Title: 'Does branding, customer behavior and regulation influence the prescribing habits of Irish Oncologists?'

Dublin Business School

excellence through learning

Author: Kieran Kenny (1689551)

Supervisor: David Hurley

Qualification: **MBA (Marketing)**

Institution: **Dublin Business School**

Date: **16/8/2013** **Word Count: 21,787**

Table of Contents……

i. ACKNOWLEDGEMENTS

I would like to take this opportunity to express my gratitude to all involved that enabled me the opportunity to complete this thesis. I am deeply indebted to my supervisor David Hurley, whose encouragement and stimulating questions, guidance and encouragement helped me, complete my research dissertation. I am also thankful to my classmates who supported me through the learning modules offering advice and guidance especially the group project work.

Thank you to all the lectures involved in the module learning, I truly enjoyed the learning experience and respect shown by lecturers and students alike.

To my work colleagues who participated in the research and management who allowed me gather sensitive data relating to the pharmaceutical Industry I will be forever great full. I need to acknowledge the time and effort graciously given by the medical profession, who answered trying questions in an effort to help me understand my research objectives.

Especially, I would like to give a special thank you to my fiancée Cristina who showed great compassion and patience throughout the two year masters' program allowing me to make sacrifices to achieve my ambition of gaining a masters' degree.

I would like to take this opportunity to acknowledge a classmate who went out of his way to help me achieve my results to date on the master's program, Andrew you were a fantastic team mate and friend, I am forever grateful, Thank you.

ii. ABSTART

Abstract

Purpose- The aim of this paper was to get a better understanding of how branding, customer behavior and regulation influence the prescribing habits of Irish Oncologists.

Design/Methodology/Approach- Research data was collected from four semi-structured interviews around different Irish hospitals. The interviewees were all medical oncologists and were held for one hour intervals. The data that was collected was used to get an understanding on the oncologists perceptions of these influencers.

Findings – The Results show that branded medicines impact what medicines are initiated for patient's treatments. These medicines are influenced by parameters such as sales staff, marketing tools and corporate branding. In some cases the oncologists prescribe branded medicines due to experience and habit. The findings suggested a trend of "If the medicine is working, why change it?" The research also showed us that regulatory bodies in the Irish pharmaceutical are influencing what medicines are being prescribed due to price issues and generic substitution options.

Originality/Value- Previous work had been focused on the advantages of branded medicines and how brand loyalty aided companies to maintain customers. No research suggested that brand loyalty and branding actually impacted on what medicines a cancer patient received. A lot of research had been done on the changing pharmaceutical industry due to regulations but no work shows us how influential regulatory bodies actually are when medicines gain access to markets.

iii. DECLARATION

I hereby declare that this material, which is now submit for assessment on the program of study to the award of Masters' Degree in Business Administration, is entirely my own work and has not been taken from the work of others and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: . . . . . Date: . . . . .

Introduction 1

1.1 Paper Overview

This study looks at branding, customer behavior and regulation in the pharmaceutical industry in Ireland and how they have influenced the prescribing habits of Irish Oncologists. It is proposed from the research that branding and marketing communications to medical professionals can somewhat influence what medicines are prescribed. The purpose of this research is to understand whether oncologists behave like any other customer and cognitively prescribe medicines due to external influences.

The author purposes that by carrying out semi-structured interviews with Irish Oncologists at various different regions of Ireland on how the physician prescribed medicines would lead to patterns on influencing powers. The objective of the research was to get a better understanding of what influential techniques are being used successively to drive this extremely lucrative industry that is Pharmaceuticals.

Despite the increase in Marketing and Sales departments in these global pharmaceutical companies more research needs to be done on the impact of these departments and an understanding of what potential revenue these departments coincide with.

Psychologically all customers react differently towards sales staff, marketing staff and regulatory policies. It is the author's belief that this is no different to Oncologists in Ireland and thus the research needs to be done on the impact of these influences with regards to what medicines patients receive for their cancers.

1.2 Research Question

My stated research question asks 'Does branding, customer behavior and regulation influence the prescribing habits of Irish Oncologists? '

1.3. Research Objectives

Medical Objectives:

- Do branded medicines affect medicines that are being prescribed by Irish Oncologists?
- Are Irish oncologists' brands loyal or corporations loyal when prescribing medicines?
- Do Irish oncologists prescribe medicines due to habit or due to experience?
- Do regulatory bodies influence the prescribing patterns of Irish Oncologists?
- Are medicine prices affecting what drugs are being prescribed in Irish oncology?
- Is generic substitution having an impact on what chemotherapies are being prescribed in Irish hospitals?
- Do Irish Oncologists understand the influence of sales and marketing staff when medicines are being prescribed?

Pharmaceutical Objectives

- Do sales executives have an impact on prescribing habits of Irish Oncologists?
- Has regulation affected sales executive's ability to build relationships with doctors?
- How has branding and corporate branding affected what medicines are being prescribed by Irish Oncologists?
- Do Irish oncologists behave differently towards marketing materials and do these materials affect what they prescribe
- Are regulatory bodies affecting what medicines are getting onto the Irish Markets?
- Is price of medicines a major concern in the Irish Oncology arena?

1.4 Research Hypothesis

"For a pharmaceutical company to gain a competitive advantage, it needs to understand how Irish Oncologists are influenced by sales staff, marketing tools, branding and even regulation"

1.5 Recipients of Research

There are five recipients of the research that is conducted as part of the master in business administration in Dublin Business School. They are as follows:

The first is Dublin Business School where this researcher is a part-time student studying for his qualification.

The second recipient for this research is the Liverpool John Moores University, who provide the qualification, which this student is studying for.

The third recipient of this thesis is David Hurley whom is the thesis supervisor and has guided this author through the research process to date.

The fourth recipient is the marketing president of the pharmaceutical company whom this student is employed by.

And the final recipients of this research are anybody that has an interest in branding, customer behavior and regulation in the pharmaceutical industry in Ireland in the current environment.

1.6 Relevance of Research

The author feels that due to the dynamic Irish Pharmaceutical Industry and the economic challenges that Ireland faces, it is compulsory for a pharmaceutical company to gain a competitive advantage over its competitors. To do so the author feels it is relevant to get a better understanding on how

branding and brand loyalty influences the prescribing habits of Irish Oncologists. The author understands from reading the literature how relevant branding is within other industries like FMCG. With this in mind the author understands the value a good brand can give to an Irish Oncologists when they are prescribing medicines.

Also the author can see that due to regulatory bodies in Ireland becoming more stringent in their policies; it is becoming harder to gain a good working relationship with Irish Oncologists. With this in mind it compulsory that due to less access time with these physician's we have to get a better understanding on how oncologists behave when prescribing medicines.

In completing this research it is the authors ambition for the pharmaceutical industry to get a better understanding on how they influence what medicines are being prescribed but also to change their business strategies around these influences to give them a better competitive advantage but also to allow patients access to the best medicines on the market.

1.7 Suitability of Researcher

By conducting this research this author will be given the opportunity to develop and explore his own personal style. He possesses an honor's degree in Chemistry, which has given him a broad knowledge into the medical world and the application of medicines to certain diseases. Working within the pharmaceutical industry he can apply his chemical knowledge when needed. The MBA program in DBS has given the author a broad business knowledge to allow him to strategize future projects when launching new medicines into the Irish pharmaceutical industry. The DBS master's program has facilitated him to be able to compile a dissertation at master's level.

1.8 Work Experience

I have worked in the pharmaceutical industry for the past five years, working small specialized

companies to large multinationals. Within all companies I have worked in the oncology disease area and have worked very closely with all Irish oncologists over these five years. I have worked as a national/country manager for the past 2 years working with cancer treatments and cancer awareness. I believe that with my work experience and with the knowledge I have gained from the DBS master's program I possess the required knowledge to complete this dissertation.

Literature Review 2

2.1.1 Brands

According to Sanyal (2013) the role of branding in pharmaceutical industry is vital and complicated due to the official designation in the product's profile, the labeling, the prohibition of direct advertising of ethical drugs to the patients, and short product life cycles.

Product brands in the pharmaceutical industry are becoming increasing more important as medicine is a fast changing industry. The importance of creating a strong brand is vital for a product to succeed in today's markets.

"Strong branding can speak volumes about the function and character of the product and help consumers to judge whether it is their sort of product, delivering the fuctional and psychological benefits sought… … if there is an element of corporate branding it can also reassure the product's quality pedigree."

(Brassington, F. 2006: 305)

What branding creates through marketing communication tools is a perceived image that a consumer creates around the brand. It is this perception or image that is an intangible asset for the company. Every consumer has a brand that they desire or have a romance towards and it is this customer behavior that adds value to a product. An organization has to understand this value and use this competency as a

competitive advantage. A company must communicate all these perceptions through brand name, logo and package design.

"The biggest successes for strong brands are brand recognition and emotional bond"

(Vukasovik, T. (2009: 172).

Same as any industry within the Pharmaceuticals industry a strong brand needs to be created and protected to sustain a competitive advantage for the company.

2.1.2 Brand Names

Physicians have their own style of prescribing drugs. This is connected to what they perceive, e.g. prescribing medicines they are aware of, respective brand names and latest medicines (Tootelian *et al.,* 1988; Probyn, 2004). Due to the legislation within the EMA (European Medical Association) there cannot be any direct to consumer marketing with the European pharma industry. Pharma companies have had to design their own strategy to communicate their brand image to physicians within Europe.

"Building a clearly communicated brand creates a differential advantage in crowded therapy areas because physicians need those resources for their decision making process."

(Moss, 2007).

Brand names creates awareness among various other drugs and allows a physician build up a perception of the brand due to its image, logo, name and function that is being communicated via the company's marketing team.

Brand name associations maybe recalled in consumers' minds as emotional expressions and consumer decision making is affected by brand awareness by influencing the brand association strengths. This in turn will cause a physician to prescribe habitually as opposed to medically.

