar angles. One crucial point to note for the remainder of this thesis is the evidence found in the literature that the size, the country of origin and the industry have a strong influence on the type of CSR activities developed and communicated on.

The following chapter will now look at the specificities of ethics and CSR within the pharmaceutical sector, through a literature review of internal or external sources.

4. LITERATURE REVIEW ON ETHICS AND CSR IN THE PHARMACEUTICAL INDUSTRY

The pharmaceutical industry is, by nature, a sector where the ideas of corporate involvement, responsibility towards patients, ethical behavior and an overall duty towards society are omnipresent. As David R Brennan, CEO of Astra Zeneca expresses, responsibility is "embedded" in the business and strategy of pharmaceutical companies "because it (is considered) critical to continued success" (Astra Zeneca, 2009). The pharmaceutical industry has for decades been developing, and continues to bring, cures to diseases and affections worldwide. Yet, although individuals and most governments alike see health as a priority and access to health as a right, 80% of the world population (Sanofi-Aventis, 2007) has no or very little access to medicine. The pharmaceutical industry continues to be on the political and social agendas and make the headlines.

This section offers a literature review of the industry's CSR concerns and identifies the areas of the pharmaceutical business which are the most prone to lead to CSR activities. The following paragraphs take a look at corporate social responsibility in the pharmaceutical sector, encompassing environmental, social and governance issues, both from an insiders' perspective, by outlining CSR activities as reported by companies, institutions, and trade associations, and from an outsider's perspective by exploring publications, books and articles particularly focusing on the importance of the concept of ethics within the sector.

4.1 Drug development

This entire section on drug development highlights concerns which are very particular to the industry. They therefore lead to the implementation of CSR activities which are also very industry specific, although aspects such as animal testing and ethics in research can be shared by other industries such as the cosmetics industry, or the medical device sector for instance.

Need for R&D and innovation

Today, the need for R&D and innovation is great, maybe greater than ever. In the developed world, access to medicines is becoming a society's demand and an ever increasing expectation from patients. Yet, in spite of the significant amount of medicines that have been developed over the decades, there are still many diseases which have not been addressed or for which appropriate treatments have yet to be developed. Many patients suffering of orphan diseases (or rarely occurring diseases) are waiting for appropriate treatments, and parents with sick children desperately watch for medicines adapted to pediatric needs. Additionally, in the developing world, thanks to globalization and global communication, people are more aware of what treatments are potentially available and, in return, have increased expectations. Moreover, populations are rising, and on the whole, aging. People are living longer and rightly expect appropriate care all along their life. Finally, and as seen recently in the case of the porcine flu, the event of a pandemic, and its potentially devastating effects on a global scale, is something that humanity has to face on recurrent occasions, calling for fast and efficient drug development and easy access to most populations.

All these factors contribute to the fact that research and development (R&D) remains a primary necessity in the pharmaceutical sector. The pharmaceutical sector has and feels a responsibility in discovering, developing and delivering medicines and vaccines that can make a difference in people's lives and create a healthier future (Merck, 2009). However, any new drug, any new medical advance comes from years of research and development by pharmaceutical companies. The development of a new drug is a progressive filtering process (Taylor, 2005). Typically, of a starting pool of 10,000 molecules screened as potential new drugs, only a dozen will make it to preclinical trials. Eventually, after clinical trials on animals then humans, only one or two of the original 10,000 molecules will make it to the ultimate marketing authorization stage and commercialization to patients (Les Entreprises du Médicament, 2008).

Overall, the process will take 7 to 12 years to complete, with a cost of development reported to be US$800 million for each drug (Dickson & Gagnon, 2004). Understandably, with such lengthy processes and need for extensive investment, and given the fact that developments of drugs are the endeavors of private entities, only companies with substantial profits can re-inject their

benefits into research and development. This not only limits the number of companies that can perform R&D but also potentially affects the span of diseases that can be studied and addressed.

Orphan drugs

There are a number of issues at stake when it comes to Orphan drugs, drugs which are aimed at treating very rare diseases and defined by WHO as affecting less than 1000 people per million.

As seen previously, the development of a new drug is a very costly process for which the investment is recovered from the revenues generated by the commercialization of the product. In the case of the development of orphan drugs, while the time and cost to develop the drug will be within the same timeframe as it would be for a "regular" drug, the return on investment will most likely be lower, due to the small number of patients and therefore the lack of economies of scale. The development of an orphan drug is often seen as uneconomical.

This factor is enhanced by the fact that by investing in the development of an orphan drug and therefore addressing the needs of "only" a few, a pharmaceutical company would ignore the greater need of the majority. Which solution is more ethical? To cater for the greater need or to address smaller populations but provide life saving results? The answer lies with pharmaceutical companies, their strategies and the way they balance their portfolios. Thankfully, governments and regulators through tax incentives and specific regulations are supporting and inciting pharmaceutical companies to develop orphan drugs.

Animal testing

Animal testing is a very vivid debate amongst the pharmaceutical industry, animal welfare NGOs, society at large, and surprisingly, even investors, as seen in the 1997 case involving animal testing contractor Huntingdon Life Science (Metcalfe, 2008; Taylor, 2005). The topic of testing of drugs on animals is one that the industry has to handle with great care.

Although science and technology have evolved, permitting the use of alternatives and bringing down the overall proportion of animal testing for the development of a new drug, testing on animals still provides information on how a drug interacts with a living body and is regarded as a critical step, before testing on humans can be carried out. Simulations and alternative

technologies do not give all the data necessary to carry the clinical trials further, as computer simulations cannot yet address the interactions between different body organs (Taylor, 2005) and give all the required information and reassurance that the drug can be tested on humans.

This calls for pharmaceutical companies to adopt and enforce very stringent company policies and welfare procedures, and promote the respect for the animals being used for the test, whether the animal testing is done in house, or performed by contracting companies.

Ethical considerations in clinical trials

When pursuing clinical research, companies have to comply with a number of ethical concepts and standards including the protection of the people involved in the study as well as a commitment to scientific objectivity (Weber, 2006).

Research participants have to be protected in terms of safety while taking the trial product, as well as in terms of confidentiality and privacy. They have to understand and to consent to the trial they participate in. This is even enhanced when clinical trials are conducted in developing countries. The involvement of local health authorities, and more specifically of local ethics committees (Les Entreprises du Médicament, 2007), becomes necessary in order to conduct the trials to an appropriate level of standard (Weber, 2006). Independent follow-up committees also should be implemented to provide the best possible protection against bias (Les Entreprises du Médicament, 2007).

Objectivity has to be ensured when conducting clinical trials. The attention given to the design of the clinical trial is a step in the right direction (Weber, 2006), and so is the suitable payment of research participants. Payments or retributions should be reviewed by an ethical committee to avoid irregularities that could favor the results of the trials. Overall, transparency, objectivity and ethics are of essence when conducting clinical trials.

Pediatric research

Further to the issues mentioned above, the context of pediatric medicine is even more sensitive and prone to issues of ethics. For decades and for “protectiveness reasons”, no research was carried out on children, and treatments were given on a “weight based metric derived from adult

dosing recommendations" (Murphy & Goldkind, 2005). Consensus guidelines have been developed for the conduct of clinical research in children, the ethical challenge being the inherent vulnerability of the population (Shevell, 2002). Aspects of consent, risk-benefit ratios, fair subject selection, and respect for subjects have to be at the forefront of pediatric clinical research (Shevell, 2002). The role of pharmaceutical firms is to help regulators design the proper legislation, always look for ways of improvement and also to enforce these rules when conducting clinical trials.

Genetic research

Genetic research is an area that the pharmaceutical stakeholders at large are not necessarily comfortable with. The public might have reservations and concerns about the reasons, motives, and applications that derive from genetic research. The pharmaceutical industry has to be very transparent in the way it conducts genetic research, as well as on the implications that this type of research has. A large part of this transparency has to be conducted directly with the patients, who have to be very well informed on the implication of the trials they are taking part in, in order to give a fully informed consent, even a family consent in some cases (Vorm, Rikkert, Vernooij-Dassen, & Dekkers, 2008). The role of the pharmaceutical sector is to work according to very high standards and in close partnership with institutions and regulatory bodies, in order to help develop this field of research in the best conditions, alleviating fears about the potential misuse of genetic information and data.

4.2 Patients

Patients are at the center of pharmaceutical companies' business. A number of CSR issues need to be addressed when thinking about patients. Once a drug is developed, it needs to be marketed and needs to be prescribed.

In developed countries, the main issue is the price and the interactions that the company can have with the governments in order to set the levels of reimbursement, coverage etc. Recently, the problem of counterfeit drugs has emerged, with two main outcomes: the risk incurred by the

pharmaceutical company whose product is copied, and the risk incurred by the patient taking a counterfeit, and either totally ineffective or potentially lethal drug.

In the developing countries, the issues are for patients to be able to access the medicine. In many countries, patients will not be able to afford the medicine, at least not at the prices it is sold at in developed countries.

Although these concerns are very linked to the nature of the industry, topics such as the importance of protection against counterfeit can be observed in other industries, such as the toys industry for instance where protecting consumers against counterfeits and their potential harmfulness is of particular importance.

Patient's protection against counterfeit

Counterfeit drugs are a growing concern affecting the developed and the developing world. Counterfeits do not only concern prescription medicine, there are also counterfeited generic drugs. Counterfeit drugs either contain the wrong active ingredients, the right ingredient but in the wrong dosage, or no active ingredient at all (IFPMA, 2009). Patients taking counterfeit drugs are at high risks of not being treated and being badly treated, with the worst scenario of severe secondary effects which might go as far as inducing death. Industry associations, manufacturers and legislators understand the seriousness of the issue and play a vital role in informing patients about the risks and raising awareness. In terms of the risk incurred by companies, a counterfeit drug's distribution under a brand name can have serious effects on the company's reputation.

Access to drugs in developing countries

The pharmaceutical industry can have an important impact on the distribution and availability of drugs in developing countries. For instance, companies, as part of their CSR activities, act by donating medicines to populations in need, by proposing preferential pricing in the world poorest countries in an effort to help fighting diseases such as AIDS and malaria (EFPIA, 2009), or in supplying vaccines to international NGOs or UN agencies at preferential prices, below those practiced on developed countries.

Price policies

In line with what was described above, companies can adopt preferential price policies, i.e. adapt their prices to the markets they are addressing, allowing for a wider part of the population to access healthcare. Differences in countries' approach in terms of reimbursement, health coverage, government or private health policies can lead to products being marketed under varying tariffs. Price policies and patient assistance programs are of particular importance in the USA, where many are not covered by any medical insurance. Such programs help people without prescription coverage save on medicines or even qualify to get free prescription medicine (Pfizer, 2009).

Relations with patient groups and NGOs

Close relationship and dialogue with patient groups is essential for the pharmaceutical industry in order to improve the products, develop new therapies, identify needs etc. This needs to be done within a context of transparency and ethics. Industry associations as well as companies have developed codes of conducts on order to frame these dialogues and exchanges (EFPIA, 2009).

The role that the industry can also play is one of communication with the patients and associations, in order to work towards common goals. Targeting patient organizations or NGOs on the importance of early diagnostics, in cases of cancers or specific diseases for instance, can ensure earlier access to medicine and provide better treatment and efficiency for patients (Les Entreprises du Médicament, 2007).

In terms of pandemics such as the propagation of AIDS for instance, the dialogue that companies and NGOs have will help identify ways to lower the proliferation of the disease or at least to permit for more patients to have access to proper treatments.

4.3 Environment and safety

There are a number of issues at stake when looking at the pharmaceutical industry and its impact on the environment. The pharmaceutical industry is a manufacturing industry which, like many

other industrial operations, carries environmental risks. The pharmaceutical industry, as said before, mainly emerged as a by-product of the chemical industry and still today, the vast majority of drugs are produced through chemical processes. Chemical processes have come a long way and tend to be "greener". Many regulations have been put in place in order to either reduce the use of solvents and potential polluters, or control their discharge.

Taking care of the environment is also a way for the pharmaceutical industry (as well as for other sectors) to save on spending. From green buildings, energy saving and packaging reduction, there are many solutions that can be put in place and achieve both goals of being a good citizen and saving money at the same time, at least in the longer run.

Water

While the pharmaceutical industry uses less water than some other industry (Pfizer, 2009), it still relies on large supplies of water for its R&D and manufacturing facilities. It is a responsibility of the industry to conserve water, evaluate the appropriate use of water and carefully gauge its needs with the objective of not depriving local communities of their supply of clean potable water. There is also a strong need for water treatment, in the same effort to not contaminate the water used by the local communities.

Environmental protection, building green etc.

Pharmaceutical operations usually require large sites, whether for production or administrative purposes. Optimizing the energy consumption by adopting green policies can greatly affect a site, benefiting the environment as well as the company's bottom line. Genzyme Corporation, one of the leaders in biotechnology, led the way and communicated heavily when it built its new corporate headquarters according to the LEED standard of Green Building (Genzyme Corporation, 2009). The impact was felt on the company's image, being seen as a responsible company in terms of environment, as well as on its future savings in terms of energy consumption.

Discharge and contamination

The issue at stake for the pharmaceutical industry is to prevent traces of its drugs from being discharged into the environment. Although the question of discharges from a production plant is highly regulated in developed country, there have been reports by NGOs and local associations that large pharmaceutical groups have discharged traces or waste of medicines into rivers in countries such as India and China, for instance, thus affecting the local population by polluting their water, land and crops.

There is also concern surrounding the potential effect that unused drugs can have on the environment if they are released as waste (Les Entreprises du Médicament, 2007). In some countries, joint efforts from governments as well as firms can help collect unused medicine from patients and discard them in appropriate ways, so that no impact is felt on the environment.

4.4 Social issues

The area of social issues in the pharmaceutical industry is maybe less industry-specific than the previous categories mentioned. The questions of equality, diversity, employee protection, senior employment etc. are common to most industries.

One social issue that is more relevant to the pharmaceutical sector is how companies address health and safety at work and address the protection of their employees from potentially harmful processes and products. The health and safety risks of a pharmaceutical plant employee will indeed be linked to the fact that the activity is industrial, and to the type of products produced and processes performed, with the extreme case, for instance, of increased health and safety risks when manipulating radioactive substances in some oncology treatment manufacturing processes.

Another aspect that is relevant today is the fact that the pharmaceutical industry's supply chain has been going through tremendous changes in the last decade. Suppliers, partners and even contractors are now often based in Asian countries, predominantly in South Asia, China and India. The responsible (or irresponsible) behavior of the companies' partners will have an impact on the company itself. Issues such as child labor, employee welfare and human rights must be

clearly assessed and even audited. Pharmaceutical groups must pay closer attention to choosing their partners and contractors, in a very similar approach to what other industries, such as the apparel industry for instance, have had to address.

4.5 Philanthropy

Philanthropy based CSR activities are of course not specific to the pharmaceutical sector and philanthropy is probably the category that first comes to mind when evoking CSR. However in the pharmaceutical industry, it is the type of activities implemented that characterize the sector, which go beyond supporting arts or community involvement. The main philanthropic role that can and should be attributed to the pharmaceutical industry is its prerogative to enhance human life and its role to provide cures for diseases. The pharmaceutical industry also takes on a number of activities which can be classified within the philanthropic category, as follows:

Access to healthcare

Access to healthcare is a major issue in the pharmaceutical sector. Indeed, the objective and finality of pharmaceutical companies is to provide healthcare to patients, but it is also to make profits. Drugs have to be distributed and provided to various populations with very different means. The responsibility of the industry is to work with institutions in order to design schemes that will allow most to access healthcare regardless of their revenues, the country they live in etc.

Humanitarian action – Foundations - Community

Pharmaceutical companies often set up foundations, in order to support, educate and better address a disease for which they provide treatment (for example a foundation on diabetes if the company provides insulin treatment; or a foundation which focuses on AIDS education in Africa for a company providing anti retroviral drugs etc.).

They also provide humanitarian action and support to various causes, often again in correlation to a product they provide, or to support a community they work with, or a country where they manufacture or undergo clinical trials.

Japanese firms are very active in involving their employees and sending them on humanitarian missions in various places in South Asia and Africa.

Support for research and education – grants

The pharmaceutical world is very much dependent on research and on the advance of science through research. Research is a pillar for the industry and the industry recognizes it by providing research grants to universities, students and educational institutions, by funding research programs, by supporting research laboratories.

Educating children or younger students on the importance of science is also part of the process. The industry identifies a role in raising awareness on the challenges that the sector faces and the obstacles that it has to surmount to develop new drugs.

4.6 Business Ethics

Pharmaceutical companies are no different from other companies and therefore are extremely carefully watching their bottom lines in a very competitive environment, having to always provide better returns for their shareholders, while taking into consideration the needs of their other stakeholders. They therefore end up in situations where there could be conflicts between ethical standards and profits. And, as was said before, the pharmaceutical industry is a sector where any activity that could be detected, suspected or labeled as unethical behavior is not tolerated by patients, the media and stakeholders at large. A number of business ethics issues are therefore relevant and specific to the pharmaceutical sector and described below:

Corporate governance

The need for strong and effective corporate governance might be emphasized in the pharmaceutical sector by the fact that pharmaceutical companies, whether large multinationals or SMEs have a strong impact on human health, and are seen as having a "duty" to provide a steady supply of medicines. As such, stakeholders expect them to be robustly organized, with defined attributions and roles, and effective governance. Pharmaceutical companies at large report on

their corporate governance, either within the financial section or as part of the CSR/sustainability information provided by their corporate communication.