A strong brand name will create differential entity from the immediate competitors taking "Viagra" for example its' brand name causes association for success and causes habitual prescribing but furthermore gives the brand a competitive advantage over its competitors.

"Brand equity is the added value bestowed on the product by the brand name"

(Park and Srinivasan, 1994).

2.1.3 Brand prescribing and brand origin.

Since pharmaceutical drugs are monitored and controlled by regulatory bodies like the FDA and the EMA within the U.S.A and Europe respectively, are other regulatory bodies outside these regions more lenient with the production of pharmaceutical drugs and if so does the origin of the manufactured drug influence the prescribing habits of physicians?

According to Sanyal et al (2013) in India the physicians don't rely so heavily on R&D and regulatory bodies to prescribe as opposed to relying on their emotional branded relationship with the drug.

Brand origin does play a key role in physician's prescribing habits as it allows the physician understand the stringent policies and regulatory challenges put forward to the drug for it to get to market. It is felt that the EMA's policies are more stringent that the FDA's policies and thus if a physician sees a drug getting to market in Europe this brand will become more superior to its competitors due to its approval by the EMA.

2.1.4 Brand Challenges

With the benefits and advantages of branding within the pharmaceutical industry as illustrated by (Chandler, J. et al 2002) also comes many challenges and issues. Products can cause adverse effects and toxicities that may become publicized through media bodies. These side effects can become detrimental to the success of a branded pharma product. Once a physician becomes aware of side effects due to one brand over another the products life cycyle will become extremely short. For example a branded drug called Myocet (metastatic breast cancer) causes alopecia (hair loss) and its competitor Caelyx doesn't,

these two branded medicines have exactly the same functionality and cost a lot of money to get to market but due to Myocet's alopecia side effect no physician would prescribe it over its competitor.

Branded medicines are also a lot more expensive than their generic counterparts thus causing a lot of challenges to remain economically competitive. Many consumers do not know that the brand name owners use their excess production capacity to provide the generic versions as well as the brand name products.

The challenge of patency expiry is always an issue for branded medicines. The branded medicine can charge whatever they deem necessary to regain the costs of development (Rotfield, H.J. 2009) but once the product becomes generic the branded drug may need to reduce its price to remain competitive.

2.2.1 Brand Loyalty

Researchers have long considered attitudes to be insufficient predictors of brand commitment (e.g. loyalty), and suggest that true loyalty requires the customer to form an emotional bond with the brand (Park et al., 2009; Oliver, 1999). Calling for greater research in this area, Park and MacInnis (2009) suggest that the boundaries of the attitudes construct need to be recognized so that another constructs reflecting emotional attachment can be articulated. The nature and character of the emotional attachment construct is reflected in Fournier's (1998) discussion of brand relationships, brand love (Carroll and Ahuvia, 2006).

2.2.2 Loyalty due to relationships

Brand love or brand relationship that creates such values towards products. There can be an emotional attachment towards products that is slightly intangible. The same loyalty exists in the pharmaceutical

industry and it is the products traits and qualities that controls whether a physician becomes loyal or not towards a medicine.

"*The greater the loyalty to the brand, awareness about its existence, perceived quality of the brand, and clear associations with the brand, the higher the brand equity"*

(Vukasovic, T. (2009: 167)

When a physician is prescribing medicines he/she will use medicines that guarantee quality and can reassure them that when this particular brand of medicine is used for an ailment it will be the best on the market. Brand strength or loyalty can be summarized into 3 dimensions according to Vukasovic, T (2009).

- Mental (emotional) strength; brand recognition, perceived quality, loyalty to the brand.
- Behavioral (purchase) strength; market penetration, purchase and application frequency.
- Economic power (market share, market coverage, price achieved in comparison with the competition)

These 3 dimensions cause customers to behave differently around certain brands as they have their own perceptions of the brand, thus becoming brand loyal. Some customers become more attached to brands then others but this is completely down to the individual. A brand relationship differs between each customer…

"We define brand romance as a state of emotional attachment (evoked in response to the brand as a stimulus) that is characterized by strong positive affect toward the brand, high arousal caused by the brand, and a tendency of the brand to dominate the consumer's cognition. Brand romance is subject-specific. Different consumers may enjoy different levels of romance with respect to the same brand"

Patwardhan, H (2011: 299)

2.2.3 Corporate Loyalty

According to Waheed (2011) some physicians adopt the drugs of certain companies and prescribe the same brand, based on the success of previous treatments. Such physicians develop loyalty to certain companies' drugs for certain treatments and the companies also encourage such loyalty.

Multinational global companies like in the pharmaceutical industry advocate towards corporate loyalty and do so by manipulating physicians with promotional activites, and various other sponsorships. Consumer rights activists complain that physicians are influenced unethically by these activities.

Corporate loyalty and prescribing habits have not been explored enough in literature and according to Waheed (2011) although there are many studies in the marketing field on brand loyalty, we rarely find studies in the area of prescription brand loyalty.

This maybe an ongoing concern as patients are been prescribed drugs may be due to physicians corporate loyalties or maybe due to companies marketing techniques.

"*Continuity in prescribing the same company's drugs or prescription loyalty is also a very important phenomenon in prescription behavior"*

(Janakiraman *et al*., 2008)

My study should prove that physicians do interact differently with certain companies over others due to their loyalty towards them and not due to the functionalities of the actual drug being used for a particular ailment. Also in this study we will see a better understanding on companies corporate spends towards maintaining a brand loyal physician.

2.2.4 Loyalty due to habit.

Loyalty maybe due to habitual prescribing according to Crosby satisfaction provides a summary of

interactions with the company and affects the quality of future interactions and the evaluation of relationship quality. Physicians may use a brand due to habit and not wonder about other brands that maybe on the market. Oncologists in Ireland are the same as any purchaser, they too become emotionally attached to a specific brand and they too prescribe drugs due to habit.

This habitual purchase maybe due to positive experiences the oncologists had with previous patients or maybe due to recommendations from their peers.

According to Waheed drug quality was a non-significant factor for physician prescription or drug choice but it did not emerge as a significant factor for creating prescription loyalty. Maybe physicians understand that all drugs that are legally on the Irish market have gone through stringent regulatory screens and thus quality is not a factor? Physicians may just prescribe a drug out of habit and are happy with their previous experiences with that brand?

2.2.5 Loyalty due to relationship marketing.

Relationship marketing is a strategy designed to foster customer loyalty, interaction and long-term engagement. This customer relationship management (CRM) approach focuses more on customer retention than customer acquisition. Relationship marketing is designed to develop strong connections with customers by providing them with information directly suited to their needs and interests and by promoting open communication. This approach often results in increased word-of-mouth activity, repeat business and a willingness on the customer's part to provide information to the organization. Relationship marketing contrasts with transactional marketing, an approach that focuses on increasing the number of individual sales. Most organizations combine elements of both relationship and transaction marketing strategies. (Keegan, J.W., Green, M.C. 2008)

In the pharmaceutical Industry relationship marketing plays an important role in marketing prescription drugs to doctors through company representatives using the account management model

Zineldin & Philipson, (2007) believe relationship marketing focuses on how to develop, maintain and enhance customer relationships over the customer life cycle rather than on attracting new customers, this approach is used by many pharmaceutical companies who target specific hospital doctors believing one doctor prescribing a lot of drugs is preferable to small
amounts being prescribed by many.

2.3.1 Customer Behavior

In the Irish Oncology arena all physicians behave differently towards sales people, marketing, clinical data and are all subjective to their own bias. It is in my opinion that there may be a gap in the literature with regards to how Irish oncologists threat their patients due to the above interactions. Cognitively everyone reacts differently to sales staff but it is easy to say that people still buy from people. In this thesis I hope to find out what are the main behavioral patterns from oncologist towards clinical data, sales people and marketing.

"Direct to consumer advertising of prescription drugs may also engender a misleading consumer trust in a brand name"

(Royne and Meyers, 2008)

Advertising and branding in the medical profession also affect customer behavior. An Oncologist is just like another consumer in that they hold certain perceptions towards certain medicines. They too can become loyal towards certain branded medicines over others. They might be the most product loyal consumer out there as they are using products for life-threatening conditions. According to Rotfeld (2009: 392)

"*Any patient taking drugs to correct a medical problem or treat a life threatening condition would*

not be easily convinced that a cheaper version of the familiar brand is "just as good" as the name as they know and trust"

2.3.2 The Influence of sales staff

All Oncologists in Ireland react differently towards sales personnel; this is the same for any industry some people just interact better with others. According to (Wilson, 2002) salespeople's personal traits or beliefs influence attitudes, which, in turn, influence outcomes. In this thesis I will try to get an understanding on sales peoples attitude/beliefs affecting the prescribing habits of Irish Oncologists. Kim and Hong (2005) proposed that salespersons in the pharmaceutical industry require three central competency dimensions.

- Motive and traits;
- Self-concept; and
- Knowledge & Skills.

Pettijohn *et al. (*2010) showed that salesperson's emotional intelligence levels are positively correlated with their customer-orientation scores. Sales force effectiveness is built upon four strategic pillars;

1. Knowledge and training;
2. Ongoing communication;
3. Sales tools or marketing programs; and
4. Motivation/incentives

Salespeople's personal traits or beliefs influence attitude or customer behavior which in turn influences prescribing patterns. The beliefs held by salespersons play an important role in their communication and conviction in a sales call which are all the more important for the salespersons operating in the oncology arena in Ireland as they are highly specialized pharmaceutical products.

It is my belief that there is a gap in the literature in Ireland when oncologists prescribe certain drugs due to the salesperson's beliefs/ attitude when selling in a sales call. This maybe just a coincidence or maybe

an innate communication tool used by pharmaceutical companies to persuade a physician to use their product. A salesperson does not understand the impact sales training has on them and the biased perception that is transferred to them during this training.

Maybe sales staffs are being cloned by pharmaceutical companies to influence Oncologists,

"This identifies the need to train the salespersons and convince them more on the benefit-risk profile and thus the price of the drug they sell. Innovative strategies involving videos and audio messages with a good blend of rationale and emotional content can be used by the product communication and storytelling, based on real life complications that a patient goes through if left untreated."