Transparency and ethics

Transparency is an attribute that is expected from a pharmaceutical company at every stage of its operations. As it is from most sectors, transparency is indeed expected in terms of corporate governance, political contributions, lobbying and financial disclosure. But it is also demanded on other issues and specific aspects of the industry, such as clinical trials, the quality of the ingredients used in formulations, the company's supply chain, the potential side effects of drugs and the methods used by the company to promote its products.

Ethical standards and marketing

In some countries, the marketing of drugs is a major issue that involves patients (even the public if advertising is authorized), the industry, practitioners and regulators. Marketing has become a very regulated activity following what has been described and criticized as "abuses".

There are conflicting interests between the fact that practitioners need to be informed on the drugs, that patients should have some understanding of the treatment they are getting and the fact that companies push for their product against the competitors' ones, in a bid to get market share. In the USA for instance, television advertising for drugs is authorized, under certain conditions, leading to some ethical issues in what is called there Direct-to-Consumer-Marketing (DTCA). Even practitioners can have difficulties being unbiased and prescribing what is best for their patients.

The pharmaceutical companies representatives, by approaching the physicians directly, induce conflict of interest situations where the doctors' interests or commitments compromise their independent judgment and their loyalty to patients (Weber, 2006). Weber describes that although physicians think they are "immune" from being influenced by pharmaceutical companies, they actually don't necessarily realize the extent to which marketing is influencing them, and unconsciously prescribe medicine A rather than its competitor B, compromising their own ethics and allegiance to objectivity and to treating their patients as best as possible. It seems that within

that domain, only regulations, tougher laws and rules can prevent the pharmaceutical companies from going "too far" in the way they promote their drugs (Abrams, 2005).

Executive compensation

This issue is relevant to the pharmaceutical industry in the sense that the world's top 50 companies are nearly all listed on trade exchanges and therefore, there is a need for transparency from these companies to address the shareholders' need for information and maximum return on their investment.

Risk and crisis management

Risk and crisis management is of particular importance in the pharmaceutical industry as the sector provides drugs to patients who cannot just walk away and buy their product somewhere else if the supplies fall short.

The possibility that the sole manufacturing site of a specific drug disappears in a fire, the risk that a sole producer of an active ingredients goes bankrupt, or even that a critical number of employees of a plant manufacturing vaccines against a pandemic flu all fall ill, require the industry to set up contingency plans and thorough crisis management structures, sometimes as part of wider initiatives with health authorities and governments.

Role of the pharmaceutical industry in pandemic crisis

The role that the pharmaceutical industry has played in helping to face a pandemic crisis emphasizes its greater role and the greater possibilities that could lie ahead.

The recent bird flu and porcine flu have indeed proven that through a common effort and common goal, all actors including institutions, regulators and competitive pharmaceutical groups can work together, side by side, to develop prevention plans and act as one, in the interest of all.

In conclusion to this chapter, it is rather obvious that the pharmaceutical sector has to deal with issues which are specific to the business environment in which it operates. Although a number of the CSR activities listed and described above can be common to various industries, a larger

number of them can be directly pinpointed to the pharmaceutical sector. Ethics plays a large role in the way business is conducted and this has a strong influence on the way pharmaceutical companies approach their corporate responsibility.

In the following chapter, and based on the last three chapters including this one, four hypotheses will be drawn on the narrowed topic of Corporate Social Responsibility AND the pharmaceutical sector.

5. HYPOTHESES

Drawing from the factors influencing CSR as detailed by Carol Adams (2002) (section 3), as well as the analysis of the pharmaceutical sector (section 2) and the industry's CSR practices (section 4) as reported in the literature review, four hypotheses can be drawn, addressing the influence that corporate characteristics (size, industry grouping, financial/economic performance, price and risk), and general contextual factors (country of origin, time, specific events, media pressure, stakeholder and social, political, cultural and economic context) have on pharmaceutical companies' CSR activities.

The pharmaceutical industry is a long-standing, well structured sector with a strong impact on society in general. It is an industry that is uncompromisingly expected to behave ethically and provide treatments for all. As such, it is under very tight pressures and scrutiny from legislators, NGOs, media and the public at large. It is also a sector that has become very competitive. It is expected that most companies within the sector have recognized the importance of Corporate Social Responsibility, and therefore that they practice and report on their CSR activities. This gives rise to Hypothesis 1, or H1.

H 1: In the pharmaceutical industry, most companies practice and report on Corporate Social Responsibility.

In the global pharmaceutical world, the actors vary enormously in terms of size and influence. From the giant firms that emerge from mega mergers to the small family owned, one product - one market companies, the variety of structures is immense. The stakeholders' profiles will be different, as well as the means to achieve CSR goals. Drawing on the work of Carol Adams (2002), CSR activities, as well as reporting, are therefore expected to be very different whether they emanate from a globally oriented "big pharma" or from a pharmaceutical SME. This gives rise to Hypothesis 2, or H2.

H2: The level of reported CSR activities is positively related to the company size.

Due to the variety of products that can be produced in the pharmaceutical sector (prescription drugs, generics, biotech therapies etc.), the variety in the "seriousness" of the pathologies being addressed (from HIV, mental illnesses, cancers, orphan diseases to common cold), or even the potential polluting or contaminating effect of certain production processes, discrepancies are expected, in terms of focus and the variety of CSR activities put in place. Likewise, common pattern of CSR focus are expected amongst companies providing similar products. This gives rise to Hypothesis 3, or H3.

> H3: The nature of the products manufactured influences the type of CSR activities.

Due to the wide differences in regulatory requirements, government policies, social and political pressures, economic context, cultures and even societies' expectations within various countries, geographical discrepancies in terms of CSR focus are expected. Corporations headquartered either in North America, Europe or Asia are expected to approach CSR according to a regional understanding of what the concept stands for and entails. This gives rise to Hypothesis 4, or H4.

> H4: The country of origin and the socio-political context influence the pharmaceutical company's CSR approach.

The aim of the research from here on will be to prove or refute the above four hypotheses. The following section will detail the methodology used in order to achieve this goal.

6. METHODOLOGY

The aim of the research is to analyze and compare the CSR activities reporting of a large sample of pharmaceutical and biopharmaceutical companies of global reach.

The methodology chosen for this study was based on content analysis using qualitative and quantitative data analysis.

The documents and sources of data analyzed were of several types: web sites (corporate or specific to CSR), CSR Reports (also called Sustainability Reports or Citizenship reports), Annual Reports and, in some instances, Environmental Reports.

The following paragraphs detail the process used for the collection and the analysis of the data.

6.1 Identifying the sector's responsibility concerns

The methodology for assessing the sector's CSR concerns was based on a review of the content of internet sites from relevant industry organizations, such as trade associations, international representative bodies, and regulators. The review of several reference books on the topic of ethics and the pharmaceutical sector and well as the review of corporate websites from leading companies helped shape this part of the research.

6.1.1 Objective

The objective was to identify the overall CSR concerns of the industry (and particularly those specific to the sector, as opposed to the ones more common to all industries), define, clarify, explain them and highlight their relevance.

The other aim of this research was to use this information to develop the database and decide on the set of fields needed for the second part of this research.

6.1.2 Choosing the sample

Choosing the sample consisted of identifying relevant industry organizations, accessing data or their websites, identifying patterns in terms of areas of expressed concerns and extracting the relevant information.

Some of the organizations that were identified and from which information on CSR roles and concerns were extracted are the following:

Name of organization	Designation
EFPIA	European Federation of Pharmaceutical Industries and Associations
EMEA	European Medicines Agency
FDA	US Food and Drug Administration
FIP	International Pharmaceutical Federation
IFPMA	International Federation of Pharmaceutical Manufacturers and Associations
LEEM	Les Entreprises du Médicament, the French Pharmaceutical Companies Association
PhRMA	Pharmaceutical Research and Manufacturers of America
Rx&D	Canada's Research Based Pharmaceutical Companies

Table 5: List of selected Industry Organizations

6.1.3 Defining the information to review and collecting the information

Once the sample was determined, the web sites were accessed, reviewed for patterns and the information used to compile and describe the main concerns of the sector.

The results were given in Chapter 4 of this thesis, as well as listed in Appendix A (fields defined and used for collecting data under the CSR activities category).

6.2 Defining the industry's current CSR practices

6.2.1 Choosing the sample

The first step of the study was to define the sample of companies to study. The sample had to address all four hypotheses, and had to be large and representative enough to cover various countries of origin and regions, a wide panel of sizes of firms, different types of products offered

as well as therapeutic areas covered. The original aim was to work on the 50 largest global pharmaceutical and biopharmaceutical groups, including generics manufacturers.

The chosen period for selected the top 50 largest players was 2007-2008. Lists of Top 50 companies were easily available on the internet. Although numerous lists could be retrieved, it was found that they were not consistent. Different organizations (mainly trade magazines and industry reference web sites) provided different rankings and non-matching lists of what they had identified as the top 50 largest companies, for an identical period. Therefore, in order to obtain a sample that would be as independent and objective as possible, a total of 3 lists of the world's top 50 pharmaceutical and biopharmaceutical companies were extracted from recognized industry organizations and combined (Please see Appendix B). One list was obtained from each of the following:

- "Top 50 Pharmaceutical companies and their Pipelines 2008" by Pharmalive and MedAd News (Pharmalive, 2008)
- "Pharma Industry Insights and Market Intelligence Updates", MediNEWSDirect (MediNEWS.Direct!, 2007)
- "Top 50 Pharma" by Piribo (Piribo, 2008)

After combining the three lists and eliminating duplicates, a final list of 70 companies was obtained (Please see Appendix C). It was decided that this would be the sample to analyze.

Working on 70 companies rather than 50 offered many advantages: the sample was larger, thus providing more data and making the findings more statistically viable. The larger sample also meant that more countries were being represented, again adding to the credibility of the study. Finally, a larger sample implied that the profiles of companies would be wider and that more differences would be included in the sample in terms of products manufactured, CSR approach, size, etc.

It is important to note that, as the coding went on, it was found that 5 companies listed in the combined list of 70 companies had since been bought or had merged with other entities. No information was therefore available for these companies and the sample had to be reduced to 65 companies. The final sample of 65 companies is the one that was eventually coded and used.

The three original lists, as well as the list of 70 (reduced to 65) companies are given in Appendices B and C.

6.2.2 Defining the data to collect

The next step was to define what information needed to be collected. The objective was to gather information on the business identity of the company as well as its CSR activities.

This was to be done by gathering information on three main categories:

- A general information category, providing the identity of the company:
    - company name
    - corporate web site
    - number of employees
    - annual revenues (in local currencies where supplied, as well as in US dollars)
    - country of origin
    - regions where the company operates through subsidiaries, local companies, sales office etc. A total of 9 regions were defined (please see Table 7 for more detail).
    - type of products
        - prescription medicines
        - consumer healthcare (OTC)
        - generic drugs
        - biopharmaceuticals including vaccines
        - others (medical devices, nutritional products etc.)
    - therapeutic areas currently addressed (13 therapeutic areas were identified, please see Appendix A for more details).
- A second category providing a brief accounting of the place where CSR activities are reported by each company, with the choice of four options:
    - information on the company's corporate web site
    - presence of a dedicated CSR website
    - presence of a CSR dedicated report

    - in the absence of a dedicated CSR report, presence or not of CSR information within the company's Annual Report.
- Lastly, a more detailed category accounting for the company's reported CSR activities and constructed from the literature review of the pharmaceutical industry's CSR practices (part 4). For this part, six sub-categories of CSR activities (please see Appendix A) were determined, encompassing a total of 46 CSR activities. The six sub-categories were:
    - drug development
    - patients
    - environment and safety
    - social issues
    - philanthropy
    - business ethics

It is important to note that from the original fields, criteria were added in several categories or sub-categories as the coding went on. When that occurred, companies previously coded were reassessed and the coding was corrected accordingly.

6.2.3 Coding the data

A simple coding template was designed.

Countries of origin

16 countries of origin were identified and coded as follows:

Code	Country	Code	Country
1	Canada	**9**	Japan
2	USA	**10**	China
3	Germany	**11**	India
4	France	**12**	Iceland
5	Switzerland	**13**	Australia
6	UK	**14**	Hungary
7	Italy	**15**	Denmark
8	Israel	**16**	Belgium

Table 6: Codes for Countries of Origin

Note: Although China was listed prior to starting the research, it was eventually not used as a country of origin. None of the 65 studied company originated from China. China was however often cited (and therefore coded) as a region where companies have operations in.

Regions of origin

Similarly, 9 regions were defined and coded as follows to identify the region of origin of the company:

Code	Region	Code	Region
1	EU	**6**	South Asia
2	North America	**7**	China
3	South America	**8**	India
4	Africa	**9**	Australasia incl. Japan
5	Middle East incl. Israel		

Table 7: Codes for Regions of Origin

Regions operating in

As far as the regions the companies have operations in, the coding used was the number "1" when evidence was found that a company had operation in a region, and "0" otherwise. Operations were defined as either: sales offices, subsidiaries, production sites, regional headquarters etc.

For example, if a company was found to operate in the EU, Africa and South America, it was assigned a "1" to the designated cells and a "0" to the other cells. The maximum number of regions a company could operate in was therefore 9, and the minimum 1 (the region corresponding to the country of origin of the company).

Reporting; Therapeutic areas; Type of products

The coding used for the following categories: "reporting", "therapeutic areas" and "type of products", was the numbers "1" when evidence of the criterion was found and "O" if no evidence was found in the accessed documents or sources of data.

For instance, if a company indicated that it was active in oncology, then a "1" would be assigned to the designated cell on the datasheet. Similarly, if the company reported producing generics

and OTC products, a "1" was assigned on the two designated cells, and a "0" on the three remaining cells pertaining to "Prescription medicines", "Others (medical devices, nutritional products" and "Biopharmaceuticals, including vaccines".

CSR activities

In the case of 46 listed potential CSR activities, a similar coding was used. On a summated scale, a "1" was assigned when the activity was practiced and a "0" if not. Given that there were 46 CSR activities, the maximum a company could therefore score was 46*1=46 if evidence was found that every single CSR activity listed was practiced. The minimum possible was 0. Every combination in between was possible. For each company, the total number of CSR activities reported was calculated by adding all the "1" reported in the datasheet. This total number was subsequently used raw, or as a percentage.

For instance, a company found to practice 12 out of the 46 possible CSR activities would be found to have a percentage of CSR activities of 12/46*100=26%, and one with a reported score of 44 activities would show a percentage of CSR activities of 95.7%.

6.2.4 Choosing the source to code from

Data, as previously said, was obtained from a variety of sources. None of the potential source was ignored until all data (or the evidence of the absence of data) was found and coded.

The collection of data was done methodically, following an alphabetic order list of the 65 companies' names.

First category of data – general information

The first step was to access through the web browser www.google.com the English language version of the corporate web site of the studied company and gather from there most of the company's "identity" data: official company name, corporate web site address, number of employees worldwide, country of origin, regions operated in, type of products and therapeutic areas covered.

Revenues were downloaded from 2008 Annual Reports, except for Actavis for which the revenues were extracted from the 2006 Annual Report, the last publicly available report before Actavis went private, and for Japanese companies for which the financial fiscal year ends at the end of March, and for which the Annual Reports used were those for year ending March 2009.

Revenues were collected as provided by the companies and where needed, converted in US Dollars by using the annual average exchange rate for 2008 between the local currency and US Dollars, according to data published by the US Federal Reserve (Board of Governors of the Federal Reserve System, 2009) (please see Appendix D).

Second category of data - where do companies report their CSR activities

To gather information for this second category, the first point of access was again the corporate web sites. Specific CSR websites as well as companies' Annual Reports were all accessible through the corporate websites. CSR reports, however, and where applicable, were accessible either from the corporate websites or the specific CSR websites.

In most cases, when information under the heading of "community involvement", "sustainability", "ethical" etc. was clearly labeled on the web site, the code was "1" in the corresponding box on "CSR info on the web site". In the case of Endo, for instance, there was a "community involvement" heading on the corporate web site and therefore the code was "1". In the case of Forest, there was nothing evident on the website, therefore the code shows "0".

Third category of data - CSR activities

This category was the longest and toughest to code, due to the number of fields and therefore activities to identify, sometimes from various sources (web, CSR report, Annual Report). Priority was given to dedicated CSR websites and CSR reports when available.

If the information was not clearly identified from these sources, the company's 2008 Annual Report, and various parts of the general corporate website were explored and information retrieved from where, if and when available.

From all the above sources, data was collected and coded directly into the spreadsheet (see Appendix A) between the period of June 14 and July 5, 2009. Although it was relatively straight

forward to come by general information and find out how companies report their CSR activities, identifying the actual CSR activities or confirming the lack of CSR activities of each company was more of a challenge. The lack of information for some companies might indeed only merely reflect the difficulty in accessing the information from a site or a report. In some instances, the research had to be carried out in various places of the web sites. In other instances, some "digging" had to be done. For instance, in the case of the US based company Eli Lilly, at first, it looked like there was very little information available. After further investigation, it was found that a lot of information on CSR was only available in their "Red Book", an internal code of conduct, which had not been identified in the first round of investigation.

6.2.5 Analyzing the data

Once all the data was coded, and given the amount of data collected (83 fields assessed for each of the 65 companies, making it a total of over 5300 collected data), the conclusion was that it would not be possible to analyze all the data gathered. Groups had to be defined in order to identify and extract patterns.

For Hypothesis 2 for instance, companies were grouped according to their size in order to assess if the collected data proved or disproved the hypothesis. Groups of companies within defined ranges of size were formed. These groups were compared to each other in terms of number of CSR activities reported, using various tools such as average, standard deviations, scatter plots and correlations. More information is given in part 7.2 of this thesis.

Similarly, for Hypothesis 3, three main groups were determined, according the companies' main activity: manufacturers of prescription medicine and OTC products; manufacturers of generics; manufacturers of biopharmaceutical products. Details of the process are given in Part 7.3 of this document.

For the separate purpose of proving or refuting Hypothesis 4, companies were grouped according to their country of origin. Although the 65 companies represented a total of 16 countries, several countries (Australia, Canada, Iceland, India and Israel,) were represented by one or two companies only. For the analysis, it was therefore decided to focus on companies from Japan, US

and the EU (note: Actavis was not included in this group, as Iceland is not part of the EU, although it has trade agreements with the Union). They were grouped geographically and the corresponding data analyzed. The three groups were assessed against each other as well as against a "reference" fourth group, representing all companies. Similarities and differences were looked for in terms of type of CSR reporting, as well as type of CSR activities.

Overall the tools that were used to analyze the data were averages, standard deviations, correlations and analysis of variances. As seen in part 7 of this thesis, scatter plots, radar charts, column charts and pie charts were used to illustrate the findings.

This chapter depicts the methodology used in the thesis. It explains where from and how the data was collected, and then analyzed. The following chapter analyzes the data that was collected and tries to provide evidence and results in order to address each of the four hypotheses developed in the previous chapter.

7. RESULTS: TRENDS IN CSR PRACTICE

The large amount of data gathered allowed for a number of different analyses to be performed, from general to more specific. The aim of the analysis presented in this chapter is to prove or refute the four hypotheses.

7.1 General observations

General observations were obtained from the data gathered. Although they do not reflect CSR activities, they are essential for the remainder of the analysis. They reflect the nature of the sample.

As shown in Figures 3 and 4, the data confirmed that the three major dominant markets are the United States of America, Japan and the European Union, with over 91% of the 65 largest global companies originating from these three regions.

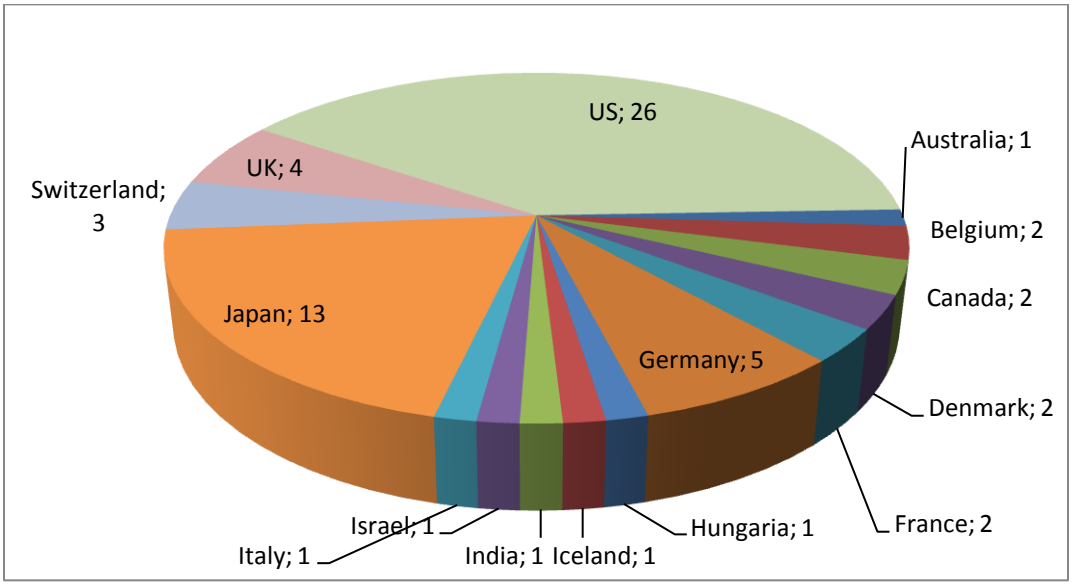


Figure 3: Number of Companies per Represented Country

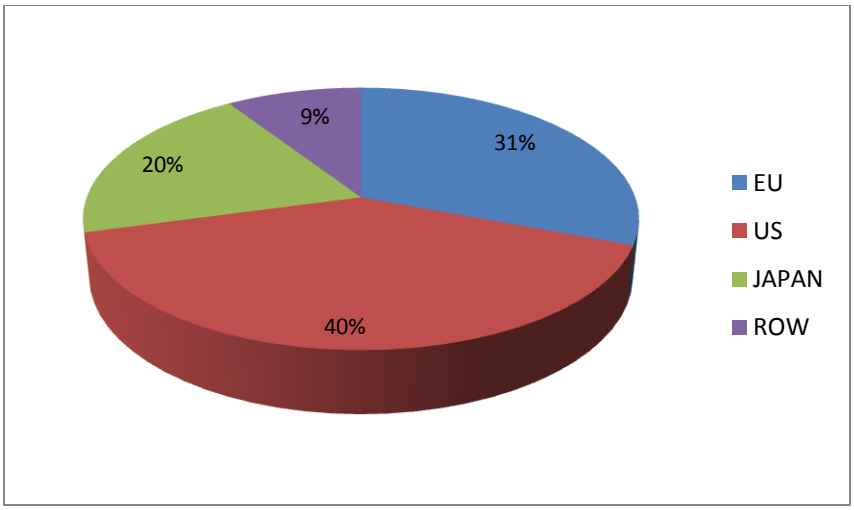


Figure 4: Percentage of companies per country

In terms of the regions where companies have operations, it was found that over the vast majority of companies operate internationally, with 38% of all the companies having operations in all 9 regions. Table 8 recaps the findings.

Number of regions operated in	Number of companies	Percentage of companies
1	2	3%
2	3	5%
3	6	9%
4	7	11%
5	7	11%
6	8	12%
7	3	5%
8	4	6%
9	25	38%
Total	65	100%

Table 8: Number / percentage of studied companies per number of regions operated in

Another interesting finding, although not linked to CSR but nonetheless important for this study, was the correlation between the number of employees and the company's revenues. The correlation was found to be 97% (Figure 5).

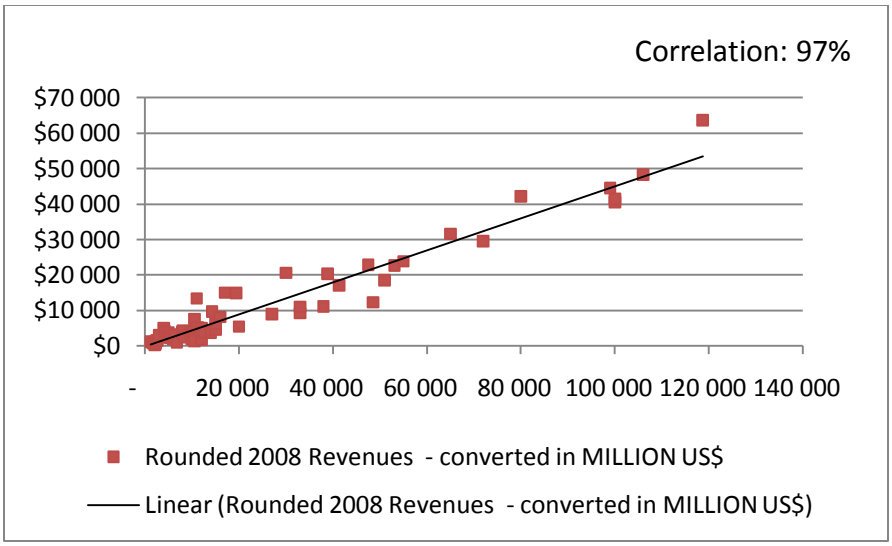


Figure 5: Correlation between number of employees and revenues

This was useful for the remainder of the analysis. In two instances, either the revenues or the number of employees could not be accessed. The results in Figure 5, and the associated calculated correlation, meant that the two companies could still be included in the study, even with missing data. In the case of Mundipharma, a UK based company, no financial data could be retrieved and the correlation was used to estimate its revenues. In the case of Procter and Gamble Pharmaceuticals, the number of employees was not disclosed since P&G does not identify and calculate the number of persons employed for its pharmaceutical division, as part of the staff works on a corporate level and not only for the pharmaceutical division. Again, the correlation was used to estimate the number of employees.

7.2 CSR Reporting: H1

This hypothesis assumed that most pharmaceutical companies practice CSR. To assess the hypothesis, a conservative test was used, defining "most of" as more than two third of the companies (or 66%).

The result that was drawn from the data is that 86% of the 65 studied companies report CSR activities on their corporate website, regardless of their size, their activity, the country which they are from or the regions they operate in. This was found to be significantly higher than the

66% mentioned above for the null hypothesis (see Appendix E for details), meaning than most companies included in this research practice and report CSR activities.

Furthermore, and as shown in Figure 6, it was found that within the group of companies that provide information on CSR activities on their web site, only 7% use their corporate website as the only platform of communication of their CSR activities, while 16% have developed dedicated CSR websites, 52% publish CSR reports (sometimes under the label of "sustainability report", or "corporate citizenship report") and 27% choose to report their CSR activities as an integrated part of their Annual Reports.

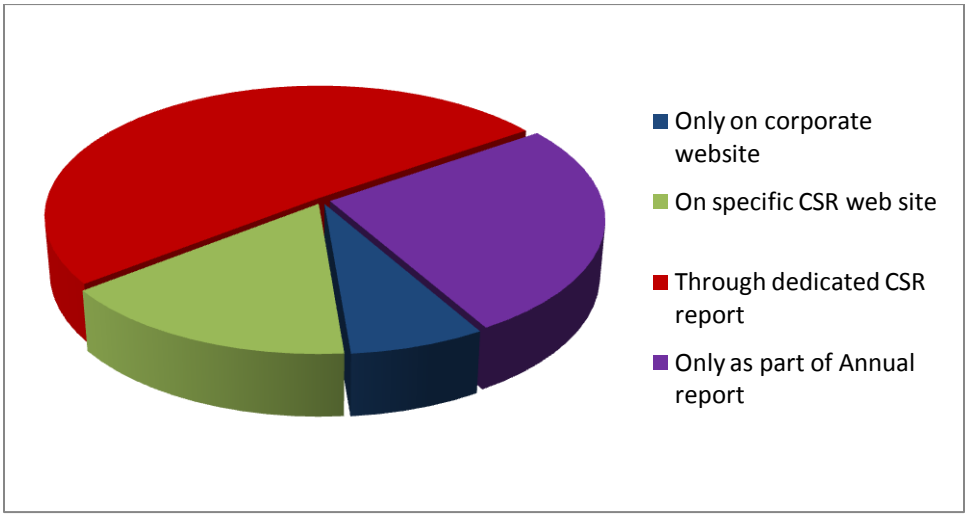


Figure 6: Reporting places

Armed with these results, the objective then was to go further into the analysis and try to verify hypotheses 2, 3 and 4.

7.3 Effect of the size of the company on its CSR reporting: H2

Looking at the effect of the size of the company on the amount of CSR reported was a source of many potential analyses. In order to find trends and appropriately use the data, the 65 companies were assembled in 3 groups on the basis of their size (number of employees).

The tools that were used to compare each group were average calculations (average number of reported CSR activities per group of companies), as well as the associated analysis of variance. The objective was to investigate if, as expected, the number of activities reported was positively linked to the size of the company.

The first group encompassed the companies with less than 5 000 employees, the second group represented the middle sized companies with 5 000 to 20 000 employees and the last group was made of the largest organizations with over 20 000 employees. The results are shown in Figure 7 and are corroborated by the results from an Analysis of Variances confirming the significance between the three groups with p=0,066% (see Appendix F for details of the calculation).

The graph in Figure 7 clearly confirms a link between the size of the company and the amount of CSR reporting.

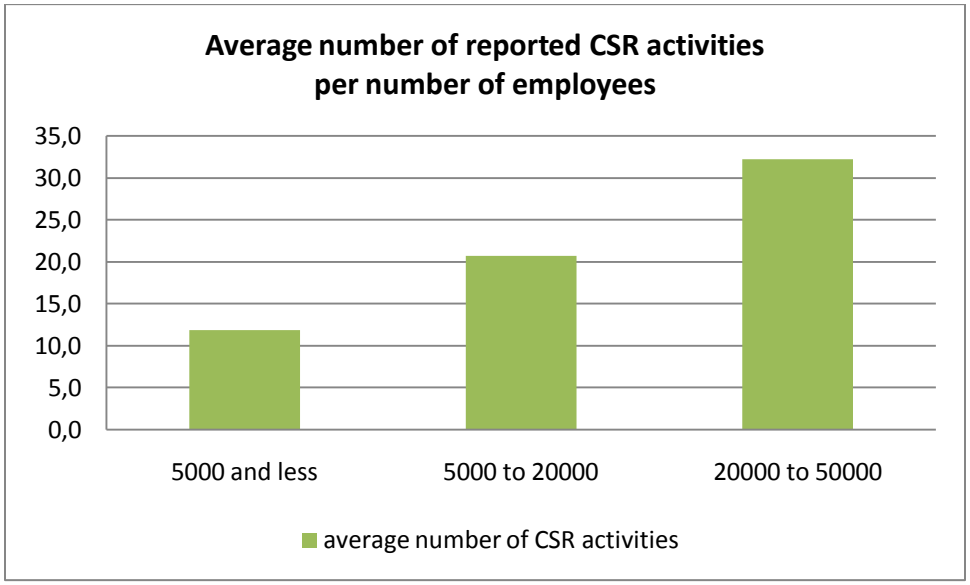


Figure 7: Average number of reported CSR activities per number of employees

A further interesting result is the one given in the Figure 8 where all revenues were plotted against the exact numbers of reported CSR activities, as opposed to average number of employees and average number of CSR activities per group. A clear logarithmic trend is shown,

demonstrating the link between the size of the company (this time in terms of revenues) and the amount of CSR reported activities.

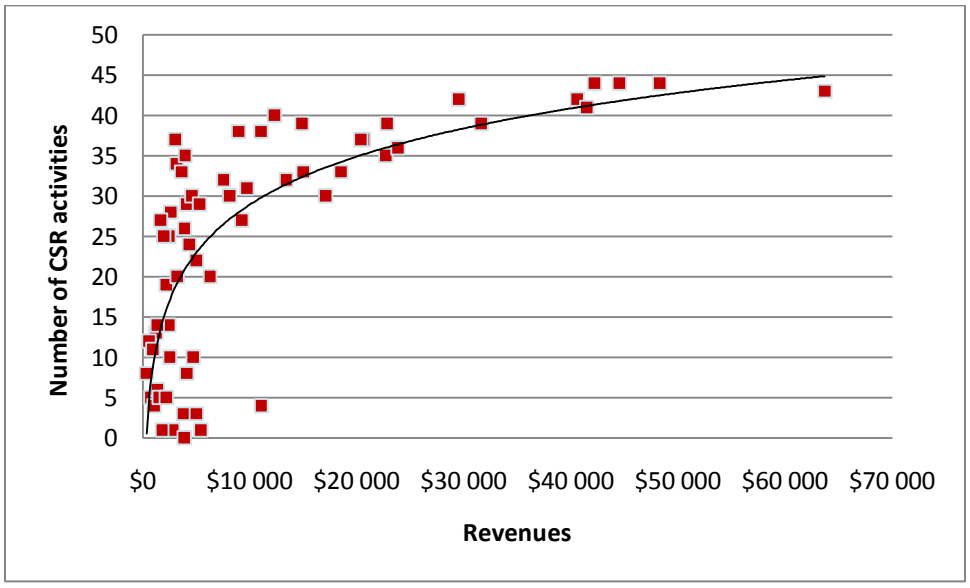


Figure 8: Number of CSR activities vs. revenues – Logarithmic trend

Both sets of calculations (shown in Figures 7 and 8), whether based on the average number of employees or the revenues, reflect a positive impact from the size of the company on the number of CSR activities reported.

7.4 Effect of the type of product on CSR reporting: H3

The original assumption for Hypothesis 3 was that generics companies and biopharmaceutical companies might not approach responsibility in the same way as prescription drugs companies, as their business focuses are different.

The objective was to see if there was any trend associated with the type of product manufactured, i.e. if the fact that a company produced generics or biopharmaceuticals meant that its CSR activities were different to the ones from a company focusing on prescription drugs. Companies were coded with the types of products they manufacture, as described in Chapter 5.2 of this thesis.