Wasuja *et al. (2012)*

2.3.3 The effect of Relationship Marketing on customer behavior

Ward & Dagger (2007) agree with Zindeldin & Philipson believing the orientation of relationship marketing is on obtaining a share of the customer, not a share of the market. A relationship orientation implies that the focus of marketing is on retaining customers by maintaining and strengthening win-win relationships over time.

Firms have accepted that customer retention is even more profitable than customer attraction and we can observe the interest of firms in adopting relationship marketing principles and designing strategies to develop close and long-lasting relationships with the most profitable customers (Izquierdo & Cillan, 2005). This agrees with the relationship marketing approach endorsed by Zineldin & Philipson (2007) and Ward & Dagger (2007)

Ndubisi (2007) has a slightly different approach to relationship marketing, believing that by building relationship with customers, an organization can also gain quality sources of marketing intelligence for better planning of marketing strategy. It is important, therefore, to understand the actual impact of

the underpinnings of relationship marketing of customer loyalty. Such understanding will assist in better management of firm customer relationship and in achieving higher level of loyalty among customers, also by gathering all the relevant information on customers (hospital doctors) other marketing tools such as e-marketing strategies may be used in the relationship

Bernard Lo & Marilyn Field (2008) have looked at conflicts of interest between doctors and representative marketing tools in the pharmaceutical industry, the literature on physician-industry conflicts of interest has generally viewed these relationships negatively. If trust is lost between the doctor and patient, the relationship will break down.

Relationship marketing may influence how an Oncologist prescribes their medicines positively and negatively. It is my understanding that pharmaceutical companies need to use the salesperson's relationship with the oncologist to understand how they behave towards marketing tools and also weather they are interested in taking part of ad boards / data gathering seminars?

2.4.1 Irish National Budget

The Republic of Ireland has a population of 4.42 million with a life expectancy of 76.8 years for men and 81.6 years for women. The Irish public healthcare system has a budget of €14.7 billion, 7.6% of GDP. The public share of total expenditure on health in Ireland in 2011 was 78%, above the OECD average of 73% according to the HSE annual report. The remaining 22% is accounted for privately. Approximately 50% of the Irish population has private health insurance cover. The three major private health insurers are the VHI, Quinn Healthcare and Hibernian-Aviva.

Approximately 15% of the €14.7 billion budget (increasing by over 10% per year over the last decade) is attributed to drug expenditure. Of this, 85% is spent on the following Community Drug Schemes: GMS, DPS, LTI, and HTD. These schemes are at the centre of the Primary Care Infrastructure of the Irish Health system. The means-tested GMS scheme is the largest by cost, covering 1.35 million people, and

provides free medical services and prescription medications to those unable without undue hardship to arrange such services. Under the DPS, no family will be required to pay more than €100 for prescription medicines in any calendar month. The LTI scheme entitles patients suffering from any one of 15 specified chronic conditions .e.g. diabetes mellitus and epilepsy, to full drug reimbursement irrespective of income. The HTD scheme facilitates the supply by community pharmacies of certain high cost medicines.

I feel that there is a gap in the literature in Ireland with regards to Oncologist's spending power in Ireland. Does an Oncologist have to justify what medicines they use due to this avg. 10% increase in annual spend? Are oncologists in Ireland audited by the HSE or the private insurance bodies to what their annual spend on medicines was? With a national medical budget of €14.7 billion the taxpayer should have the right to know how much medicines cost and how much oncologist's are spending on them!

2.4.2 Branded Prices

Originator brand medicines are medicines that have been newly developed and subsequently patented by a pharmaceutical company. The company then launches the new medicine as a novel brand and enjoy the monopoly of the sales of the medicine safeguard by the patent protection, which last for approximately 10-12 years depending on when the drug was launched after research and development started. The process of bringing a newly patented medicine requires a considerable research and development investment in terms of time and money. The drugs are placed through numerous phases of clinical trials across various sites globally with vast numbers of patients in these trials.

The Pharmaceutical Company regains its investment in R&D during the patent protection period and can charge extremely high prices for these products to obtain high revenues. For example oncology products could be as high as €20,000 per vial/dose. It is my opinion that in Ireland at present there is now evidence

to show these prices will be reduced to allow patients have access to new cutting edge products that are specialized for certain cancers.

Are Oncologist's happy to pay high prices for these products due to the R&D costs entailed to bring the novel product to market? Are Oncologists even aware of the cost of these products in Ireland? According to the national cancer registry of Ireland 49-50% of all diagnosed cancer patients in Ireland receive branded medicines. According to the national cancer registry there are approximately 3000 newly diagnosed breast cancer patients in Ireland annually. These patients will cost the state due to branded medicines approximately 10,000-12,000 euro per patients just for their chemo alone, excluding any branded adverse effect medicines that might be used for e.g. Neutropenia or Anemia... The branded medicine for neutropenia in Ireland at present is a drug call Neulasta and has a retail price of 1,200 euro per dose according to MIMS.

It is my opinion that not enough work has been done in the costing's of branded medicines in the cancer field in Ireland. Pharmaceutical companies don't have to justify what price they are charging and want to know why?

2.4.3 Generic Prices

Once the patent of the branded medicine expires, other companies may bring the same medicine to market under a different brand name, after filing for registration and gaining the approval of the regulatory authorities. Generic medicines are identical to their branded counterparts as far as chemical structure, dosage form and strength, route of administration, efficacy, safety and quality are concerned. In order to be registered in Ireland, generic medicines need to demonstrate bio-equivalence, implying therapeutic equivalence, with the originator product. This implies that there are no statistically significant differences in the rate and extent of absorption in the body between the generic and the originator medicine.

According to the Irish Pharmaceutical Health Association (IPHA) all generics in Ireland have to be at least 40% cheaper than the originator. It is my opinion that a lot of Irish Oncologists don't understand what medicines are been given to their patients when a medicine has gone off patent. No literature exists to show that generic substitution is occurring in the oncology arena due to the reduced generic prices. For example drugs such as doxorubicin, epirubicin (all antracyclines) taxatere, paclitaxel, docetaxol (all taxanes) now have generic substitutes. Are pharmacists in Ireland buying the generic substitutes without the knowledge of the oncologists and if so is it being forced onto them by the state and insurable bodies?

2.4.4 Health Technology Assessments.

According to IPHA Ireland currently has an efficient system which allows authorized products to be put on the reimbursement list in a timely manner, enabling timely access for all patients to new treatments.

The international research-based pharmaceutical industry recognizes the State's need to ensure that it gets value for money for the large sums it is investing in the health services, including on medicines. The industry has shown its willingness to work in partnership in this regard, for example in its collaboration with the National Centre for Pharmaco-economics on the development of the Irish Healthcare Technology Assessment Guidelines

" *There is a risk that evaluation mechanisms will run counter to what should be their key objectives: identifying medicines that bring the greatest benefit to patients, ensuring early access to these medicines, allowing choice among medicines of value and ensuring efficient healthcare through objective high-quality assessments*."

(IPHA)

There is nothing in the literature to show how prices are graded or if there are numerous products being brought to market what is the tendering process to get reimbursement? Are Oncologists in Ireland aware

of the hoops that pharmaceutical companies have to jump through before their new branded product can be made available to the Irish patient?

2.5.1 Generic Substitution

The substitution of generic medicines for branded medicines is of significance to customers, due to the opportunity it creates to save money; community pharmacists, because of their responsibility to facilitate generic substitution and at the same time manage a business; governments, which aim to reduce the rapid growth in public pharmaceutical expenditure; and the pharmaceutical industry, as a result of the loss of sole proprietary rights when a patented medicine can be produced as a generic by a number of other manufacturers. Generic substitution is an international phenomenon; with Al-Gedadi and Hassali (2008) pointing out that it is being practiced in most westernized countries. Generic prescription drug substitution occurs within a personal selling context in the pharmacy (Mott and Cline, 2002; McDonough and Doucette, 2003), and it has been shown to be influenced by such factors as branding (Patel et al., 2009) and habit formation (Lambert et al., 2003; Steinman et al., 2007).

In the Irish Oncology arena generic substitution is occurring daily in my opinion without the knowledge of the oncologists. I feel that there is no literature to give an understanding of Irish buying groups like Hospital buying groups that purchase bulk medicines like antracyclines at cheaper rates due to them being generic substitutes as opposed to the branded originators. Are oncologists aware of the impact of generic substitution on their patients?

2.5.2 Adverse effects due to generic substitution

Unfortunately there is very little literature on the topic of adverse effects due to generic substitution. With the bio-availability of the drug being the same and the route of administration being the same, is there any evidence to suggest that there might be added risk when using a generic as a substitute towards the

originator. A lot of work has been done with this globally in regards to statins like Lipitor or Crestor but it is my opinion that when we are talking about chemotherapies such as taxanes or antracyclines we need to get a better understanding of the risk of adverse effects or co- morbidities.

2.5.3 Reference Pricing

"Ireland currently has a fair and equitable single tier system, whereby all patients, regardless of income, have access to a secure supply of the medicines which their doctors believe are most suitable for them. This has been achieved through the delivery of successive supply agreements between the IPHA, the DoHC and the HSE which have provided significant value for the taxpayer, as well as ensuring continuity of supply. This current system is providing, and can continue to do so in future, real and meaningful savings as acknowledged in the report, far and above those which might accrue from the introduction of a reference pricing system."

(IPHA 2013)

As we can see from the IPHA system reference pricing is being set up in Ireland at present to make all medicines available to physicians at lower prices. This to me is a success for the Irish patient as long as we can guarantee supply of these medicines. Due to supply and distribution issues from big pharmaceutical companies maybe reference pricing will cause a hindrance to physicians? If a lower price contract is assumed by the HSE with a specific company to supply a medicine what happens if that company goes out of stock?