The preliminary observation showed that a majority of companies are active in more than one type of products and that it would be a difficult task to clearly segment companies into groups that represent prescription drugs vs. generics vs. biopharmaceuticals manufacturers. Companies that started as generics manufacturers are beginning to develop prescription medicine, while traditional pharmaceutical firms are increasingly moving towards producing generics, often of their own proprietary drugs, in an effort to keep their market share.

Thus the difficulty was clearly to define the sample to analyze. The chosen approach concentrated on looking at companies that strongly focus on one particular sector rather than "generalists" which have activities in more than one type of products. This approach therefore took away the big pharmas from the sample.

The first step was to start identifying the generics manufacturers, pinpointing companies like Teva and Ranbaxy whose major strategy is to develop generics. The second step was to select a sample of them (as large as possible), look at their profiles and their average revenues, and match these profiles with companies with similar revenues and a clear-cut focus on prescription drugs, as well as companies with similar revenues and a main activity in biopharmaceuticals.

From this approach, a list of 20 companies was obtained (Table 9), representing 31% of the original sample of companies. The advantage of this new list was that it provided a sample of companies that were focused on one category of products, and was therefore more representative for the purpose of proving or disproving Hypothesis 3.

Generics	Prescription drugs	Biopharmaceuticals
Apotex	Rhoto Pharma	Gedeon
Mylan	Nycomed	Genzyme
Ranbaxy	Perrigo	Shire
Ratiopharm	Dainippon	Shugai
Stada	Lundbeck	Genentech
Teva	CSL	Merck KGaa
Watson	Taisho	

Table 9: list of companies focusing on one category of products

The Anova calculation on this sample showed that the difference between these three new groups was significant with a p value of 0,4% (see Appendix G for details).

The results obtained by plotting the above companies' average number of CSR activities showed that companies focusing on generics display less activity in terms of CSR (Figure 9). This would be consistent with the fact that the need for CSR activities and reporting might be less demanded since these companies already fill their societal obligation of providing affordable healthcare. The results also showed that companies producing biopharmaceuticals had overall the strongest focus on CSR.

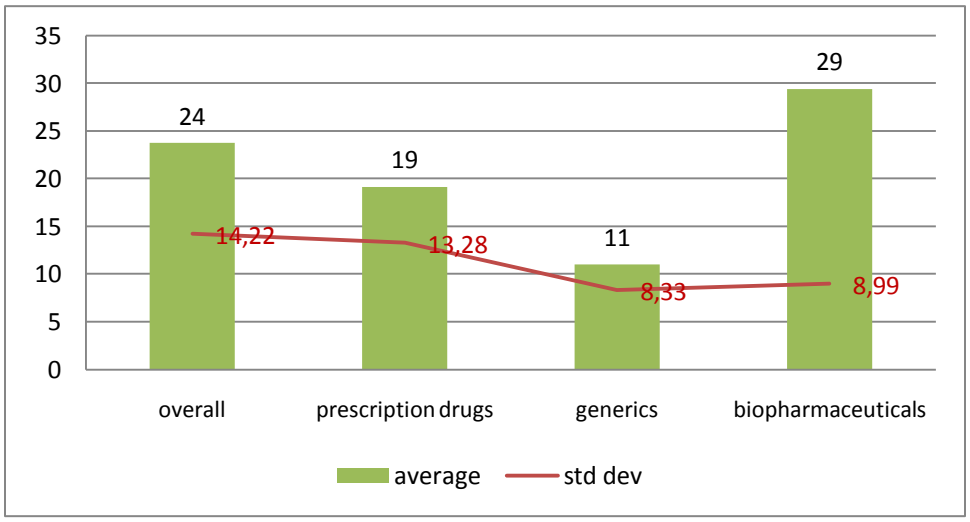


Figure 9: Average number of CSR activities reported – By type of products

A further breakdown looked at the amount of CSR reporting per category of CSR. Again it confirmed differences linked to the type of products manufactured (Figure 10).

Overall, generics manufacturers probably do not allocated as high a budget as the other groups of companies do to their CSR activities, as their margins are also smaller. Unsurprisingly, generic manufacturers do not report much activity in terms of product development since they do not develop proprietary products. A surprising observation was that overall wider discrepancies existed within the generics sector.

It might have been useful to conduct primary research on these companies to understand their policies and strategies and better understand the reasons behind the discrepancies.

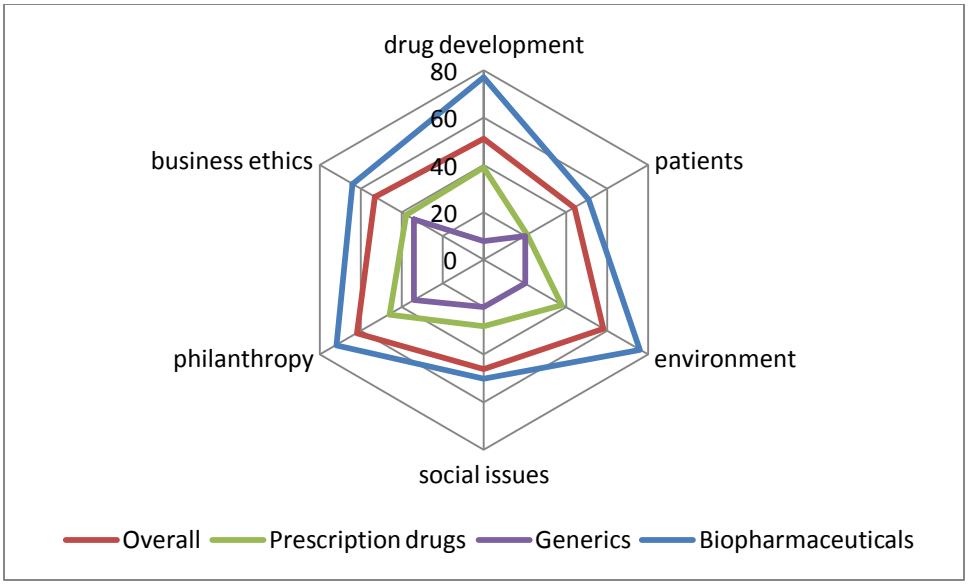


Figure 10: Differences in CSR focus – per type of products manufactured

In contrast, biopharmaceutical companies demonstrated an average high commitment to CSR, with the lowest standard deviation, thus showing a more constant approach within the group. Their high commitment to drug development related CSR activities is of no surprise since they are research companies. Their focus on the environment is again not surprising as their processes require even more stringent control and monitoring than chemical processes in terms of emissions and especially contamination.

7.5 Effect of the country of origin on CSR reporting: H4

In the last hypothesis, the question to address was whether the country of origin of the company had or not an impact on the way it approached corporate social responsibility. The assumption was that different cultures might call for different approaches and that since, as seen earlier, regulations have a strong impact on the industry, differences were to be expected when comparing countries with different legal and regulatory approach.

Although a total of 15 countries were represented in the sample of 65 companies, for the sake of the analysis, only Japan, US and the countries making up the European Union were looked at. The rationale was that these three main poles represent 91% of all companies looked at in this

research, and, as seen earlier in this thesis, have also been designated as the three countries dominating the global pharmaceutical industry (Aruvian Research, 2009). Other countries studied in this research were represented by one or two companies each: Australia, Iceland, Israel, India, Canada.

The first result that was found was that there was no difference at all in the amount of CSR activities reported between US, EU and Japan i.e. a lack of influence of the country on the amount of CSR reported, and this, regardless of the size of the company. All reported an average of 24.2 activities out of a possible 46. The standard deviations were also very similar. A single factor Anova corroborated these findings, by giving a p value of 98% showing that the differences between the countries in terms of the amount of CSR activities reported were not significant (see Appendix H for detailed results).

Since no differences were found in the amount of reporting, the next two steps were to look at the type of reporting and identify if any differences emerged among the three countries. Additionally, it was interesting to evaluate potential difference in terms of the weight given to certain CSR activities rather than others, in an attempt to illustrate for instance that geography had an influence on whether social issues were more emphasized than environmental issues.

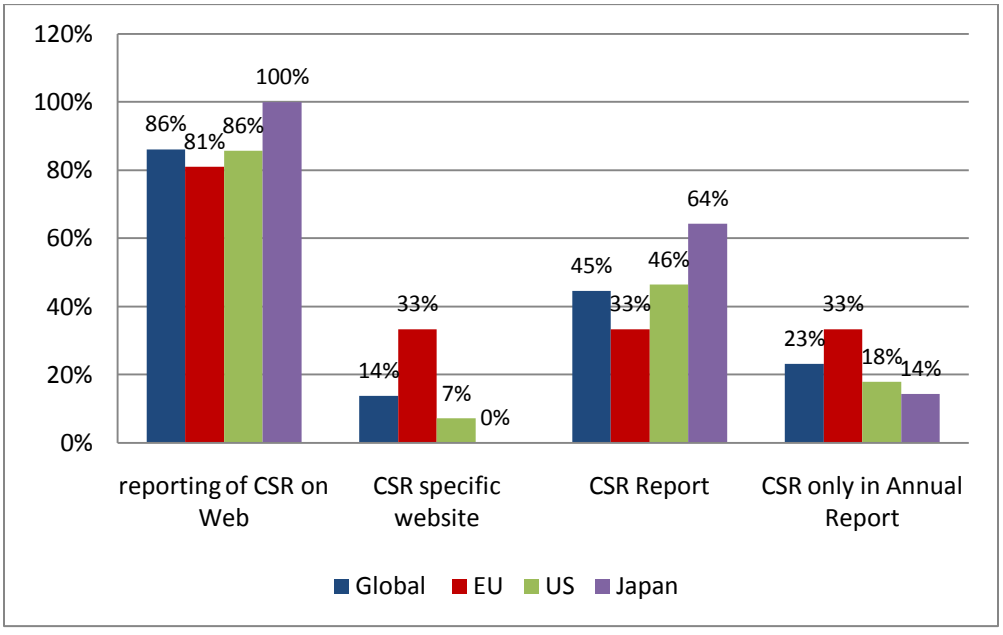


Figure 11: Type of CSR reporting – Differences in terms of country of origin

Figure 11 shows differences in the way countries approach their CSR reporting. While 100% of Japanese companies report their CSR on their corporate website, no Japanese company has a dedicated CSR website. Meanwhile, 40% of EU companies have a dedicated CSR website, against 12% in US, etc. In terms of documents (i.e. excluding the information provided on web sites), EU companies split their reporting halfway between specific dedicated CSR reports and their Annual Reports.

The next step was to look at potential differences in terms of CSR focus, first for each category of CSR activity (Drug Development; Patients; Environment and Safety; Social Issues; Philanthropy; Business Ethics), and second for specific issues within each category.

As shown on Figure 12, overall, the country of origin does not seem to have a major impact on the companies' reported CSR activities. Very slight differences in the way CSR issues are focused on are found between US, the EU and the global average. Japan, however, displays a slightly different emphasis, specifically in terms of environment and patients.

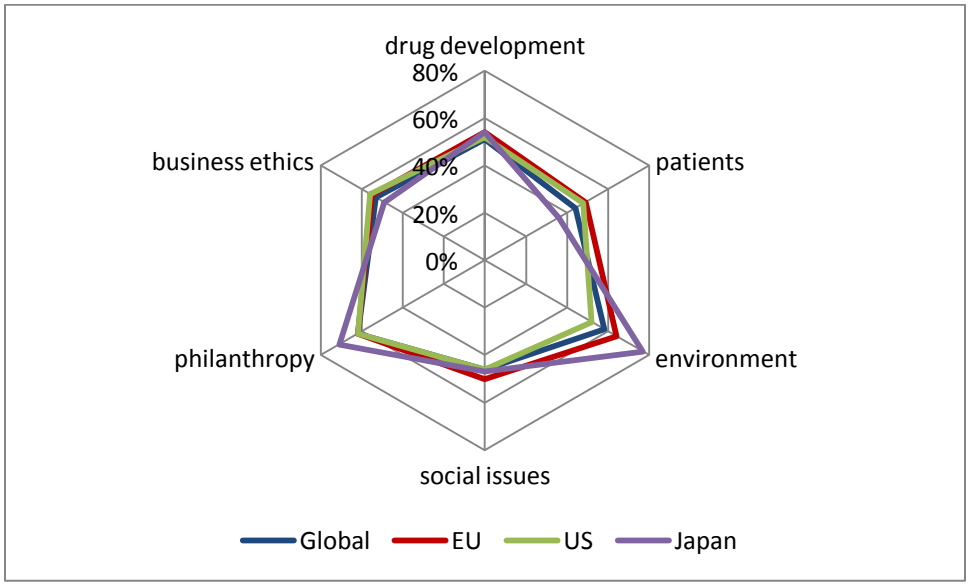


Figure 12: Differences in CSR focus – per CSR category - per country

Further to these results and in order to identify reasons for these overall differences, it seemed necessary to have a closer look at potential discrepancies within each category. In order to easily identify discrepancies or major differences in the number of activities communicated, each

category was plotted using radar charts. Radar charts were found useful here as they allow for two observations: overall trends/differences in the relative focus given to each criterion within a category, and attention given by each country to each criterion.

Drug Development focus

No major discrepancies among countries were found within that category since all countries seemed to be splitting their focus in very similar patterns (Figure 13). Japan showed a slightly higher focus than its counterparts on Animal Welfare, and commitment to R&D (92% of Japanese companies report their commitment to R&D and Innovation, compared to 75% in European companies and 81% in US companies), which could be explained by the fact that the Japanese companies within the studied sample are mostly focusing on prescription drugs rather than generics and do therefore put strong attention on product development and research.

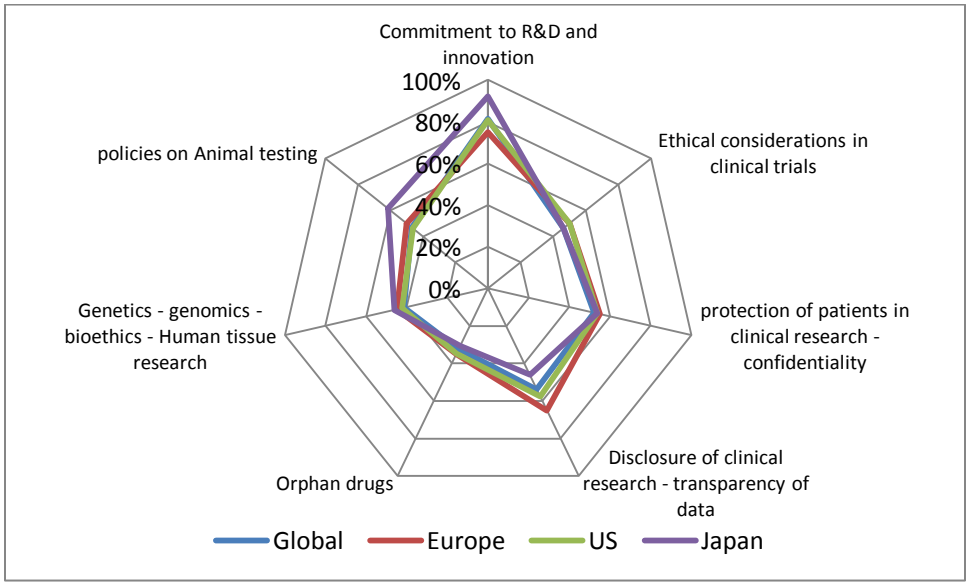


Figure 13: CSR Focus within the "Drug Development" Category

Patients focus

As seen in Figure 14, the overall consistency observed among countries in terms of R&D is not repeated in terms of patient focus. Several differences can be spotted, particularly in terms of the activities reported by Japan compared to the other regions.

Japan displays lower focus than other regions on “patient protection against counterfeit”, “adapted price policies” as well as “participation in global health programs” and “adapted price policies”. Japan, however, displays much higher activity in terms of “education and awareness”.

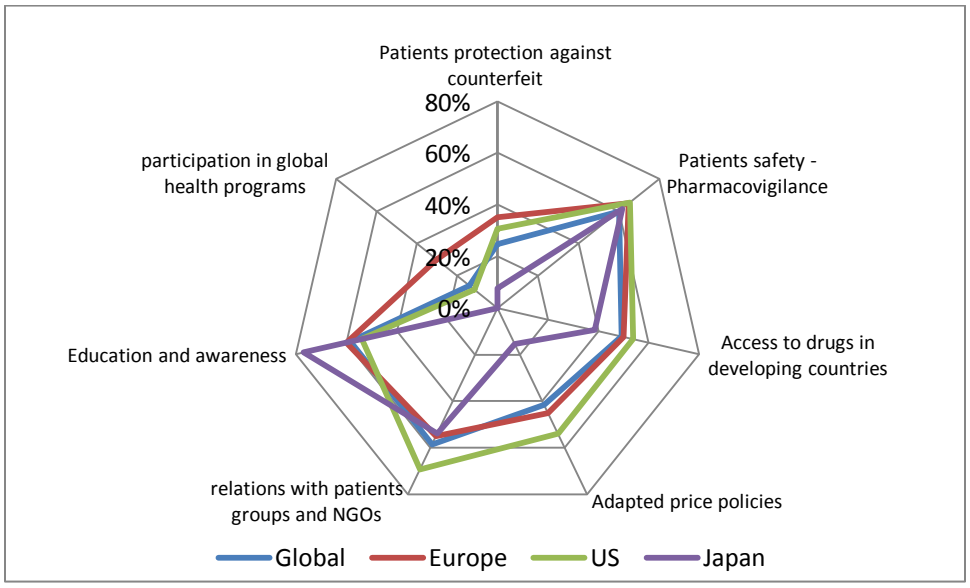


Figure 14: CSR Focus within the “Patients” Category

US and Europe display similar overall allocation of focus, with the exception of the participation in global health programs.