Reference pricing, with its successes in bring affordable medicines to patients, may have its limitations when guaranteeing supply. I feel it paramount to ask the question to Irish Oncologists is reference pricing a positive thing for their practice or a negative issue? There is a gap in the literature with regards to challenges of reference pricing in the Irish Pharmaceutical industry.

2.6.1 Regulation

Regulation can be described as administrative legislation that constitutes or constrains rights and allocates responsibilities, it can be distinguished from primary legislation on one hand and judge made law on the other

(Government or elected legislative body)

Regulation can take many different forms including legal restrictions promulgated by a government authority, self-regulation by an industry such as the pharmaceutical industry, social regulation i.e. "the norms" or market regulation. (High, J. C. 1997)

Regulation in the pharmaceutical industry can be traced back to 1894, when phials of anti-diphtheria serum went on sale in German pharmacies. The selling of this breakthrough therapy signaled the evolution new regulatory institutions, as well as new markets in industrially produced pharmaceuticals (Huntlemann, A. C. 2011)

Regulation of pharmaceutical companies in the United States is carried out by the Food and Drug Administration (FDA) established in 1906. (Regulatory Regime 2011)

Drugs have long been among the most highly regulated of all consumer products, not only do all governments closely supervise every aspect of their development including marketing, but many also regulate pricing and distribution (Vogel, D. 1998)

Wood (1982) argues the point that regulation in the pharmaceutical industry reduces the opportunity to bring innovate drugs to market, stating that regulation is of greater importance than new developments. This author believes regulation is necessary but should not be prohibitive to innovation in the industry. Abraham (2005) looks at a petition from the pharmaceutical industry calling for reduced regulation in an effort to streamline innovative drugs to market; this highlights the need for an overall review of regulation to protect patients from pharmaceutical influence over the medical profession, but also to ensure innovative drugs are available to patients that may save lives.

There is a distinct difference of opinion in the literature with regards to regulation towards

Pharmaceutical products. Is regulation having an impact on allowing new innovative products get to market or is regulation necessary to stop poor medicines getting to market?

Methodology 3

3.1.1. Introduction

This research is used to highlight the correlation with branding and brand loyalty in the prescribing habits of Oncologists in Ireland. The influence of branding and customer behavior will be the main topics of this research and how oncologists perceive medicines due to the pharmaceutical companies branding techniques. In this section the research will outline the methods to collect data, how to design the research and also how the research will use the data to show the relevant findings.

According to Fisher (2004:33), *Methodology* is the study of methods, which raises all types of philosophical questions for the researchers to know and check the validity of their knowledge.

When carrying out research (Saunders et al. 2011) have identified that practical issues such as (e.g. time constraints, economic and sample) can impact on the choice of methodology of the researcher (Gary Bernie notes 2012). The research methodology provides and helps assist the researcher in addressing and facilitating the answering of the research questions by identifying important information and the selection of an appropriate design (Gary Bernie notes 2012). There are many options available to researchers to carry out research however (Saunders et al. 2011) have suggested that the research should apply the research onion approach and is comprised of the following segments (Gary Bernie 2012)

Figure 1: The Research process 'onion' (Saunders, M. et al, 2007, p102)

In this chapter the researcher will outline the methods being used to design, to data collect and to review the research finding using the 'onion' format. The research will peel back each layer to explain the research methods being used to collect the relevant data.

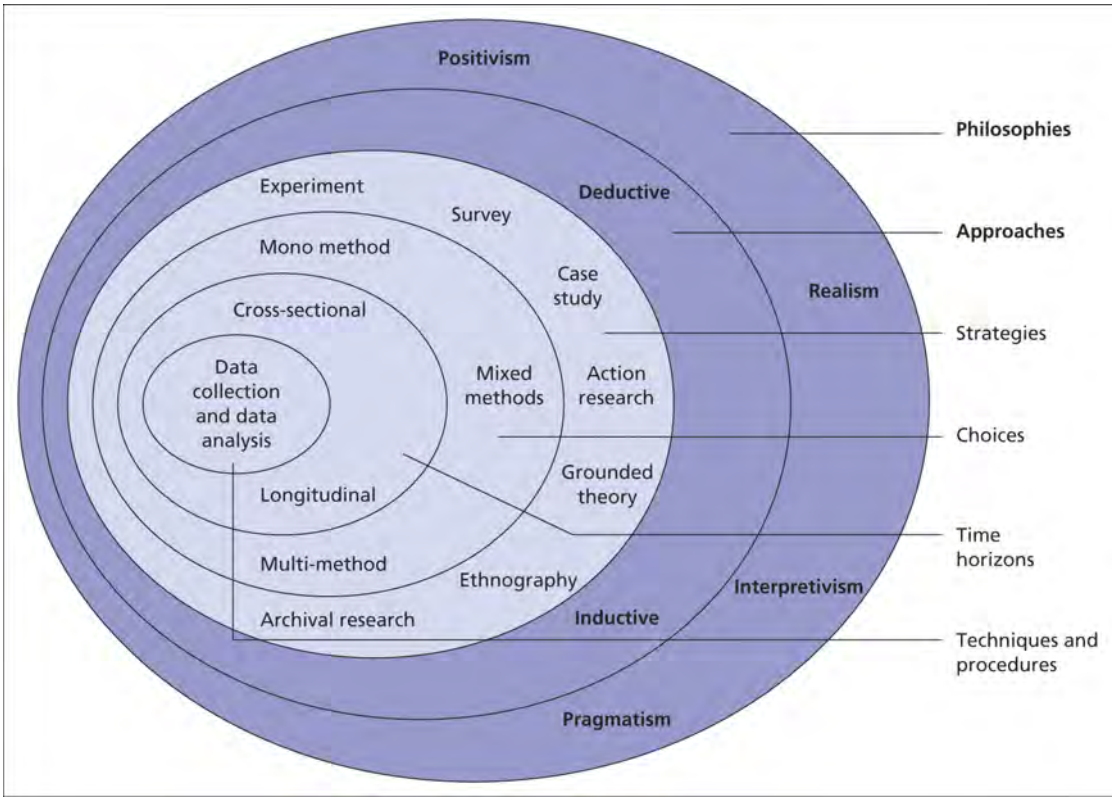

Figure 1

3.1.2. Research philosophy:

This research will use the philosophy of **Interpretivism** as according to Saunders, M. et al (2007: 106)

> Fisher (2004: 41) *proposes that interpretative research seeks people's accounts of how they make sense of the world and the structures and processes within it and also that interpretative researchers often take a processual perspective*

The research focuses on Oncologists perceptions and involves researching people and their views. This research hence has a strong social component.

According to Saunders et at (2007:106) *The term 'social actors' is quite significant here. The metaphor of the theatre suggests that as humans we play a part on the stage of human life.*

This research will use the philosophy of interpretivism as the questions being asked in this research around branding is customer/individual focused and thus they're maybe a bias towards the individual's responses. The research will interpret the influence of branding in relation to the Irish Oncologists.

Positivism is a structured approach taken by the researcher, this methodology helps to replicate or test theory (Gary Bernie notes 2012). Quantitative research which is often referred to as the positivist/rationalist paradigm, has strong views on what counts and does not count as worthwhile research. . (Deacon et al.,1999) The researcher will prefer working with an observable social reality; positivism is similar to the natural scientists thinking. The positivist researcher will be most likely to implement structured methodology to facilitate replication (Gill and Johnson 2002). The Positivism approach will make interpretations about the collected data

Realism

Realism is another philosophical position relating to a scientific approach for creating knowledge. The philosophy of realism looks at their being a reality independent of the human mind. What we as researchers see is only part of the picture making up the social world. As a business executive working in the pharmaceutical sales, I have chosen the philosophy of interpretivism. This approach I believe not alone best suits my own social thinking but more relevantly interpretivism suits my outlined research question and objectives. Interpretivism suggests we as humans interpret the social roles of others in accordance with our own set of meaning, my stated question looking at branding and how it affects the different actors as stakeholders in the pharmaceutical industry.

Each actor in their role as a stakeholder is effected by branding; however each actor may interpret branding differently with changes in outcomes based on individual interpretations. My stated research question will also contain influences derived from realism, particularly critical realism which recognizes the existence of a gap between the researchers concept of reality and the unknown reality, this I believe would imply that research is not value-free and is conducted within a broader framework based on our current knowledge and concept of reality (Saunders et al. 2011).

3.1.3. Research Approach:

In this layer of the 'onion' the researcher has two method options either deductive or inductive.

According to Bryman, A. (2007: 11) deductive theory represents the commonest view of the nature of the relationship between theory and research. The researcher, on the basis of what is known about a particular domain and of theoretical considerations in relation to that domain, deduces a hypothesis that must be subject to empirical scrutiny.

This research will take the **'Inductive Approach'** because according to Easterby-Smith et al., (2002) the study of a small sample of subjects might be more appropriate than a large number as it would with the deductive approach. Researchers using the inductive approach are more likely to work with qualitative data and establish different views of the phenomenon.

This research will form an inductive approach when interviewing three Irish oncologists on their perception of branding. Using the Inductive approach the researcher will be able to pool a small sample of the Irish Oncologists and decipher the differences around prescribing due to branded medicines.

3.1.4. Research Strategy:

Within this layer of the 'Onion' the researcher will use the case study method, as this method will help the researcher interpret the data being collected by a small sample of interviews. The data primarily will be qualitative and according to Robson (2002:178) *A case study as a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence.*

The author of this research will be taking the multiple case study approach as it focuses the need to establish whether the findings of the first case occur in other cases and, as a consequence the need to generalize from these findings, Saunders, M. et al (2007: 140)

The case study will be pre-determined as the researcher has a history within the pharmaceutical oncology industry and understands who the most appropriated candidates are.

3.1.5. Research Choice:

The research choice used by this author is mono-method as the author will only use one data collection method i.e. the interview method and use only one analysis procedure. The mono-method is used as the data being collected by the interviews maybe conflicting and a single analysis method must be used when interpreting this data. The interview method will be used for this research because when you are undertaking an exploratory study, or a study that includes an exploratory element, it is likely that you will include non-standardized (qualitative) research interviews in your design (Blumberg et al., 2005)

> *The interview research choice is used as it is necessary to understand the reasons for the decisions that your research participants have taken, or to understand the reasons for their attitudes and opinions, it will be necessary for you to conduct a qualitative interview*. Saunders, M. (2007: 315)

To make sure the data being collected is reliable and not generalized a semi-structured interview format will be used, thus the questions will be pre-determined and a check list will be formatted before the interview is commenced.

Interviews are an important source of data collection as not only can the researcher obtain relevant answers but can also collect data on the interviewee's body language or perception on the actual topic being questioned. This data will also be relevant when analyzing the participant's responses.

3.1.6. Time Horizon:

Saunders et al (2007: 148) refers to cross-sectional study as the study of a particular phenomenon or phenomena at a particular time. As the author is researching this topic part-time the research is analyzed as a 'snapshot' of brand theory and brand loyalty rather than over a period of time. Due to these time restrictions the research looks at branding and brand loyalty in the present as opposed to the changing beliefs of the participants on brands, over time. The researcher will do a cross-sectional analysis over the 12-week period allocated, to show this phenomenon. Within the 12-week period it is a snapshot of the overall branding theory in the case study of Oncologists prescribing habits in Ireland.

3.1.7. Qualitative:

The author uses the qualitative data collection method and follows Bryman, A. (2007: 405) steps.

- Step 1: General Research questions
- Step 2: Selecting relevant subjects
- Step 3: Collection of relevant data
- Step 4: Interpretation of data

When analysis of the data takes place the author will review the data in six ways content analysis, grounded analysis, discourse analysis, narrative analysis, conversation analysis and argument analysis.
As the qualitative data will be collected during a semi-structured interview process the author will have to use these six methods of analysis as according to (Taylor & Bogdan, 1998),

Qualitative findings are generally presented in everyday language and often incorporate participant's own words to describe a psychological event, experience, or phenomenon.

In order to answer the research question the primary data will be collected and analyzed from the semi-structured interviews. The reason for this research is to find out the impact of branded medicines when an Irish Oncologist is prescribing.

The secondary data for this research will primarily be obtained from online journal articles available on the emerald database. Data from other research findings will aid the author when analyzing the primary data.

Riley et al (2005: 107) quote secondary data analysis as *'any further analysis of an existing data set which presents interpretations, conclusions, or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results.'*

3.1.8. Sampling:

Due to time and budget limitations the author will not be able to decipher data from a total population like all the prescribing habits of all the physician's in Ireland and the influence branding plays in these habits. Instead the author will interview a selected sample pool of Irish Oncologists to determine the outcome of branding and brand loyalty in prescribing medicines. With this in mind the author has chosen '**Purposive Sampling'**

According to Saunders, M. et al (2007: 230) Purposive sampling enables you to use your judgment to select cases that will best enable you to answer your research questions and to meet your objectives.

'This form of samples is mainly used when working with very small samples such as in case study research and when you wish to select cases that are particularly informative' (Neuman, 2000).

The author in this research decided to purposively select the key Oncologists from the biggest hospitals in Ireland as his samples as according to Patton (2002) the researchers needs to select information-rich cases. The aim of the research is to understand the influence of branded medicines when Irish Oncologists prescribe and when that author uses the 4 most influential oncologists as the samples; the data collected will be extremely informative and extremely important. The author is not trying to understand the overall impact of branding in the Irish Pharmaceutical Industry, with the limitations this research is not viable, thus using a cross-sectional, purposively sampled pool to analysis the data.

3.1.9. Ethics:

Blumberg et al (2005: 92), define ethics as the '*moral principles, norms or standards of behavior that guide moral choices about our behavior that guide moral choices about our behavior and our relationships with others'*

The information obtained from the interviews will be used for the dissertation purposes only. All subjects will have the option to withdraw any statements that he/she wish. No harm to future prospects or future employment will come of any questions within the semi-structured interviews. All subjects will understand that they have full control of the information that will be analyzed from their participation.

According to Saunders, M. et al (2007: 178) Research ethics therefore relates to questions about how we formulate and clarify our research topic; design our research in a moral and responsible way.

If for any reason the subject would prefer to reject a question that will be completely up to them. The subjects have the right to decline answering any questions being put forward to them. Also the author is of the opinion that due to the aim of this research being focused on physician's prescribing habits, the research has to be responsible in its design so that it does not harm any of its subjects due to the way they are treating their patients with specific medicines.

This research is not trying to find out if a specific Irish oncologist is using a generic chemotherapy regimen instead of using a branded medicine. The aim of the research is to find out the impact of branding when a physician is choosing a medicine type.

It will be ensured by the author that all questions will be respectively placed to gather data on brand theory and branding in the Irish Pharmaceutical industry.

3.1.10. Limitations:

As the researcher is using Oncologists as the subjects for the qualitative data collection, the limitation factor here is to gain access to them and their secretaries maybe the factor of allowing access or not, Secretaries can sometimes be known as the 'Gatekeepers'. These professional subjects are extremely busy and very hard to organize a 1-2hr-time slot to set the semi-structured interview.

Another limitation is the minimal amount of literature in this specific area. There is very little research done on the Irish Oncology arena and thus causing the research to be somewhat limited, there is a gap in the literature at the moment in relation to generic substitution and the introduction to reference pricing. The reason this gap exists is due to European Legislation not being approved yet. If reference pricing is regulated throughout all European countries it will have a massive limiting factor on this brand and brand loyalty theory as it might not be up to the Oncologist's anymore. The state bodies may introduce national tenders for big products and the researcher may not be able to decipher the branding issues being put forward.

Also the researcher is involved in the Irish Oncology Industry thus causing the subjects to be more questionable about the data being collected. This may have its limitations as regards to the credibility of the answers being received. The subjects may fear that the data being collected will be dispatched among their peers.

Another limiting factor for this research is that it is done over a cross-sectional time frame thus limiting the research to a specific time in the industry. Changes in the industry such as the addition of reference pricing may impact the oncologist's perception of branding at this specific time.

In addition the interpretation of the researcher maybe biased as the author is involved in the commercial side of the Pharmaceutical Company and this may cause the author to be slightly in favor of the branding concepts and influences.

3.2 Population and Sampling:

3.2.1 Population:

For my proposed research I have decided to interview four Oncologists in Ireland at four different regions demographically in Ireland.

The definition of the research is prescribing oncologists in Beaumont, Cork University Hospital, Waterford Regional Hospital and Mater Private Hospital.

Three Components of Population

Elements – Oncologists

Units – Beaumont, CUH, WR and the Mater Private.

Time – summer 2013

The Qualitative semi structured interviewees will be held in Beaumont, CUH, and Waterford and in the Mater Private hospitals. I have four medical oncologists who have agreed to one hour interviews.

3.2.2 Sampling Framework Qualitative:

I have secured four semi structured interviews with prescribing oncologists from Beaumont, CUH, Waterford regional and the Mater Private Hospitals. I have met all doctors previously as I have a working relationship with them; however this was necessary in securing their time to participate in the interview. All Oncologists were chosen because they all have at least 60 patients in there clinics at any one time and are prescribing branded medicines as well as generics every day. The interviews will last approximately one hour and will take place in the consulting rooms at the end of out- patient department clinics, this will allow for a quite discreet location to allow uninterrupted conversation.

I have organized the meetings either via email to the oncologists or through the oncologist's secretary. In all cases a meeting was organized for a one hour session. I also organized coffees/teas for our sessions as it was a way of relaxing the subjects. Depending on times of meeting some light refreshments were also organized.

3.3.1 Data Collection, Editing and Coding.

My intended research proposal will be an explanatory research described by Saunders et al. (2011) as a study that establishes casual relationships between variables. I intend to study the influence of branding and how oncologists behave due to brand loyalty in the Irish pharmaceutical industry. This will comprise of qualitative data collection in an effort to explain the reasons behind customer behavior and brand influence in prescribing habits of chemotherapy regimens in Ireland.

In order to answer my research question and objectives of this study primary data collection will be employed. This study will use a qualitative technique to gather the data, this I believe will help cover a wide range of data to be collected, and where it is hoped from the data inferences will be made in regards to the research questions and objectives (Gary Bernie notes 2012).

Due to potential subjectivity the author considers Locke's (2004) two recommended ways to manage subjectivity, firstly, neutrality, structuring questions to ensure they avoid biasing a potential answers and findings, Secondly, transparency, explicitly stating the author's own position. However a completely free ethnographic approach may entice the researcher into a very long and broad research process, therefore the author focused on a bounded ethnographic approach considering the time limits on the research.

Further confirmation that this was a qualitative approach is from Easterby-Smith et al (2008), this qualitative approach involved collecting data that was mainly in the form of words, rather than data that could be expressed as numbers, associated with a quantitative approach. The author used primary data predominantly through interviews with a minimal use of secondary data.

3.3.2 Primary Qualitative data Collection

3.3.3 Instrument Design

The influence of branding and brand loyalty interview questions were designed to primarily answer.

- Is a strong brand in pharmaceuticals vital for a medicine to succeed in the Irish Pharmaceutical market?
- Are Brand names influential when remember medicines?
- Does the origin of the medicine affect the Oncologists use of that medicine?
- Does the adverse effects with one brand influence the oncologists use over another?
- Can an Oncologist become loyal to a specific brand?
- Does relationship marketing and global pharmaceutical marketing influence the prescribing habits of Irish Oncologists?
- Can Irish Oncologists decide to prescribe a brand due to the corporate image of the pharmaceutical company?

The influence of consumer behavior and regulatory challenges interview questions were designed to primarily answer.