Unsurprisingly, US based companies seem to emphasize reporting their actions in terms of adapted price policies, which, as seen earlier, is a very important issue within the USA, where in 2007, 18% of the population under the age of 65 had no healthcare insurance coverage (National Coalition on Healthcare, 2009).

Environmental reporting focus

In terms of environment and as seen in Figure 15, very similar patterns can be seen as far as the comparative attention given by each country to a particular criterion is concerned.

However, although the pattern is similar, the number of activities differ and Japan displays a much stronger focus on environmental issues than other regions, particularly in terms of 2 criteria: climate change policies and emissions reductions.

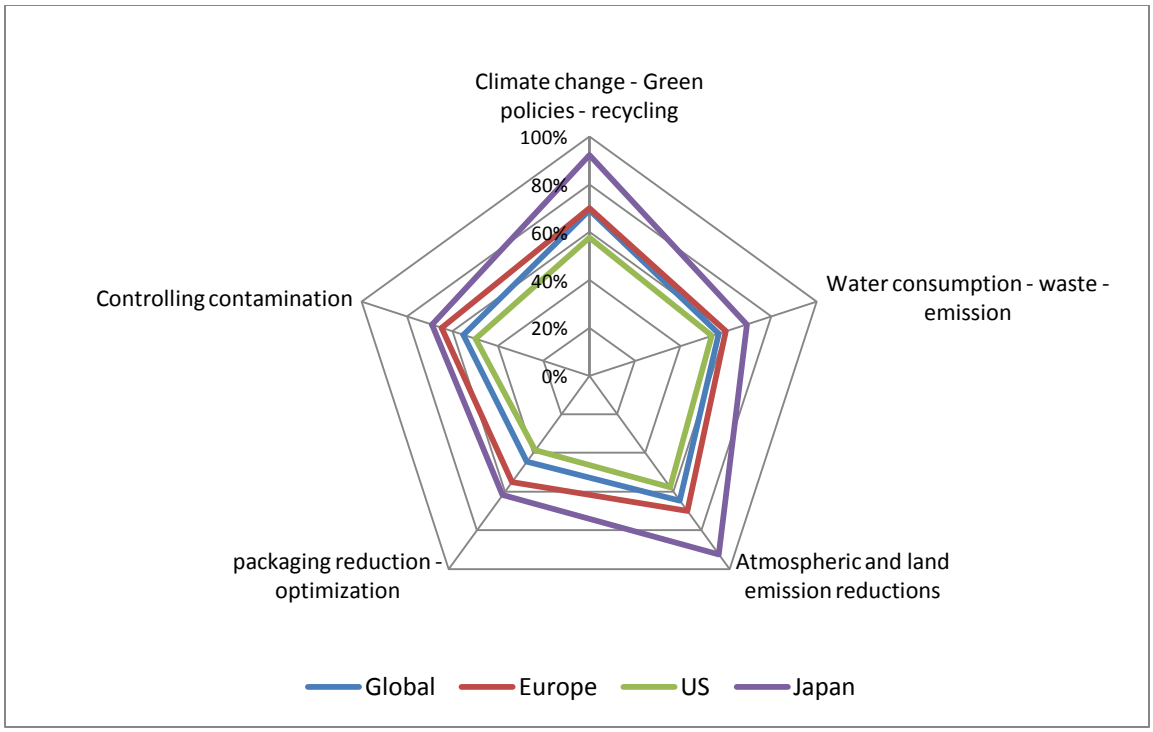


Figure 15: CSR Focus within the "Environment" Category

Social issues focus

"Social issues" is a category in which major discrepancies are seen among countries, in terms of the comparative amount of attention given to each criterion as well as the way different countries address social issues (Figure 16).

For most criteria, the US and the EU follow a similar approach, except on the questions of "contractor and supplier" criteria which will be discussed at a later stage. Japan, however, does not reflect so much on its approach to diversity but does concentrate a lot more on senior employment than other countries do. Two reasons can be found: either Japan focuses more on senior employment than other countries, due to its aging population or its cultural approach to work, or, in other countries, senior employment is embedded in the companies' diversity policies.

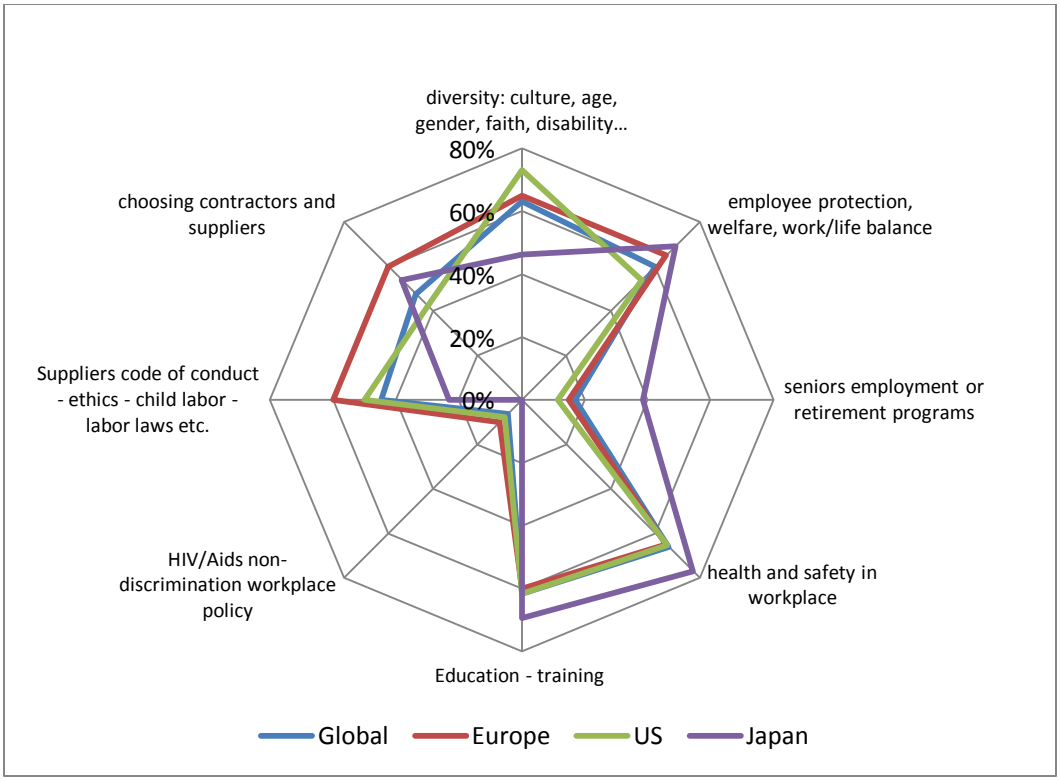


Figure 16: CSR Focus within the "Social Issues" Category

As far as "HIV/aids non-discrimination workplace policy" is concerned, what was found was that major EU or US firms which have operations in Africa and which manufacture HIV medicines are the ones putting emphasis on that criterion.

Philanthropy

Companies' policies or CSR approach to Human Rights seem to be one of the overall listed criteria which displays the most discrepancies among countries.

According to Figure 17, Japan again distinguishes itself from the US, the EU and the overall global approach on the criteria listed under philanthropic issues, specifically in terms of human rights and support for research and academic grants for which Japanese countries seem to lead the way, and in terms of access to healthcare which surprisingly does not seen to attract so much attention in Japan.

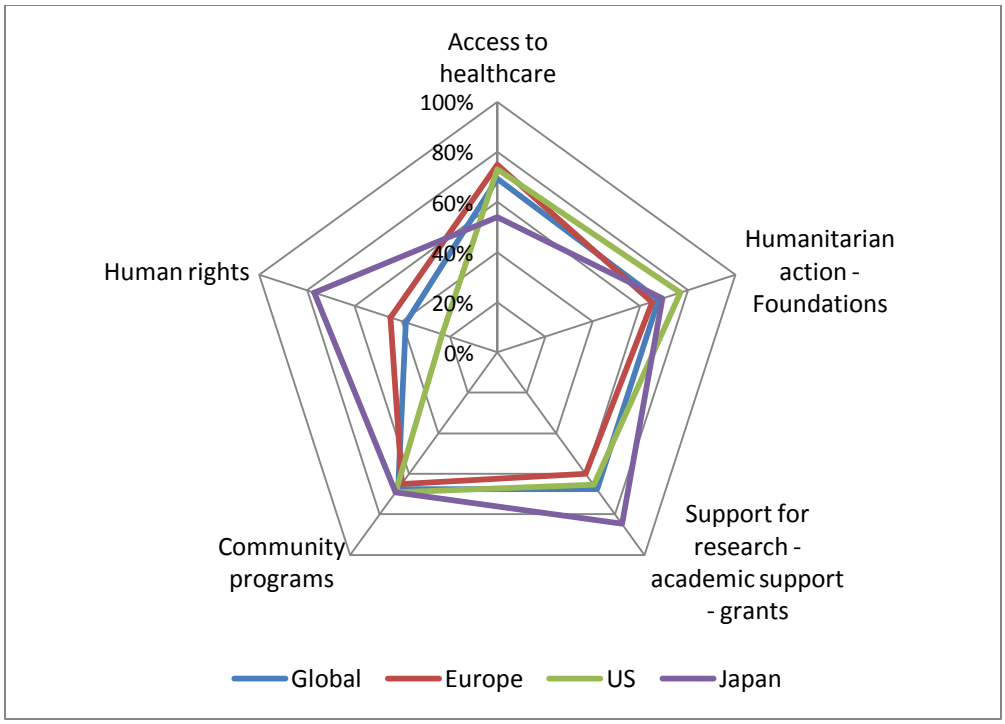


Figure 17: CSR Focus within the "Philanthropy" Category

Again, one thing to keep in mind is that this thesis reflects the reporting of CSR issues and the communication used by companies. It does not necessarily reflect the actual CSR activities, actions and projects.

Business Ethics

In this category, similar patterns can be seen for most of the 14 criteria listed, even if the intensity that countries give to certain topics differs (Figure 18).

For the majority of criteria listed under this category, the US displays the stronger focus, probably reflecting strong regulations for disclosure. Executive compensation, financial disclosure, the need for ethical standards in marketing and sales, and the emphasis on a code of ethics are all criteria where US based firms display a strong commitment.

Surprisingly, risk and crisis management is a point that is emphasized a lot less in the US than it is in Japan or the EU.

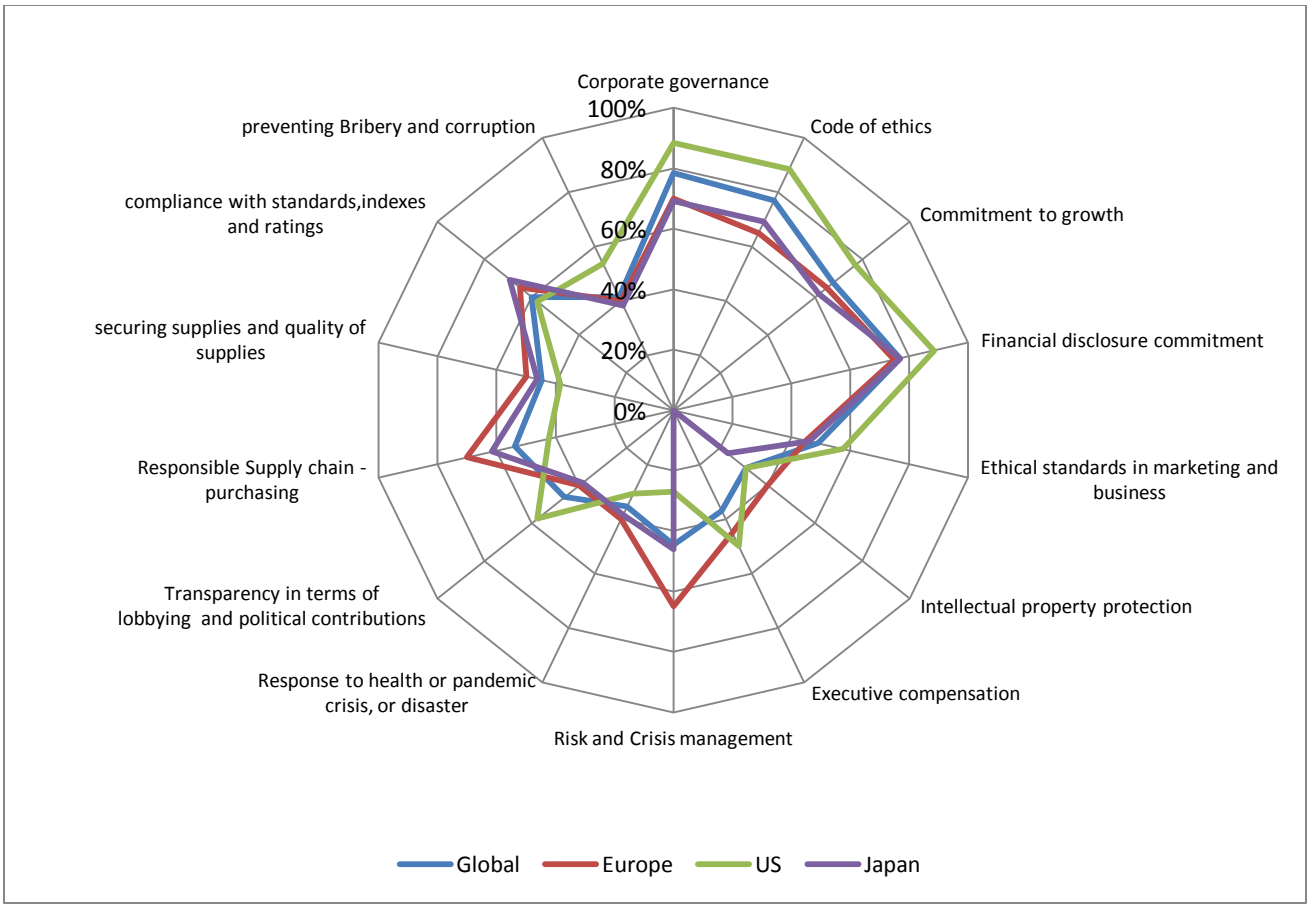


Figure 18: CSR Focus within the "Business Ethics" Category

Compliance is a criterion that all countries put a similar emphasis on. This probably reflect the nature of the industry in which compliance to regulations, standards of quality, and the concept of good manufacturing practices are omnipresent.

On the other hand, executive compensation is a criterion where major discrepancies are observed, most probably reflecting a cultural factor in terms of disclosure.

Supply Chain

Although this category was not listed in the original research, a last graph on the topic of "supply chain" was added to the study as the analysis of the data went on.

It seemed indeed that a pattern was emerging on the way supply chain, procurement, suppliers and contractors were addressed by the various countries. In particular, it seemed that European-

based countries were paying stronger attention to their contractors and suppliers than the rest of the world.

The way to verify the assumption was therefore to extract the data, plot it under one graph and confirm. Four sets of data were extracted from two categories: the social issue category and the business ethics category. The results are shown in Figure 19.

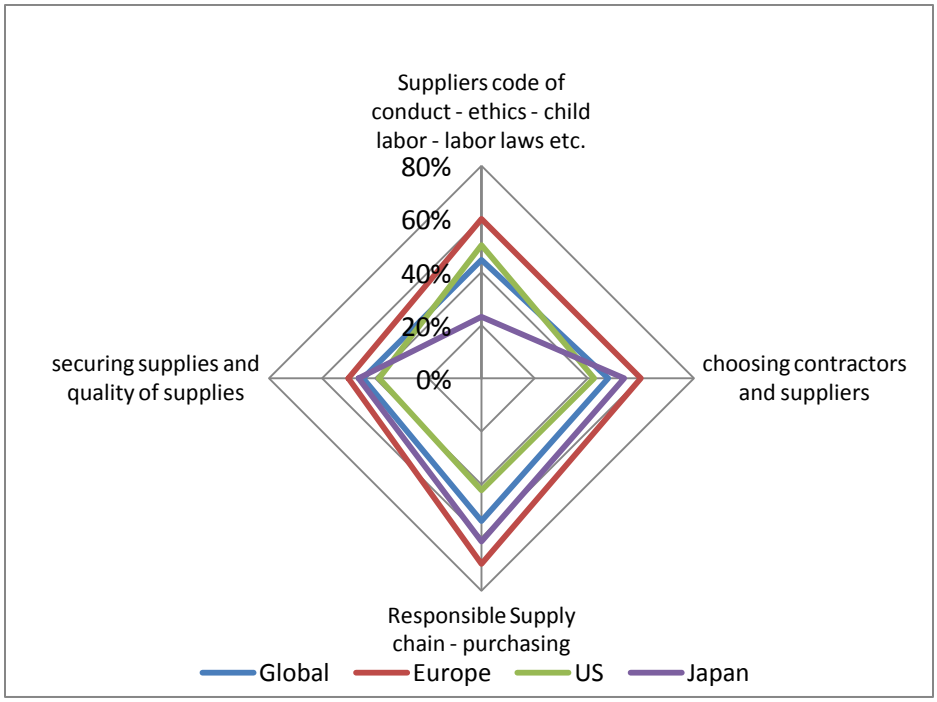


Figure 19: CSR Focus in terms of Supply Chain

Figure 19 confirms the impression that Europe is communicating more on its supply chain CSR activities than other regions. This might be the reflection of the fact that large groups in Europe outsource their production to Asian countries and that they therefore have to ensure that the contractors follow the appropriate codes of conducts. Pharmaceutical groups are also increasingly purchasing their raw materials from Asian countries.