- Are Irish Oncologists manipulated by global marketing strategies in what medicines they use in their practice?
- Can the number of sales staff or marketers locally, affect Oncologists prescribing habits?
- Does the government body HSE influence what is prescribed by the Oncologists due to national budgets?
- Will the branded drugs' price affect the prescribing habits of Irish Oncologists?
- Are Irish Oncologists aware of the difference between generic prices and Branded?
- Are Irish Oncologists aware of the generic substitutions that are going on in hospitals with medicines such as antracyclines and taxanes?
- Would the adverse effects of generic drugs influence oncologists in using these medicines?
- Are oncologists in Ireland up to speed with regulatory bodies such as FDA, EMA, and IMB when prescribing medicines?
- Can reference pricing affect what medicines Irish Oncologists can prescribe?

\3.3.4 Interviewing Method

All four semi structured interviews will be conducted between the researcher and the selected interviewee face to face. The interviews will take place in private rooms where confidentiality and privacy will create an environment where information can be easily expressed and recorded without interference.

3.3.5 Question Content, Structure and Wording

An interview will undoubtedly be the most advantageous approach to attempt to obtain data where the questions are either complex or open-ended (Easterby-Smith et al.2008; Jankowicz 2005): I intend to open each interview with light hearted chat and basic demographic questions related to number of years worked in hospital and different disciplines' will then introduce a number of themes to be explored throughout the interviews. I intend asking open questions in a neutral tone to avoid bias followed by probing questions where necessary. Easterby-Smith et al. (2008) point out that the use of open questions should help to avoid bias. I will be introducing three themes for the interviews,

- Branding and Brand Loyalty
- Customer Behavior
- Regulation and external challenges

I will be asking open ended questions that have been prepared in advance of the interviews that all fall under the three themes mentioned. There is also the opportunity to ask questions that may arise throughout the interviews.

3.3.6 Interviewer Behavior during the Interviews

Appropriate behavior by the researcher should help reduce the scope for bias during the interview. Comments or non-verbal behavior, such as gestures, which indicate any bias in your thinking, should be avoided (Saunders et al.2011). Robson (2002) says that you should enjoy the interview

opportunity, or at least appear to do so. An appearance of boredom on your part is hardly likely to encourage your interviewee.

As the interviews will be part of a business masters I feel it is important to show the interviewees the respect their time and experiences deserve by wearing appropriate dress attire in the form of a business suit with shirt and tie. I will attempt to ask all questions in the same tone while listening to answers without interruption. I plan to record the interviews using an audio recording device whilst also taking notes of all relevant points and tone during the interviews. As the themes and questions being asked directly relate to my day job I expect to have sufficient knowledge of the chosen themes to be able to ask pertinent questions where necessary to follow up on answers recorded.

3.4 Methodology Summary

I have attempted to primarily collect my data using a qualitative tool such as four semi-structured interviews. Although it is extremely important how you set about collecting data, ensuring you follow procedures to increase reliability and accuracy, it is just as important what you do with the data once collected.

The semi structured interviews are an effective qualitative research method that allows participants to express their views and expand on points free from restrictive answer choices. Dey (1993), points out that' the more ambiguous and elastic our concepts, the less possible it is to quantify our data in a meaningful way' Qualitative data are associated with such concepts and are characterized by their richness and fullness based on your opportunity to explore a subject in as real a manner as is possible (Robson 2002). New behavior patterns can be identified 'better and earlier using qualitative methods of investigation' (Milliken 2001).

In this research it is my goal to get an understanding of Irish Oncologists prescribing habits and what influences? Is there a link between customer behavior, brand loyalty and prescribing?

4. Data Analysis and Findings

4.1 Introduction:

The researcher organized four semi-structured interviews in four different hospitals around different regions of Ireland. The researcher scheduled these one hour interviews either via email through physician's secretaries or by contacting the physician in person as the researcher has worked with the interviewee's over a 5 year period. The researcher attempted to make the interviewee as comfortable as possible to attempt a relaxed atmosphere. The researcher organized food/coffees for all meetings. Meetings were held either in the oncologist's office or in the out patients clinic meeting rooms, depending on the time and place that suited the physician. Due to time constraints the researcher had to organize these four interviews over a two week period and only for the researcher's business relationship with these physicians it would have been extremely difficult to tie these busy professionals down.
The researcher used the qualitative interview styled method to collect his data as it would benefit the overall objectives of customer behavior and body language when the researcher attempted to ask questions. Initially the researcher would open all interviews with relaxed day-to-day questions such as family questions or sport questions to relax the Oncologists and also the researcher did have a history with all physicians so he knew what would relax them.
There were three main objectives of the interviews,

1. Branding and brand loyalty towards medicines.
2. Customer Behavior.
3. Regulation in the Irish Pharmaceutical Industry.

These three sections were broken down into various topics and issues and each physician was asked the same styled questions.

4.1.1. Medical Oncologist A

The 1st semi-structured interview was held in Beaumont hospital on a Thursday after clinic in the out-patients ward after the Oncologists was finished his clinic. This Oncologist has extensive experience in Breast cancer and has trained in MD Anderson in the States; he is extremely well respected by his peers. He was made professor of Oncology at the age of 36 and is maintaining a high level of academic work and clinic work at present. I have worked closely with this Oncologist on various occasions over a 5 year period and due to my relationship with this physician being so good, access was a little bit easier for me and I also knew his responses to my questions would be non-biased and trustworthy.

I previously worked with this Oncologist to obtain better outcomes for breast cancer patients in the metastatic setting. I helped the oncologist with these patients as I had a branded medicine called Myocet (liposomal doxorubicin) that would help patients with their time to treatment failure and also their progression free survival in this setting. When the Oncologist noticed good responses with his patients after using Myocet he started to trust my knowledge and expertise for him and his patients.

This trust and loyalty towards me helped me gain access to this oncologist for this interview. It takes a lot of work and experience to gain this relationship with oncologists as at the end of the day they are trying to save lives, thus they have to believe in the person they are talking to. I am lucky to have had such a good branded medicine at the time, and it is because of this that I feel our relationship started from.

On average this Oncologist would have 30-40 patients in his clinics in any one day. He would also have up 20 research projects ongoing at any one time. So for him his main priorities are to better treat his patients in clinic but also try to be the founder of new research that will aid patients globally. When I mentioned my research was involved in global marketing schemes in the pharmaceutical industry and how oncologists reacted or were influenced by these schemes he was happy to give me his time to give his opinions on the matters.

4.1.2 Branding *Answer*

Oncologist A beliefs states once a branded medicine has been brought to market, the costs and the workload it takes by research and development teams to get it there is huge as I am involved in various ongoing projects at present for pharma companies in Ireland. I may be given sponsorships up to €100,000 to do work at phase 1 stage to find out the response rates of medicines. Branded drugs I feel are extremely beneficial as they are new novel medicines that have been developed for specialized disease areas. Without pharmaceutical companies aiding researchers like me or R&D teams there would be no new medicines being brought to the market and more importantly no new advancements in medicines!

I understand how costly new branded medicines are when they initially come to market but this is just a plow to try and retain some money that was initially placed into R&D to develop the market. I completely understand that some pharmaceutical companies exploited prices as they held a monopoly when they brought the new novel drug to market but in my eyes that is just business and without it there would be no incentives for funding in the future.

After using branded medicines I feel I start to trust and understand the medicine better the more experience I gain with it. For example your product Kieran Myocet, was initially started at doses of 65mg/kg but after using the medicine I started to increase this dosage when I felt necessary for certain patients. Maybe it is due to me gaining trust and getting an understanding of the medicine I'm not sure, but I do it all the time to new Branded medicines. Also I notice with branded medicines, the proprietor of the brand will always do further research or clinical trials in off license areas to get a better understanding of the brand but also to try and extend the brands life cycle. This is evident with medicines like Herceptin in oncology. This Roche branded drug was initially administered I.V but after further research Roche designed a new administration method via a sub-cut patch. Due to this research Roche

has now extended the products life cycle but also due to me trusting Herceptin as a brand I will now try the sub-cut without any hesitation.

4.1.3 Brand Loyalty *Answer*

I know I shouldn't say I am brand loyal due to every patient being different and every patient responded differently to certain branded medicines, but unfortunately I have to say I do become loyal towards some brands over others. I think it is mainly due to habit and experience of the brand over others. When prescribing brands I pretty much always use the one I am familiar with and unless the patients has an adverse effect due to that brand I will not change the medicine I have prescribed.

Initially loyalty mainly comes from the research that has been done on the brand. I look very closely at overall survival benefits and time to treatment failure outcomes in all branded clinical trials. I then decide what brand to use and over time if the brand is showing good responses for my patients I will stick to that brand. I suppose it is like anything in life if you become aware and experience with a brand it is very hard to move away from it.

Global marketing does influence me when I am choosing the brand. When sales staff or marketers from the pharmaceutical companies send me new data on the brand that I am using, I feel a certain satisfaction that I am using the right medicine. I will remain loyal to a brand unless an extremely new and novel brand comes to market that further benefits my patients. Without a new brand I will prescribe a brand throughout my career maybe due to habit but I do think it is mainly due to experience and a better understanding of that brand. The best way I can explain my attitudes towards branded medicines is, I play golf with Calaway branded clubs, I start to get used to these clubs, I get a feel for what I can potentially do with these clubs but more importantly I have an understanding of what the clubs can actually do for me. I would not change this brand of golf clubs because I start to trust them and have a slight fear that if I change to another brand I won't play as well. I'm loyal to Calaway golf clubs just as I'm loyal to Roche's Herceptin.

4.1.4 Customer Behavior *Answer*

Cognitively I suppose I do interact with certain sales staff differently to others. Like for example yourself Kieran, you are probably the youngest sales staff I see from pharmaceutical companies. This and other personality traits set sales staff apart. I see certain staff more than others because if I see the value for me, then I will see them. With you Kieran we have worked together on research groups, on international meetings, organized speaker events etc. etc. This to me is value and this is why I see you more often than others.

Knowledge of medicine and products is also extremely important to me. If I notice a representative or a marketer not understanding their brands how can I trust what their saying for future topics. If I see a rep. and they have a good understanding of their brands and are benefiting me and my patients with their knowledge than I will see them but also may try their branded medicines as I trust them and believe in what they are saying. For me it is better if a rep. says they don't know rather than pretend and communicate misleading information to me.

Also when I meet marketers they can influence me to prescribe certain brands as I will remember 3-4 key points of a branded medicine. If these 3 key points are communicated in a logical and beneficial way, I will try their medicines but furthermore I will remember them!

To summarize I suppose I do agree I react differently to certain sales staff and certain sales staff influence me more than others when I am prescribing medicines. I behave differently towards certain groups of reps. As I feel they have been trained in a certain generic way, for example Roche staff can be a more tactful approach, always trying to help with sponsorship etc. Then smaller pharmaceutical companies like Cephalon communicate their medical knowledge and the benefits of their products more. I react differently to both these groups of reps and both are adding value and are beneficial to me and my practice.

4.1.5 Regulation *Answer*

I belief that regulation has been, both positive and negative for the pharmaceutical Industry in the past five years. The positives are how the relationships between medical doctors and pharmaceutical sales representatives are now governed by increased regulation through IPHA; this is of vital importance as the patient who is the third party in the relationship must always be the most important party.

Medical professionals need to feel that they are free to prescribe medicines for patients in the knowledge that the medicine prescribed is for the right reasons and without influence from the pharmaceutical industry, without influence meaning without financial incentive either through educational grants or international meeting attendance, staying in opulent five star accommodations. A positive from increased regulation in patient confidence in drug prescribing, Doctors do not wish to be perceived by patients as been influenced by pharmaceutical companies. The negatives of regulation are the reduced ability or willingness of pharmaceutical companies to invest in open and transparent research projects without influence, also there is less opportunity to attend international meetings which were a fantastic opportunity to gain new medical insight and liaise with international research experts.

4.2.1 Medical Oncologist B

Oncologists B is based in County Waterford with a population span of 300,000 people. She covers county Waterford, county Wexford and county Kilkenny. She has been working as a medical oncologist for approximately 15 years and has vast experience in breast, lung, colorectal and many other cancers. Due to the vast population group she has extremely busy clinics and can be very difficult to see at the best of times.

She is constantly up skilling her knowledge of her profession by attending various international conferences annually and also does vast clinical trial and academia work. She is an extremely well

thought of oncologist in her field and respects the knowledge of all her colleagues from surgeons through to nursing staff. She treats on average 200 breast cancer patients annually always with the wish to give the patient a better outcome.

She always believes that new medicines are the reason for such advancements in patient survival rates. Initially she did a PhD in biochemistry thus giving her a passion for research. This research flame was not distinguished due to her very busy schedule. She has at least 10 clinical trials on going and she has 2 clinical trial nurses specifically devoted to her work.

I was extremely lucky to gain an appointment to interview her for my research as I had worked with her previously on a genotype project in breast cancer patients. Due to my relationship I meet with Oncologist B in her office in Waterford regional on a Tuesday afternoon between 3-4pm. She was happy to take the interview as she sits on the ethical board in Waterford regional hospital so research on influencing oncologists prescribing habits are very interesting to her.

4.2.2 Branding *Answer*

Medicine in Ireland is not subject to direct to consumer advertising buts as a physician we can still be sent marketing materials within the license of the medicine. I do feel good branding creates good value for me as I will remember a good brands name just like Tamoxofin I will always remember it as a brand name but due to global marketing techniques like nurse workshops or branded materials with efficacy benefits of the drug I will always remember it.

What I value in a branded medicine is quiet simple, one I can rely on, one I trust and also one I know will not cause patients any issues or adverse events. Today due to branded medicines being so expensive for example we seen the new leukemia drug costing up to €60,000 per dose, I find this to be ridiculous. I do understand the cost of bringing a new branded medicine to market is extremely costly but I find it ridiculous that at this stage there is not more transparency within pharmaceutical companies and government bodies like the HSE and what a drug costs to get to market and what the HSE are will to pay for it. This would allow medicines be more accessible in Ireland I feel.

Without Brands we would not have patents and new medicines but more importantly we as physicians would not have the reliability of a medicine we give to our patients. It's like me going to an expensive hotel like the four seasons I know it will cost more but I get reliability, exclusivity and the best that hotels can offer today.

4.2.3 Brand Loyalty *Answer*

There are a lot of negatives in my mind when you become brand loyal or even corporate loyal due to previous medicines. Taking Roche for example their brand of Herceptin is fantastic for Her 2+ breast cancer patients but when an oncologists sees a new branded medicine developed by Roche why are we all influenced by our loyalty to the brand? I see myself do it all the time, I always give a new branded medicine more of a chance from a big pharma company over a company that might be small or one I have not used before.

Corporate loyalty is a massive issue in my eyes in Irish oncologists prescribing habits. There seems to be an acceptance of a brand once it has been developed by a well-established corporate branded company. Oncologists in Ireland should be paying more attention on clinical trials and results of the actual medicine rather than where the medicine comes from or who sells it.

Thus there is a big negative towards becoming loyal to a corporate brand, all medicines are different and have to be treated differently too. Regulatory bodies I feel may be biased to this issue also? It is my opinion that bodies like the FDA maybe more lenient towards medicines coming from huge corporate global pharmaceutical companies due to their loyalty towards them?

4.2.4 Customer Behavior *Answer*

When I am prescribing I usually prescribe drugs that I feel will benefit the patients conditions the best. I do find myself prescribing medicines out of habit but now due to economic constraints and departmental

cut backs I have to behave differently. I know am trying to substitute branded medicines for generic medicines once generics are available for that medicine. Because I am on the ethical board here in Waterford I feel if there is a cost saving of up to 20% a medicine should be switched to its generic counterpart as it is the exact same drug with the same bioavailability as the branded predecessor.
I think in future the HSE will make it compulsory for oncologists to prescribe generics if they are available to them and also without their choice, like the NHS system in the U.K.
I probably would behave differently when I know that the generic substitute caused more adverse effects than the original. I would go back to the more expensive branded medicine but as I said this process might be out of my hands in the near future. I feel the HSE will put certain medicines like Antracyclines for example up for tender and the cheapest supplier will win the contract for a period of time and the oncologists won't have a say in that decision.
Supply will then be an issue when one pharma company wins the contract. The will then be the whole supplier to all hospitals in the country with no alternative source. This I feel will be a challenge down the line and at the end of the day we are only an Island.

4.2.5 Regulation *Answer*

We in Waterford hospital cannot accept sponsorships or travel expenses from pharmaceutical companies due to the standard operating policies we have in place here. I think this is a good thing as it rules out any thoughts that oncologists might be influenced to use certain medicines over others.
I do acknowledge regulatory bodies such as the IMB, EMA and the FDA because they aid me in what medicines I should prescribe as they have been tested in their systems. I rely on regulatory bodies to find the negative drugs so that I will not prescribe them.
The second side to this coin is regulatory bodies stopping certain brands from entering the markets for example there are new anti-coagulant drugs available in Europe that obtained EMA approval but did not get approval from the IMB body this I feel is counterproductive.

4.3.1 Medical Oncologist C

This 3rd semi- structured interview was held in Cork University Hospital at 8am in the 3rd week of July. Oncologist C is the third busies oncologist in the country. He sees on average 350 breast cancer patients annually but also specializes in all cancer disciplines. He has a private practice also in Cork and has been working as an Oncologist for the past 20 years. He is one of the most experienced oncologists in Ireland and has seen huge changes in medicine and in the pharmaceutical industry.

I previously worked with this oncologist when linking him with an oncologist in Genoa, Italy. He formed a great working relationship with her as they both worked on a clinical trial co funded by two pharmaceutical companies. I suppose it is due to this interaction that I formed a relationship with this oncologist and this allowed me to interview him.

He has trained over 80 new oncologists through his years in CUH and thus his time and knowledge will be fantastic for my research. It will be great to see his opinions on brands and how he behaves due to loyalties or due to regulatory bodies when prescribing medicines.

4.3.2 Branding *Answer*

When I prescribe a medicine I have an image or a somewhat perception of that medicine due to its brand. I remember a brand due to past experiences for example if a brand causes alopecia I will remember that trait with the brand. This perception can be negative but it also can be extremely positive. If I see a specific brand showing very high efficacy traits or better response rates for my patients, I will remember these benefits and prescribe that brand in future.

Branded prices and generic prices are becoming a hot topic at present in Oncology as there are new medicines known as Biosimilars taking over from products such as Gcsf or Epo's. Bio-similars are like

generics except they are harvested/grown exactly the same as the originator and they have to undergo clinical trials just like the originator. I have no issues with prescribing Bio-similars as in my eyes they are exactly the same product for 40% of the price. When it comes to generics, I still only use the branded medicines as I am familiar with them and I know how to react to their adverse effects but not the generic counterpart.

I use branded medicines because I believe in their benefits for my patients but also because of the experience I have obtained when using them over the last few years.

4.3.3 Brand Loyalty *Answer*

Yes I am brand loyal, plain and simple if I believe in a brand and it works for me, I continue using it! It is not due to sales people influencing me or marketers, it is due to me reading clinical papers involving the branded medicines, trying them out on patients and then continuing to use them.

If I knew that pharmacies were changing my prescriptions, without my consent, to generic substitutes I would be extremely annoyed. I don't have experience with generics as I do with branded medicines so if that is loyalty then I suppose I am. I would change a patient's medicine back to the originator if they started using a generic because I don't know how/where the generic medicines are manufactured.

If there is a national tender and I don't have an option to use branded medicines I will more than likely be against such a movement. I feel all oncologists should have an option in what medicine they prescribe for their patients and in the UK they are completely the opposite, their medicine dispensing rights are governed by the NHS and I for one do not want that for Irish patients.

4.3.4 Customer Behavior *Answer*

I suppose without my knowledge I do treat certain sales executives differently to others. If I form a good working relationship with one over the other I do give more time to the better rep. I should not be like that but I do form biasness towards some reps over others. What values sales reps bring to me are various. They communicate new advancements in their products that I might not be aware of and this might help some of my patients. The allow me understand what work is ongoing in their corporation at a global level and if there maybe any chance for me to be involved in their global research. I also value the networks that the pharmaceutical companies can give me at an international level.