The surprising results came from the fact that US firms do not report spending as much attention on a responsible supply chain. No explanation could be found as to the reasons for this observation.

Finally, Japan did not report much in terms of their suppliers' adherence to codes of ethics, respect of labor laws, child labor, etc. The reason here might be that these categories were amalgamated and assimilated under the wider heading of human rights, for which Japan displayed the strongest focus.

The data analysis undergone and presented in this chapter highlighted a number of trends and focuses, provided evidence of differences and similarities among types of companies, countries of origin, products manufactured, etc.

The following chapter will discuss if the analysis and the results provided are sufficient to confirm or refute the four hypotheses. The subsequent chapters will highlight and propose the potential need for further research.

8. DISCUSSION: CONVERGENCES AND CONTRADICTIONS – ARE THE HYPOTHESES CONFIRMED?

Following the materialization, through the analysis, of a number of clear trends, similarities, disparities, contradictions and convergences, the next step of this thesis is to discuss if the four hypotheses formulated in the first half of the thesis based on the literature review as well as on a description of the pharmaceutical industry and its challenges, can or cannot be confirmed.

Each hypothesis will be discussed in a separate section.

8.1 H1: In the pharmaceutical industry, most companies practice and report on Corporate Social Responsibility

The objective of this first part was to prove that the pharmaceutical industry has a specific, dedicated approach to corporate social responsibility. The assumption was that, due to the sheer nature of the industry and its role towards society at large, the pharmaceutical sector is not only plugged into responsibility and ethics, but its CSR activities and commitments are a mere extension of its daily activities. Therefore the hypothesis assumed that most companies would act and report on CSR.

Chapter 4 of this thesis had indeed provided information by listing, grouping and describing a number of activities that seemed to be very specific to the pharmaceutical sector, tending to show that the CSR activities of pharmaceutical firms are embedded in the companies' approach and strategy and that therefore most companies would act on CSR almost "as a matter of fact".

The methodology that was used to prove or refute this point was based on a content analysis of company websites, dedicated CSR websites, dedicated CSR reports and Annual Reports. The information and data looked for were evidence of CSR activities and reporting. The first point of access to the data was the corporate web site for each of the listed companies.

The results showed that 86% of the 65 companies displayed evidence of CSR activities which was found significantly higher than the null hypothesis at 66%. The way and place where they

report were however found to differ, from scarce information on their corporate website to dedicated, very detailed CSR report.

Although the assumption at this stage is that the CSR activities do very much reflect the intrinsic characteristics of the industry and that therefore the industry invests a lot in CSR, further investigation by means of comparative research would be interesting in order to compare the industry with other sectors and find if, within other industries, as seen in the pharmaceutical industry, the trend is for most of the largest companies to act and report on CSR or not.

Regardless of this observation, since 86% of companies report CSR activities on their websites, Hypothesis 1 can be fully confirmed. Most companies within the sector, regardless of their size, their country of origin or the products they manufacture report on CSR.

8.2 H2: The level of reported CSR activities is positively related to the company size

It has been proven in the literature that a link exists between the size of a company and its CSR activities. Due to the weight they might have on economy, their role as major employers and the relatively larger part they might have in the media's attention, larger companies are indeed more prone to being watched in terms of their actions and activities as responsible companies. They also have larger resources, staff and time to allocate to a "side" topic like CSR than SMEs might have.

The pharmaceutical sector is no different from other sectors, it is very diverse in terms of size of companies, and although the industry has changed tremendously and the major players are now giant firms, there is still a wide variety of available sizes among pharmaceutical companies.

The assumption for drawing Hypothesis 2 was therefore that there would be no reason to think the pharmaceutical industry would behave differently than other sectors, and hence that there should be a correlation between the size of the pharmaceutical company and its CSR activities.

In order to prove this hypothesis, the method that was chosen was based on a content analysis of company websites, dedicated CSR websites, dedicated CSR reports and Annual Reports. The

information and data gathered were cross-linked with company size, and evidence of correlations between the size of the companies and the number of CSR activities reported were looked for.

The results showed a clear link between the size of the company and the number of CSR activities reported with an overall observation that the larger the company, the larger the amount of CSR activities performed.

The link between the size of the company and the amount of CSR activities reported was proven to be a lot more evident amongst the larger companies than amongst the smaller ones with the overall trend across the industry found to be logarithmic.

Overall, the data confirmed Hypothesis 2 and proved that in the pharmaceutical industry, the level of reported CSR activities is positively related to the company size.

8.3 H3: The nature of the products manufactured influences the type of CSR activities

In the literature, it has been detailed that different industries adopt different approaches to CSR. There are also references to various models of CSR used by companies (explicit vs. implicit, inwards vs. outwards, etc). On the other hand, the pharmaceutical sector offers a wide spectrum of companies, very different in terms of what they produce (prescription drugs, generics, biotechnology therapies, etc.) leading to differences in terms of business focus and strategies: generics manufacturers are focused on providing cheaper alternatives to prescription drugs while biopharmaceutical companies are concentrating on targeted research to provide cures for yet uncured diseases.

These observations led to building Hypothesis 3 on the assumption that discrepancies were to be found on the number of CSR activities put in place as well as on the focus attributed to each CSR category, and this in direct link with the type of product manufactured.

The method was again based on a content analysis of company websites, dedicated CSR websites, dedicated CSR reports and Annual Reports. This time, the data gathered was grouped according to the type of product companies manufactured. The results showed that generics manufacturers, prescription manufacturers and biopharmaceuticals manufacturers approached

CSR in different manners. As expected, less emphasis was put on CSR by generics manufacturers. On the other hand, biopharmaceuticals manufacturers fully addressed and covered the potentiality of corporate social responsibilities.

The main issue here is that only a third of the companies were used to gather the data necessary to prove or refute this hypothesis. Many companies, active in more than one type of products, had to be excluded from the analysis. A second issue is that the big pharmas were excluded from the analysis and this fact might have introduced a bias in the research in the sense that, by excluding the big pharmas, the variety in the size of the companies looked at was considerably lessen. This might have added a factor of uncertainty and leads to question the acceptability of the sample.

Hypothesis 3 was therefore proven, only for companies focusing on one type of products only, and tends to show that in the pharmaceutical sector, the type of products manufactured has an influence on the company's approach towards CSR.

8.4 H4: The country of origin and the socio-political context influence the pharmaceutical company's CSR approach

The CSR literature clearly shows a link between the company location, geography, socio-political context and the way CSR is approached. Culture has been found to play a role on how an organization decides to communicate its CSR activities as well as how stakeholders view such communication (Hartman, Rubin, & Dhanda, 2007).

Based on the above, since the pharmaceutical industry is very much affected by regulatory requirements, government policies, social and political pressures, economic constraints, and since three main countries (Japan, the EU and US) with very distinct cultures, political and regulatory environments make up most of the global pharmaceutical market, Hypothesis 4 expected to find differences in the way a company approaches CSR and this, based on its country of origin.

The content analysis method was again used, focusing on the collected data from a reduced sample of 59 companies representing the EU countries, Japan and the USA. A number of analyses were performed, particularly looking into how each country reported on each criterion listed within the 6 categories of CSR activities. The results were plotted in radar charts which were found useful and easier to interpret, given the large amount of data to compare.

Overall, the first results showed clear differences in the communication tools used to report CSR activities but no clear or significant differences in terms of how countries approached the different CSR categories. The overall trend was similar, with a slightly stronger emphasis on some categories. The country of origin, therefore, did not seem to have a major impact on the companies' reported CSR activities, only an impact on the way the information was conveyed.

However, a closer look at the criteria within each category brought more information. Evidence was found that several criteria, such as "patient safety", the "need for development", "compliance with standard", "employee protection" and "environment" were addressed in very similar ways, regardless of the country of origin of the company.

This was nonetheless not the case for most criteria, and clear trends were seen in a number of instances where different countries placed very different focuses on categories or criteria within a category. "Social issues", "business ethics" and "patient focus" were the three categories for which, overall, most differences were observed.

On the whole, Japanese companies were found to have a different approach on CSR than US or EU companies, which tended to be more alike, although differences were also observed among companies from these two regions. This was slightly surprising as early review of the literature had indicated differences in CSR approach between the US and the EU (implicit vs. explicit CSR for instance), and this did not seem to be proven by the data collected. In terms of the reasons why Japanese companies had a slightly different approach, it would have been interesting to investigate the factor of size, and see if there was a combined influence of size and country of origin here.

Overall, despite these maybe surprising observations, the data clearly showed that differences exist in the way pharmaceutical companies from various countries, and this regardless of their

size or the products they manufacture, address their corporate social responsibility. Hypothesis 4 is therefore proven.

8.5 Summary of discussions

The research conducted in this thesis and the results obtained have helped to identify, highlight and characterize the Corporate Social Responsibility activities and reporting practices of pharmaceutical firms of various size and structural form on a global basis.

Results have shown that overall, the pharmaceutical industry's CSR tend to fit with the CSR processes, methods and theories described in the literature.

The results obtained from the collection of over 5300 data tend to prove that factors such as the size of the company, the type of products manufactured as well as the country of origin of the company have an impact on a company's CSR approach, understanding and implementation.

The research also seems to tend towards proving that some, if not most, of the observed CSR activities are very specific to the sector, again matching what is described in the literature and proving that the pharmaceutical approach to CSR is very much in line with its activities and its primary role towards the betterment of human health.

9. LIMITATIONS – FUTURE DIRECTIONS

Although the research conducted in this study brought a number of interesting results and confirmed the four hypotheses almost fully, it would be interesting to further the study in several aspects, which are discussed in the following paragraphs.

A more thorough statistical analysis, using more advanced statistical tools on the collected data, would most probably be useful in order to extract more information and identify more precise trends from the collected data. Furthermore, cross analysis between hypotheses could also bring about some interesting findings, such as for instance the impact of both size and country of origin of the company on its CSR activities.

At many stages during the collection of data, information was read and found very interesting and relevant, but it was not noted or clearly collected, as it did not fit within the format of the collection datasheet. This leads to the suggestion that it would have been interesting to summarize the CSR activities reported by each company, to put in into words in order to have a more characterized profile for each company and help the reader better understand the concerns of the profession. It would have also helped identifying more trends and identical practices.

Another limitation of this study was that it did not address the match between the reported CSR activities and the theories and models described in the literature and reported in chapter 3.1.1 of this thesis, namely the "Shareholders vs. Stakeholders vs. Societal" theory, the "Implicit vs. Explicit CSR" model, the "Inwards vs. Outwards CSR" model as well as the "Global vs. Local" theory. Although it was originally planned to code these criteria, the idea was abandoned very early on. As a matter of fact, it proved almost impossible within the defined methodology proposed to identify such "subjective" criteria. A different type of analysis would be needed to address these, and particularly a definition of each criterion and of a scientific, objective, independent method to identify and characterize the type of CSR approach of each company.

Primary research would also greatly benefit the study, particularly for Hypothesis 1 as well as Hypothesis 3. In several instances, no explanation could be found for a particular "behavior" either from a single company or a group of companies (the comparatively lesser emphasis put on supply chain by US based firms for instance). Carefully designed interviews and surveys could

bring about the answers to these unattended questions. It could also mitigate the fact that the lack of information could in some instance have merely reflected "poor communication" from the studied company, rather than a lack of CSR involvement.

Finally, one of the biggest limitations of this study is the lack of comparative data from other industries and especially when it comes to Hypothesis 1. Although Hypothesis 1 confirms a high degree of involvement in CSR from the sector, it does not fully confirm that the nature of the pharmaceutical industry drives that involvement. It does not assess it against other industries either. One approach would be to carry out similar research on various distinct industries and analyze the amount of reporting as well as the differences and similarities in CSR approach between these industries and the pharmaceutical sector.

Hopefully this research will be helpful in better understanding the pharmaceutical sector, its constraints, its actors and the way it functions, particularly in terms of its approach of CSR. However, the above reflections on the observed limitations of this thesis show that there is still plenty that could be researched on this vast topic, and many various different angles towards which further research could be oriented.

10. CONCLUSION AND RECOMMENDATIONS

The pharmaceutical industry is an industry that is expected to do everything right. It is expected to produce drugs and treatments for diseases and as such is under tight pressure not only to "perform" and provide cures, but also not to "stray" and do anything that could be perceived as "wrong" or unethical. It is expected to invest heavily in research, but yet is criticized when making the profits needed to fund research. It is a sector that is in constant paradox, where the duality between selling and curing is always present and constantly leads to criticism. As eloquently described by H. Tristam Engelhardt Jr (Engelhardt, 2008) "the pursuit of profit in the pharmaceutical industry is for many morally dubious because it is acquired from those who have had the bad fortune of being diseased or disabled". In a few words, the general public put their trust in medicines but expects a lot in return in terms of ethics and socially responsible behavior.

The assumption before starting this thesis was that the industry's *raison d'être* (to develop and provide products to improve human health) could in itself be described as its corporate social responsibility. The aim of this thesis was therefore to take a close look at the sector, address the issues facing the industry, understand the concept of Corporate Social Responsibility, identify the industry's involvement in CSR, and finally assess the overall importance that pharmaceutical firms place in being socially responsible.

After a review of available academic work on the concept of CSR and a snapshot description of the pharmaceutical industry, its challenges and its business environments, four hypotheses were drawn based on models and theories available in the literature. The four hypotheses were as follows:

- Hypothesis 1: In the pharmaceutical industry, most companies practice and report on Corporate Social Responsibility
- Hypothesis 2: The level of reported CSR activities is positively related to the company size.
- Hypothesis 3: The nature of the products manufactured influences the type of CSR activities.
- Hypothesis 4: The country of origin and the socio-political context influence the pharmaceutical company's CSR approach.

The methodology for assessing these hypotheses was based on secondary research, mainly on a content analysis of a variety of documents and communication vehicles publicly available on the web sites of the 65 top pharmaceutical global companies. A total of over 5300 data was collected and analyzed in order to confirm or refute each of the four hypotheses.

The conclusion was that Hypotheses 2, 3 and 4 were confirmed and therefore matched the models identified in the literature. Factors such as the size of the company, the products manufactured and the country of origin all have an influence on the company's CSR approach and on its reporting. As far as Hypothesis 1 is concerned, it was also confirmed, although further investigation and research, and in particular a comparison with other industries, would be needed to fully pledge that the pharmaceutical sector's high involvement in CSR activities mirrors the industry's intrinsic characteristics.

The efforts that the sector has put into corporate responsibility will hopefully carry on and will be further developed and extended. One can only hope that a constant reminder of the primary role of the industry and its duty to global health, thanks to the daily realization of CSR activities at every level within a firm, will continually help the industry find the right balance in addressing all of its stakeholders' needs and goals, and consolidate the structure of the industry so that all players, from research based companies to generic manufacturers, can work towards achieving a common goal: making their companies financially sustainable while continuously improving human health.

Appendix A: Categories and fields used in the datasheet to collect and code the data

- **NAME OF COMPANY**
- **CORPORATE WEB SITE**
- **SIZE**
  - Number of employees
  - Latest available Revenues in MILLIONS local currency
  - Rounded 2008 Revenues - converted in MILLION US$
- **COUNTRY - REGION**
  - Country of origin
  - Region of origin
  - Regions operating in
    - Region 1 EU
    - Region 2 NA
    - Region 3 South Am
    - Region 4 Africa
    - Region 5 Middle East incl Israel
    - Region 6 South Asia
    - Region 7 China
    - Region 8 India
    - Region 9 Australasia including Japan

- **REPORTING**
  - CSR on web
  - CSR dedicated website
  - CSR report
  - CSR only in Annual Report

- **TYPE OF PRODUCTS**
  - Prescription medicine
  - Consumer healthcare OTC
  - Generic drugs
  - BIOpharmaceuticals incl vaccines
  - OTHER: nutritional, medical devices etc.

- **THERAPEUTIC AREAS**
  - Allergy - respiratory - inflammation
  - Arthritic - bones - orthopedics
  - Blood, cardiovascular, metabolic and endocrine diseases
  - Dermatology
  - Gastrointestinal and hepathology
  - Genetic diseases
  - Genito-urinary - fertility - hormone replacement
  - Immunology
  - Infectious diseases
  - Neuroscience - central nervous system - pain
  - Oncology
  - Ophthalmology
  - Transplantation - surgery - anesthesia

- **CSR ACTIVITIES**
  - Drug development
    - Commitment to R&D and innovation
    - Ethical considerations in clinical trials
    - Protection of patients in clinical research - confidentiality
    - Disclosure of clinical research - transparency of data
    - Orphan drugs
    - Genetics - genomics - bioethics - Human tissue research
    - Policies on Animal testing
  - Patients
    - Patients protection against counterfeit
    - Patients safety - Pharmacovigilance
    - Access to drugs in developing countries
    - Adapted price policies
    - Relations with patients groups and NGOs
    - Education and awareness
    - Participation in global health programs
  - Environment and safety
    - Climate change - Green policies - recycling
    - Water consumption - waste - emission
    - Atmospheric and land emission reductions
    - Packaging reduction - optimization
    - Controlling contamination
  - Social issues
    - Diversity: culture, age, gender, faith, disability…
    - Employee protection, welfare, work/life balance
    - Seniors employment or retirement programs
    - Health and safety in workplace
    - Education - training
    - HIV/Aids non-discrimination workplace policy
    - Suppliers code of conduct - ethics - child labor - labor laws etc.
    - Choosing contractors and suppliers
  - Philanthropy
    - Access to healthcare
    - Humanitarian action - Foundations
    - Support for research - academic support - grants
    - Community programs
    - Human rights
  - Business Ethics
    - Corporate governance
    - Code of ethics
    - Commitment to growth
    - Financial disclosure commitment
    - Ethical standards in marketing and business
    - Intellectual property protection
    - Executive compensation
    - Risk and Crisis management

- Response to health or pandemic crisis, or disaster
- Transparency in terms of lobbying and political contributions
- Responsible Supply chain - purchasing
- Securing supplies and quality of supplies
- Compliance with standards, indexes and ratings
- Preventing Bribery and corruption

Appendix B: Lists of top 50 pharmaceutical companies

List from Pharmalive (Pharmalive, 2008)

http://www.pharmalive.c... | Pharma Industry Insights ... | Top 50 Pharma Market R...

http://www.pharmalive.com/special_reports/sample.cfm?reportID=266

Gmail | RMail System | Blackboard | Google | Google News | Paris Apartments : A... | ameli.fr - | LEEM rapport 2007 | Les Entreprises du M... | Business ethics | Other bookmarks

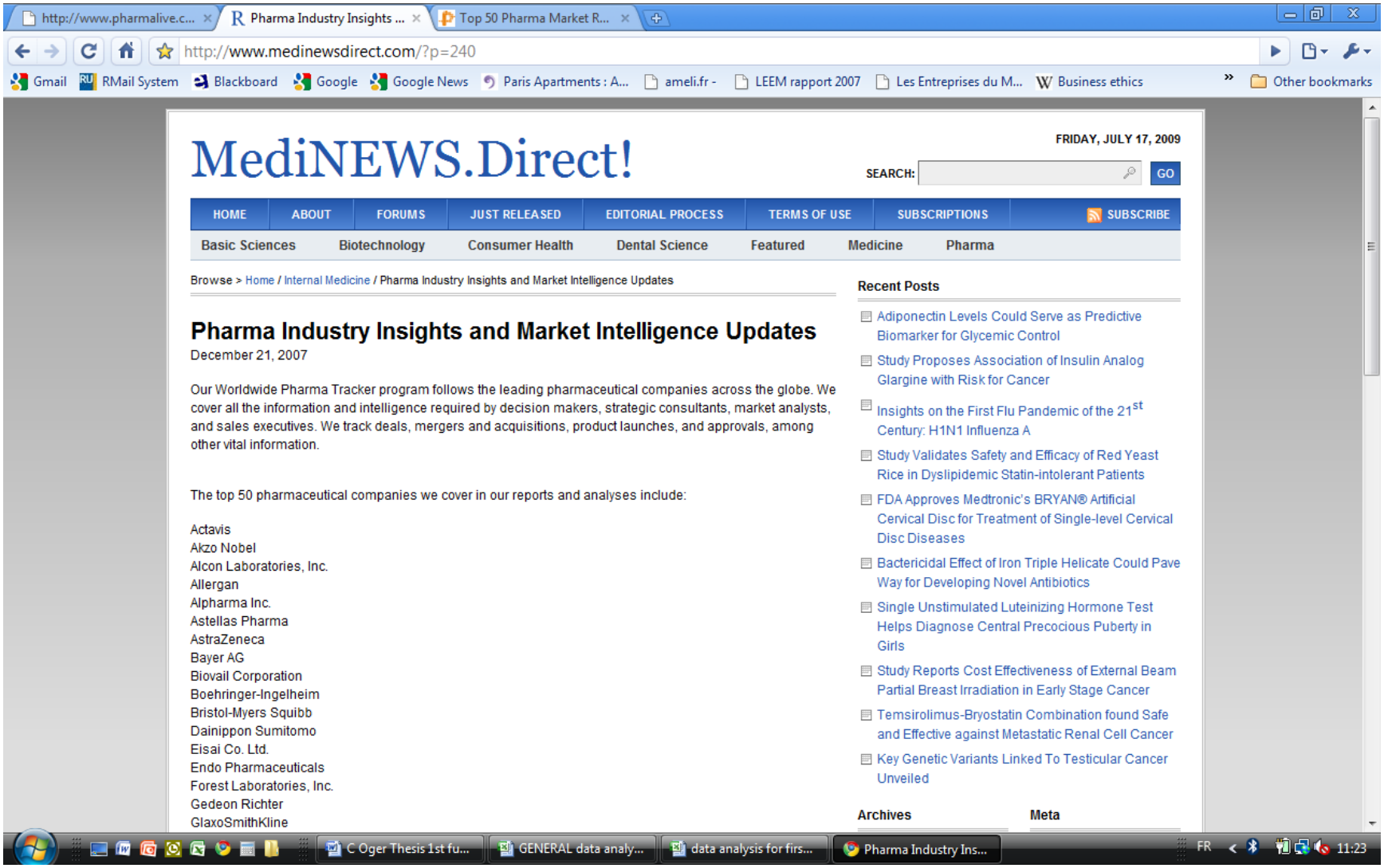
2 / 3 | 75% | Rechercher

INDEX TO PIPELINES

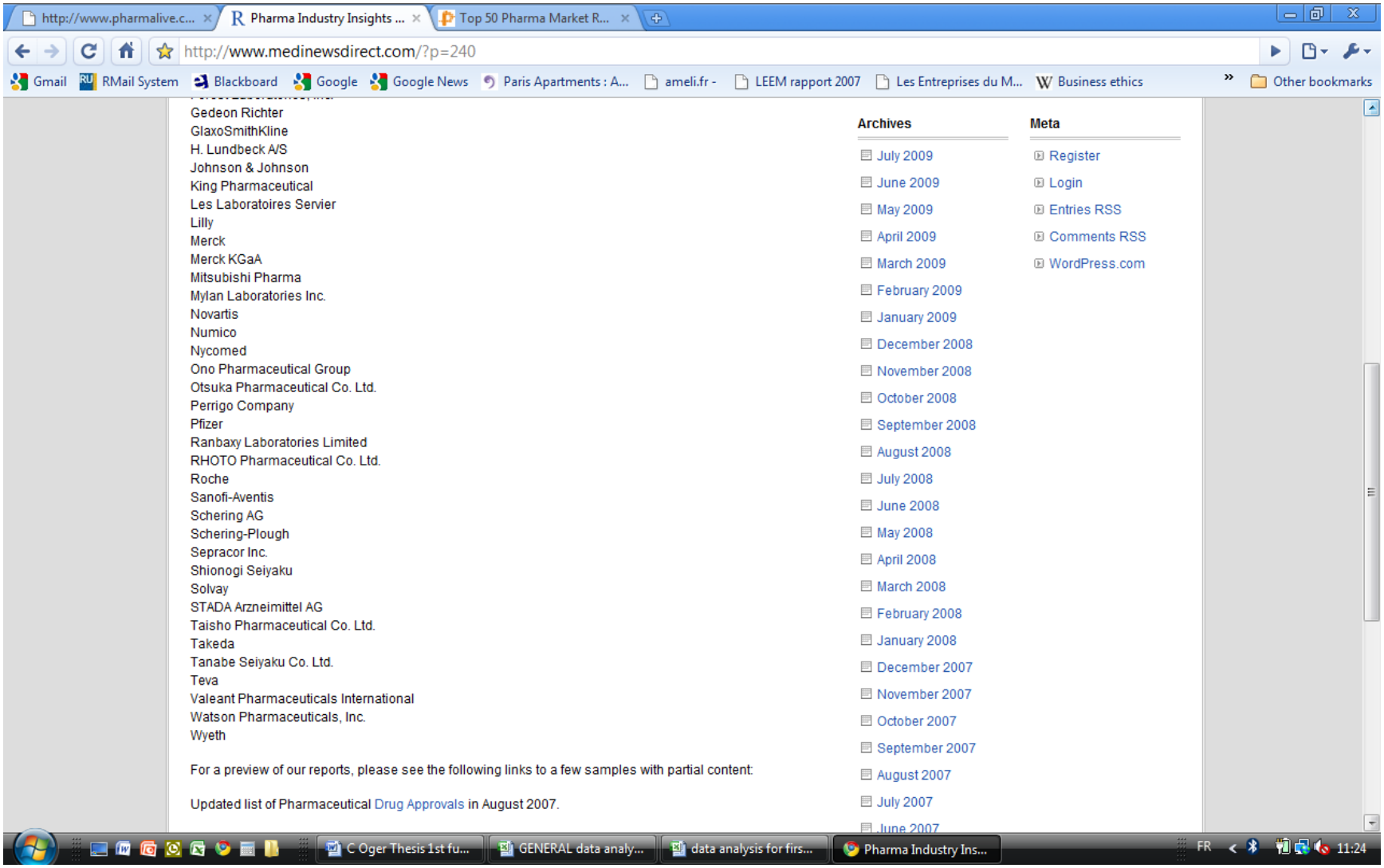
Company	Page	Company	Page
Abbott Laboratories	17	King Pharmaceuticals Inc.	127
Alcon Inc.	21	Kyowa Hakko Kogyo Co.	128
Allergan Inc.	22	Merck & Co.	129
Amgen Inc.	24	Merck KGaA	135
Astellas Pharma Inc.	29	Mitsubishi Tanabe Pharma Corp.	140
AstraZeneca Plc.	34	Mylan Inc.	143
Barr Pharmaceuticals Inc.	48	Novartis	144
Baxter International Inc.	49	Novo Nordisk AS	153
Bayer AG	50	Nycomed Group	155
Biogen Idec Inc.	57	Otsuka Pharmaceutical Group	156
Boehringer Ingelheim GmbH	61	Pfizer Inc.	158
Bristol-Myers Squibb Co.	62	Procter & Gamble Co.	167
Chugai Pharmaceutical Co.	68	Roche	168
CSL Ltd.	71	Sanofi-Aventis Group	178
Daiichi Sankyo Co.	72	Schering-Plough Corp.	189
Dainippon Sumitomo Pharma Co.	75	Shionogi & Co.	193
Eisai Co.	77	Shire Ltd.	194
Eli Lilly and Co.	83	Solvay SA	196
Forest Laboratories Inc.	88	Stada Arzneimittel AG	198
Genentech Inc.	90	Taisho Pharmaceutical Co.	199
Genzyme Corp.	98	Takeda Pharmaceutical Co.	201
Gilead Sciences Inc.	102	Teva Pharmaceutical Industries Ltd.	209
GlaxoSmithKline Plc.	103	UCB SA	211
Hospira Inc.	118	Watson Pharmaceuticals Inc.	214
Johnson & Johnson	119	Wyeth	215

C Oger Thesis 1st fu... | GENERAL data analy... | data analysis for firs... | http://www.pharma... | FR | 11:21

List from MediNews.Direct ! (MediNEWS.Direct!, 2007) (1/2)



List from MediNews.Direct ! (MediNEWS.Direct!, 2007) (2/2)



List from Piribo (Piribo, 2008)

Appendix C: Compiled list of the 70 largest global companies – by alphabetical order

Name of Company	Name of Company
Abbott Laboratories	Menarini
Actavis	Merck & Co.
Akzo Nobel*	Merck KGaA
Alcon Inc	Mitsubishi Tanabe Pharma Corp.
Allergan Inc	Mundipharma
Alpharma Inc.*	Mylan Laboratories Inc.
Amgen Inc.	Novartis
Apotex	Novo Nordisk AS
Astellas Pharma Inc.	Numico*
AstraZeneca	Nycomed Group
Barr Pharmaceuticals Inc.*	Ono Pharmaceutical Group
Baxter International Inc.	Otsuka Pharmaceutical Co. Ltd.
Bayer AG	Perrigo Company
Biogen Idec	Pfizer
Biovail Corporation	Procter & Gamble Co
Boehringer-Ingelheim	Ranbaxy Laboratories Limited
Bristol-Myers Squibb	Ratiopharm
Chugai Pharmaceutical Co	Rhoto Pharmaceutical Co. Ltd.
CSL	Roche
Daiichi Sankyo Co.	Sanofi-Aventis Group.
Dainippon Sumitomo	Schering-Plough
Eisai Co. Ltd.	Sepracor Inc.
Eli Lilly and Co.	Servier
Endo Pharmaceuticals	Shionogi Seiyaku
Forest Laboratories, Inc.	Shire Ltd.
Gedeon Richter	Solvay
Genentech Inc.	Stada Arzneimittel AG
Genzyme Corp.	Taisho Pharmaceutical Co. Ltd.
Gilead Sciences	Takeda Pharmaceutical Co.
GlaxoSmithKline Plc.	Tanabe Seiyaku Co. Ltd.*
Hospira Inc.	Teva
Johnson & Johnson	UCB SA
King Pharmaceutical	Valeant Pharmaceuticals International
Kyowa Hakko Kogyo Co.	Watson Pharmaceuticals, Inc.
Lundbeck	Wyeth

* excluded from the research due to mergers and acquisitions by other firms

Appendix D: Foreign Exchange Rates

Federal Reserve Statistical Release

G.5A

Foreign Exchange Rates (Annual)

THE TABLE BELOW SHOWS THE AVERAGE RATES OF EXCHANGE IN 2008 TOGETHER WITH COMPARABLE FIGURES FOR OTHER YEARS. AVERAGES ARE BASED ON DAILY NOON BUYING RATES FOR CABLE TRANSFERS IN NEW YORK CITY CERTIFIED FOR CUSTOMS PURPOSES BY THE FEDERAL RESERVE BANK OF NEW YORK.

(Currency units per U.S. dollar except as noted)

COUNTRY	MONETARY UNIT	2008	2007	2006	2005
*AUSTRALIA	DOLLAR	0.8537	0.8391	0.7535	0.7627
BRAZIL	REAL	1.8327	1.9461	2.1738	2.4352
CANADA	DOLLAR	1.0660	1.0734	1.1340	1.2115
CHINA,P.R.	YUAN	6.9477	7.6058	7.9723	8.1936
DENMARK	KRONE	5.0885	5.4413	5.9422	5.9953
*EMU MEMBERS	EURO	1.4726	1.3711	1.2563	1.2449
HONG KONG	DOLLAR	7.7862	7.8016	7.7681	7.7775
INDIA	RUPEE	43.39	41.18	45.19	44.00
JAPAN	YEN	103.39	117.76	116.31	110.11
MALAYSIA	RINGGIT	3.3292	3.4354	3.6661	3.7869
MEXICO	PESO	11.143	10.928	10.906	10.894
*NEW ZEALAND	DOLLAR	0.7151	0.7365	0.6492	0.7049
NORWAY	KRONE	5.6365	5.8557	6.4095	6.4412
SINGAPORE	DOLLAR	1.4140	1.5065	1.5882	1.6639
SOUTH AFRICA	RAND	8.2480	7.0477	6.7668	6.3606
SOUTH KOREA	WON	1098.71	928.97	954.32	1023.75
SRI LANKA	RUPEE	108.298	110.620	103.940	100.383
SWEDEN	KRONA	6.5846	6.7550	7.3718	7.4710
SWITZERLAND	FRANC	1.0816	1.1999	1.2532	1.2459
TAIWAN	DOLLAR	31.521	32.855	32.506	32.131
THAILAND	BAHT	32.962	32.203	37.876	40.252
*UNITED KINGDOM	POUND	1.8545	2.0020	1.8434	1.8204
VENEZUELA	BOLIVAR	2.14	2.14	2.14	2.11
MEMO:					
UNITED STATES	DOLLAR				
1)BROAD	JAN97=100	99.83	103.40	108.52	110.71
2)MAJOR CURRENCY	MAR73=100	74.34	77.84	82.46	83.71
3)OITP	JAN97=100	127.23	130.28	135.38	138.89

* U.S. dollars per currency unit.
1) A weighted average of the foreign exchange value of the U.S. dollar against the currencies of a broad group of major U.S. trading partners.
2) A weighted average of the foreign exchange value of the U.S. dollar against a subset of the broad index currencies that circulate widely outside the country of issue.
3) A weighted average of the foreign exchange value of the U.S. dollar against a subset of the broad index currencies that do not circulate widely outside the country of issue.

Appendix E: Binomial proportion statistical test for Hypothesis 1

Description of data	Value	Percentage
Number of companies reporting CSR	56	86%
Total number of companies	65	100%
Null hypothesis	42,9	66%
Probability that 86% higher than 66%		**99,99%**

Appendix F: Single Factor Anova calculation on the number of CSR activities per number of employees:

NUMBER OF CSR ACTIVITIES REPORTED

Group 1: - <5000	Group 2: 5000 < - < 20000		Group 3: 20000 < - <50000
8	11	26	38
12	14	35	27
5	27	29	38
4	1	24	4
13	25	30	40
6	5	10	30
5	19	3	37
28	14	29	37
37	25	1	39
3	10	20	
8	1	32	
22	34	30	
0	20	31	
15	33	32	
	0	39	
		33	

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
- <5000	14	166	11,85714	111,2088
5000 < - < 20000	31	643	20,74194	145,8645
20000 < - <50000	9	290	32,22222	130,9444

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2283,109	2	1141,555	8,475404	0,066%	3,178799
Within Groups	6869,205	51	134,6903			
Total	9152,315	53				

Appendix G: Single Factor Anova calculation on the number of CSR activities per type of product:

NUMBER OF CSR ACTIVITIES REPORTED

Prescription	Generics	Biopharma
4	11	14
3	10	30
1	27	37
28	1	34
19	14	32
20	4	38
25	10	

SUMMARY

Groups	Count	Sum	Average	Variance
Prescription	7	100	14,28571	127,9048
Generics	7	77	11	69,33333
Biopharma	6	185	30,83333	76,96667

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1427,538	2	713,769	7,737275	0,4%	3,591531
Within Groups	1568,262	17	92,2507			
Total	2995,8	19				

Appendix H: Single Factor Anova calculation on the number of CSR activities per country: Japan / EU / US / All Countries:

NUMBER OF CSR ACTIVITIES REPORTED			
JAPAN	EU	US	ALL COUNTRIES
4	14	8	8	3
6	19	12	12	29
5	14	13	5	1
25	1	5	11	20
28	37	1	4	32
34	0	15	13	30
26	35	10	14	38
29	3	33	6	27
32	29	3	5	31
30	1	8	27	38
27	38	24	1	4
31	38	30	25	40
39	30	10	15	32
	35	22	5	39
	39	20	19	33
	42	40	14	30
	41	32	25	33
	44	33	10	37
	44	33	28	37
	0	37	1	35
		37	37	39
		39	34	36
		36	20	42
		42	33	39
		44	3	42
		43	0	41
			26	44
			35	44
			29	44
			8	43
			24	0
			30	22
			10	

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Japan	13	316	24,30769	134,3974
EU	20	504	25,2	281,5368
US	26	630	24,23077	199,6246
all countries	65	1542	23,72308	202,1096

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	34,33548	3	11,44516	0,055185	98%	2,680168
Within Groups	24887,6	120	207,3967			
Total	24921,94	123				

References

Abrams, T. (2005). The Regulation of Prescription Drug Promotion. In M. A. Santoro, & T. M. Gorrie, *Ethics and the Pharmaceutical Industry* (pp. 153-168). New York: Cambridge University Press.

Adams, C. A., Hill, W.-Y., & Roberts, C. B. (1998). Corporate Social Reporting Practices in Western Europe: Legitimating Corporate Behaviour? . *British Accounting Review* , 30, 1–21.

Adams, C. (2002). Internal Organisational factors influencing corporate social and ethical reporting. *Accounting, Auditing and Accountability Journal* , 223-250.

Anderson, S. (2005). *Making Medicines. A Brief History of Pharmacey and Pharmaceuticals.* London, UK: Pharmaceutical Press.

Andrew Crane, A. M. (2008). *The Oxford Hanbook of Corporate Social Responsibility.* New York: Oxford United Press.

Appelbe, G. E. (2005). From Arsenic to Thalidomide: a Brief History of Medicine Safety. In S. Anderson, *Making Medicines: a Brief History of Pharmacy and Pharmaceuticals* (pp. 243-260). London, UK: Pharmaceutical Press.

Aruvian Research. (2009, March). *Analyzing the Global Pharmaceutical Industry*. Retrieved July 8, 2009, from Research and Markets: http://www.researchandmarkets.com/reportinfo.asp?report_id=481962

Astra Zeneca. (2009, February). *Strategy and Vision*. Retrieved July 14, 2009, from Astra Zeneca Corporate Web Site: http://www.astrazeneca.com/responsibility/strategy-vision/

Balabanis, G., Phillips, H. C., & Lyall, J. (1998). Corporate Social responsibility and Economic Performance in the Top British Companies: are they related? *European Business Review* , 25–44.

Board of Governors of the Federal Reserve System. (2009, January 2). *Foreign Exchnage Rates (annual)*. Retrieved June 31, 2009, from US Federal Reserve: http://www.federalreserve.gov/releases/G5A/Current/

Carroll, A. B. (2008). A history of Corporate Social Responsibility. Concept and Practices. In A. M. Andrew Crane, *The Oxford Handbook of Corporate Social Responsibility* (pp. 19-46). New York: Oxford University Press.

Central Intelligence Agency. (2009, May 19). *CIA World FactBook*. Retrieved June 4, 2009, from Central Intelligence Agency (CIA) Website: https://www.cia.gov/library/publications/the-world-factbook/print/xx.html

Court, W. E. (2005). Pharmacy from the Ancient World to 1100AD. In S. Anderson, *Making Medicines. A Brief History of Pharmacy and Pharmaceuticals* (pp. 21-35). London, UK: Pharmaceutical Press.

Dacin, P. A., & Brown, T. J. (1997). The company and the product: Corporate associations and consumer product responses. *Journal of Marketing* , 68-84.

Dahlsrud, A. (2008). How Corporate Social Responsibility is Defined: an Analysis of 37 Definitions. *Corporate Social Responsibility and Environmental Management* , 1-13.

Dickson, M., & Gagnon, J.-P. (2004). The cost of new drug discovery and development. *Discovery Medicine* , 172-179.

Doh, J. P., & Guay, T. R. (2006). Corporate Social Responsibility, Public Policy, and NGO Activism in Europe and the United States: An Institutional-Stakeholder Perspective. *Journal of Management Studies* , 47-73.

EFPIA. (2009). *Building healthier societies for better global public health*. Retrieved July 8, 2009, from European Federation of Pharmaceutical Industries and Associations: http://www.efpia.org/Content/Default.asp?PageID=395

EFPIA. (2009). *Patient Organisations*. Retrieved July 8, 2009, from European Federation of Pharmaceutical Industries and Associations: http://www.efpia.org/Content/Default.asp?PageID=367

Enderle, G. (2004). Global competition and corporate responsibilities of small and medium-sized enterprises. *Business Ethics: A European Review* , 51-63.

Engelhardt, H. T. (2008). The Unavoidable Goodness of Profit. In H. T. Engelhardt, & J. R. Garrett, *Innovation and the Pharmaceutical Industry : Critical Reflections on the Virtues of Profit* (pp. 17-33). Scrivener Publishing.

Fassin, Y. (2008). SMEs and the fallacy of formalising CSR. *Business Ethics: A European Review* , 364-378.

Frankental, P. (2001). Corporate Social responsibility: a PR Invention? *Corporate Communications: An International Journal* , Volume 6 . Number 1 . pp 18-23.

Franklin, D. (2008, January 17). Just good business. *The Economist* .

Frederick, W. C. (2008). Corporate Social Responsbility - Deep Roots, Flourishing Growth, Promising Future. In A. Crane, A. McWilliams, D. Matten, J. Moon, & D. S. Siegel, *The Oxford Handbook of Corporate Social Responsibility* (pp. 522-531). New York: Oxford University Press.

Friedman, M. (1970, September 13). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine* .

Genzyme Corporation. (2009). *An Innovative Building for an Innovative Company*. Retrieved July 14, 2009, from Genzyme Corporate Website: http://www.genzyme.com/corp/media/presskits_genzctr_background.asp

Hartman, L. P., Rubin, R. S., & Dhanda, K. K. (2007). The Communication of Corporate Social Responsibility: United States and European Union Multinational Corporations. *Journal of Business Ethics* , 74:373–389.

Hubbard, G. (2009). Measuring Organizational Performance: beyond the Triple Bottom Line. *Business Strategy and the Environment* , 177-191.

Husted, B. W., & Allen, D. B. (2006). Corporate social responsibility in the multinational enterprise: strategic and institutional approaches. *Journal of International Business Studies* , 838–849.

Idowu, S. O., & Papasolomou, I. (2007). Are the corporate social responsibility matters based on good intentions or false pretences? An empirical study of the motivations behind the issuing of CSR reports by UK companies. *Corporate Governance*, 136-147.

Idowu, S. O., & Towler, B. A. (2004). A comparative study of the content of corporate social responsibility reports of UK companies. *Management of Environmental Quality: an International Journal* , 420-437.

IFPMA. (2009). *Countefeit Medicines*. Retrieved June 1, 2009, from International Federation of Pharmaceutical Manufacturers & Associations: http://www.ifpma.org/Issues/index.php?id=414

Industry Canada. (2006). Corporate Social Responsibility: an Implementation Guide for Canadian Business. Ottawa, Ontario, Canada: Public Works and Government Services Canada.

Kakabadse, A. P. (2007). Being Responsible: Boards are Reexamining the Bottom Line. *Leadership In Action* , 3-6.

Kolk, A. (2008). Sustainability, Accountability and Corporate Governance: Exploring Multinationals' Reporting Practices. *Business Strategy and the Environment* , 18, 1–15 .

Les Entreprises du Médicament. (2008, February 18). *Le médicament : un produit pas comme les autres*. Retrieved June 11, 2009, from LEEM - Les entreprises du Médicaments: http://www.leem.org/medicament/innovation-comment-les-medicaments-sont-ils-decouverts-386.htm

Les Entreprises du Médicament. (2007). *Responsabilité Sociétale des Entreprises du Médicament - Rapport 2007.* Paris: LEEM.

Maignan, I., & Ferrell, O. (2003). Nature of corporate responsibilities: Perspectives from American, French, and German consumers. *Journal of Business Research* , 55– 67.

Marrewijk, M. v. (2003). Concept and Definition of CSR and Corporate Sustainability: between Agency and Communion. *Journal of Business Ethics* , 95–105.

Matten, D., & Moon, J. (2008). "Implicit and Explicit CSR": a Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review* , 404–424.

McWilliams, A., & Siegel, D. (2000). Corporate Social Responsibility and Financial Performance: Correlation or Misspecifications? *Strategic Management Journal* , 603–609 .

MediNEWS.Direct! (2007, December 21). *Pharma Industry Insights and Market Intelligence Updates*. Retrieved June 12, 2009, from MediNEWS.Direct!: http://www.medinewsdirect.com/?p=240

Meehan, J., Meehan, K., & Richards, A. (2006). Corporate Social Responsibility: the 3C-SR Model. *International Journal of Social Economics* , 386-398.

Melé, D. (2008). Corporate Social Responsibility Theories. In A. Crane, D. M. Abagail McWilliams, J. Moon, & D. S. Siegel, *The Oxford Handbook of Corporate Social Responsibility* (pp. 47-82). New York: Oxford University Press.

Merck. (2009, February 25). *Corporate Responsibility*. Retrieved June 12, 2009, from Merck Corporare Web Site: http://www.merck.com/corporate-responsibility/

Metcalfe, D. (2008). The Protest Game: Animal Rights Protest and the Life Science Industry. *Negociation Journal* , 125-143.

Muller, A. (2006). Global Versus Local CSR Strategies. *European Management Journal* , 189–198.

Murphy, M. D., & Goldkind, S. F. (2005). The Regulatory and Ethical Challenges of Pediatric Research. In M. A. Santoro, & T. M. Gorrie, *Ethics and the Pharmaceutical Industry* (pp. 48-67). New York: Cambridge University Press.

National Coalition on Healthcare. (2009). *Health Insurance Coverage*. Retrieved July 16, 2009, from NCHC: http://www.nchc.org/facts/coverage.shtml

Nellin, E., & Webb, E. (2009). Corporate social responsibility and financial performance: the ‘‘virtuous circle’’ revisited. *Review of Quantitative Finance & Accounting* , 197–209.

Oetzel, J. M., Bettis, R. A., & Zenner, M. (2001). Country Risk Measures: How Risky Are They? *Journal of World Business* , 128-145.

Palazzo, G., & Richter, U. (2005). CSR Business as Usual? The Case of the Tobacco Industry. *Journal of Business Ethics* , 387–401.

Palmisano, S. J. (New York). The Globally Integrated Enterprise. *Foreign Affairs* , 2006.

Perrini, F. (2005). Building a European Portrait of Corporate Social Responsibility Reporting. *European Management Journal* , Vol. 23, No. 6, pp. 611–627.

Pfizer. (2009). *Our Responsibility in a Changing World*. Retrieved July 1, 2009, from Pfizer Corporate Web Site: http://www.pfizer.com/responsibility/index.jsp

Pfizer. (2009). *Protecting our Water*. Retrieved July 12, 2009, from Pfizer Corporate Website: http://www.pfizer.com/responsibility/protecting_environment/conserving_water.jsp

Pharmalive. (2008, September). *Special Reports.* Retrieved June 12, 2009, from Pharmalive - The Pulse of the Pharmaceutical Industry: http://www.pharmalive.com/special_reports/sample.cfm?reportID=266

Piribo. (2008, July). *Top 10 Generic Pharmaceutical Companies*. Retrieved May 2009, from Piribo. Online Business Intelligence for the Biopharma Industry: http://www.piribo.com/publications/generic_drugs/top_10_generic_pharmaceutical_companies.html

Piribo. (2008). *Top 50 Pharma*. Retrieved June 12, 2009, from Piribo, on-line Business Intelligence for the BioPharma Industry: http://www.piribo.com/publications/pharmaceutical_companies/top_50_pharma/

Pivato, S., NicolaMisani, & AntonioTencati. (2008). The impact of corporate social responsibility on consumer trust: the case of organic food. *Business Ethics: A European Review* , 3-12.

Porter, M. E., & Kramer, M. R. (2006, December). The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review* , pp. 78-92.

Roth, G. Y. (2009). *2008 Top 10 Biopharmaceutical Companies Report*. Retrieved May 2009, from Contract Pharma: http://www.contractpharma.com/articles/2008/07/2008-top-10-biopharmaceutical-companies-report

Roth, G. Y. (2009). *2008 Top 20 Pharmaceutical Companies Report*. Retrieved May 2009, from Contract Pharma: http://www.contractpharma.com/articles/2008/07/2008-top-20-pharmaceutical-companies-report

Rundle-Thiele, S., Ball, K., & Gillespie, M. (2008). Raising the bar: from corporate social responsibility to corporate social performance. *Journal of Consumer Marketing* , 245–253.

Runhaar, H., & Lafferty, H. (2009). Governing Corporate Social Responsibility: an Assessment of the Contribution of the UN Global Compact to CSR Strategies in the Telecommunications Industry. *Journal of Business Ethics* , 84:479–495.

Sanofi-Aventis. (2007). *Sustainability Report.* Paris: Sanofi-Aventis Sustainibility Department.

Secchi, D. (2007). Utilitarian, managerial and relational theories of corporate social responsibility. *International Journal of Management Reviews* , 347–373.

Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research* , 225-243.

Shen, W. (2004). A Comparative Study of Corporate Sponsorships in Asia and Europe. *Asia Europe Journal* , 2: 283–295.

Sherman, W. R., Steingard, D. S., & Fitzgibbons, D. E. (2002). Sustainable stakeholder accounting beyong complementarity and towards integration in environmental reporting. In M. S. Sanjay Sharma, *Research in corporate sustainability: the evolving theory and practice of organizations in the natural environment* (pp. 257-294). Cheltenham: Edward Elgar Publishing.

Shevell, M. I. (2002). Ethics of Clinical Research in Children. *Seminars in Pediatric Neurology* , 46-52.

Strategic Direction. (2007). Shareholder value or social responsiblity? What should motivate today's CEO? *Strategic Direction* , 15-18.

Taylor, R. (2005). Testing Drugs on Animals: a Test Case for Socially Responsible Investment. *Business Ethics: A European Review* , 164-175.

Thomas, M. (2001). Asian Corporates: Willing Participants in the Reporting Revolution? *Corporate Environmental Strategy, (2001)* , Vol. 8, No. 3, pp 248-259.

Tom McManus, F. G. (2008). The business strategy/corporate social responsibility "mash-up". *Journal of Management Development* , 1066-1085.

Vorm, A. v., Rikkert, M. O., Vernooij-Dassen, M., & Dekkers, W. (2008). Genetic research into Alzheimer's Disease: a European focus group study on ethical issues. *International Journal of Geriatric Psychiatry* , 11-15.

Weber, L. J. (2006). *Profits before People? Ethical Standards and the Marketing of Prescription Drugs.* Bloomington, IN: Indiana University Press.

Williams, C. A., & Aguilera, R. V. (2008). Corporate Social Responsibility in a Comparative Perspective. In A. M. Andrew Crane, *The Oxford Handbook of Corporate Social Responsibility* (pp. 452-472). Oxford University Press.

Wood, N., & Anderson, S. Representation, Regulation and Recognition: Pharmacy in Britain 1986 to 2004. In S. Anderson, *Making Medicines. A Brief History of Pharmacy and Pharmaceuticals.*