I hope these traits or values that sales reps bring to me don't influence my prescribing habits but obviously that is not true. If I am part of a clinical trial that is being run by certain pharmaceutical company and I see great responses from my patients, I will use that branded medicine off trial for other patients.

Thus sales staff, clinical trials and marketers do influence me to prescribe certain brands as long as it helps my patients.

4.3.5 Regulation *Answer*

Regulation impacts our day to day role greatly in the past five years when dealing with the pharmaceutical industry, we no longer receive medical samples, there is a real lack of research funding since there were changes made to how the finances could be paid to individuals, I feel regulation of the pharmaceutical industry has gone too far,

Yes there is a need for regulation, we have to have confidence in the standard of clinical trials and the product information you relay to us but where will it all end.

I am less likely to meet with representatives since regulation has become so stringent because Sales reps are now too restricted in what they can do for me, a positive gained by having regulation in place is public and patient confidence in the relationships that exist between medical professionals and sales executives.

4.4.1 Medical Oncologist D

The fourth semi- structured interview was held in the 3rd week of July in The Mater Private hospital with a new oncologist. Just back from working in Toronto a position arose in the Mater Private and he obtained the job. Originally from Dublin this oncologist was delighted to be given the opportunity to start his own private practice.

I had worked with oncologist D when he was a trainee registrar in Beaumont hospital and was now delighted to see him with this opportunity in The Mater. He was an exceptional registrar and was well respected by all his mentors at the time of his oncology training. I felt oncologist D would be a great asset to my research as he gave a new young oncologists attitude top branding but more importantly loyalty and pricing.

Do obtain access to this oncologist I organized a meeting in his office via email and obtained a one hour slot. The private practice would give my research a different opinion on how pricing is treated when choosing medicines as it is the physician's budget that will be used but also private insurance companies have control of what is being prescribed

4.4.2 Branding *Answer*

I feel branded medicines are extremely beneficial as I know what I am getting and I hold my own perceptions and belief towards certain brands. Branded medicines can give a physician a trust factor as

they can rely on what the branded medicines features are. In my practice if a branded medicine is not off patent yet I will prescribe the one I am must familiar with and also the one that I am best able to treat the adverse effects that go with the medicine.

Branded medicines are a lot more expensive and in this day and age I am extremely cost sensitive. If I see a brand going off patent I will revert to a generic substitute. I do understand that pharmaceutical companies have to obtain monies back after all the funds they placed into R&D to get the medicine to market. But once the ten year patency has expired I feel I should change to the generic option to save my department more money.

With brands I understand there is biasedness towards certain ones and this is due to experience but in my experience mainly due to habit. A brand name is an extremely valuable part to a brand, one I remember easily, one I can spell but more importantly one closer to the start of the alphabet as when I prescribe electronically the brands starting with the letters "A" etc. are obviously seen first.

All in all brands are extremely important to the medical industry as without them there would be no funding for further research but also there are negatives, a physician can perceive a brand of medicine to be poor and cause many adverse effects and thus never use again. So there are pluses and minuses to brands in medicine in my eyes.

4.4.3 Brand Loyalty *Answer*

In my opinion I can see how oncologists become loyal to certain brands, due to sponsorships, experience, clinical trials, marketing and even habit but unfortunately in my practice I have to let emotions go and not become attached to certain brands even if I am happy with their responses and outcomes for my patients. I have to treat with the cheaper alternative as private bodies like VHI, Aviva and Laya pay for my patient's medicines not government bodies. Thus I have no say in what I can prescribe once a brand has gone off patent.

I personally can become loyal to a certain corporate company due to their history and expertise. For example I always try to use Roche's medicines as they as a company specialize in oncology products and have a great R&D team behind them. This is a massive positive as when Roche launches a new medicine I will be sure to try due to my loyalty with them. I am waiting anxiously for Roche's new drug that does not even have a brand name yet but it is known as Tdm1, I have seen the clinical data behind this medicine and I really want to use it as it will be extremely beneficial for my patients but I have to wait for the regulatory bodies to give the drug its approval.

4.4.4. Customer Behavior *Answer*

Because I'm relatively new to this hospital I find myself giving every sales representative a chance to meet me at some stage. As my practice is just starting to gain momentum I need to listen to all the executives have to say. The reason I want to see the "Industry" is because I would like to be involved in more clinical trials and more advisory boards and I feel the "Industry" can provide that for me.

I have recently started a trial for GSK for a global clinical trial; I obtained the chance to get involved with this trial through a medical representative and from now one I will give her any chance to see me that I can.

Knowledge is key when I am talking to reps; I expect the rep to have a wide medical knowledge before I meet them as I want to obtain value when I meet them. Some reps I have noticed can be better at communicating their knowledge then others. All I require is what new information they have on their brands and what this new knowledge can give me when I am treating my patients, this I see as value and I suppose cognitively I seem to treat some reps differently.

4.4.5. Regulation *Answer*

There are pluses and minuses in my eyes towards regulation. I absolutely agree there should be regulatory bodies in place to approve medicines or not to allow medicines get to market but there sometimes are medicines that are approved by bodies like the FDA in the States but not approved the EMA and thus we physicians are not allowed to use such medicines in Europe. This causes a hindrance as a lot of my colleagues have been trained in the states or practiced oncology in the states and would have used medicines there that are not available in Ireland due to regulatory bodies not agreeing.

I think IPHA is a great body to have in Ireland as it shows transparency to patients that oncologists or any physician is not being influenced by pharmaceutical companies due to the laws that are put in place. It is hard to know where this line stops. IPHA have to understand that oncologists like myself need to have access to the pharmaceutical industry to obtain sponsorship for my work but also to gain knowledge about their new and innovative drugs on their portfolio.

Conclusions and Recommendations 5

5.1 Conclusions

It is the conclusion of the researcher that corporate branding influences oncologists to prescribe medicines due to an emotional loyalty they obtain due to experience. It is the researcher's opinion that global marketing departments have to communicate their messages better to Oncologists as the impact is evident at hospital level. By applying gaps in literature around branding and the influence of branding in medicine the researcher was able to gather a lot of data from oncologists on their own perceptions of branded medicines.

The researcher also noticed there was a gap in literature when it comes to prescribing habits of oncologists in Ireland. The medicines being prescribed are lifesaving and thus it is extremely important to understand the psyche of oncologists due to influential powers like marketing departments.

The researcher acknowledged that oncologists are still human and behave emotionally too when prescribing medicines, thus oncologists become brand loyal just like any other consumer when they become familiar with a brand. There was no literature to explain the implications of brand loyalty when prescribing chemotherapy drugs.

The limitations that exist with regards to literature for regulatory bodies in Pharmaceuticals concerned the researcher and this strengthened the dissertations credibility. The researcher noticed that there was no correlation between what regulatory bodies expected from physicians and what was actually happening.

The three main objectives for the researcher were to:

- Gain evidence that brand and brand loyalty does influence Irish Oncologists when prescribing medicines.
- Prove that oncologists behave differently towards influences such as sales staff, marketers, corporate brand and pricing structures.
- Determine the impact of regulatory bodies in pharmaceuticals when an oncologists is prescribing medicines.

5.1.1 Branding

The researcher concludes that after interviewing oncologists A, B, C and D a constant trend appears in favor of branded medicines. The value that a brand creates in medical oncology can simple be summarized into two points,

- Trust
- Experience

It is the researcher's opinion that the brand value creates the influence for oncologists. It is not due to marketing communication tools or sales techniques it is due to an oncologist trusting a branded medicine due to their experience with that brand.

Another trend that filtered down to the researcher from the oncologists was the topic of brand prices. The researcher concluded that the costs of branded medicines that are brought to the market are extremely expensive. All interviewee's agreed that the price has to be more expensive than generic medicines due to retaining the funds that have been spent on R&D at the initial experimental stage. The researcher believes there should be more transparency between pharmaceutical companies and government bodies when prices are negotiated for medicines. This will allow branded medicines to become more accessible to oncologists.

Medical oncologist C was quiet adamant that he would always prescribe a branded medicine over a generic due to his experience and trust towards the medicine. These values of brands are extremely beneficial and influential for oncologists as they can treat their patients with the right chemotherapies because they know they are using the best medicines available to them!

The researcher learnt that without branded medicines being allowed to enter the Irish markets, medicine and cancer treatments would never improve and would remain stagnant all the time. The researcher derives from the data that if government bodies are not willing to pay extra for branded medicines then there will be reductions in sponsorships towards R&D which, in turn will reduce new novel medicines being manufactured.

The researcher also learnt that brands in medicine can also be negative; this is due to poor experiences or bad adverse effects caused by certain brands. This poor perception that a brand can leave with an oncologist will reduce their chances of using the medicine again. Thus the researcher believes that brands are extremely advantageous to oncologists and will influence them to prescribe them again but they can also cause an oncologist to perceive a poor image of them and never use them again.

To deduce the influence of branding in oncologists prescribing habits, it is evident that due to trust and experience all four oncologists are influenced by branded medicines. Branded medicines are extremely expensive and maybe an issue of exploitation exists on the pharmaceutical company's part. Branded medicines also cause oncologists to prescribe habitually which can have negative implications as better medicines might be appropriate. It is the researcher's opinion that pharmaceutical companies need to

communicate their brand image and logos better like the FMCG industry to exploit this influence to its maximum potential.

5.1.2. Customer Behavior

The researcher deduced from the four interviews that all oncologists behave differently towards influential tools like sales staff, marketing tools, sponsorships and clinical trials. The researcher noticed that it is a cognitive thing that causes one oncologist to react differently to one tool over another. All oncologists agreed that they for a biased relationship towards some sales staff over others.

The researcher believes that the reason an oncologists forms a biasness towards one representative over another is mainly due to two points,

- Knowledge
- Communication

The overall trend was the same throughout all oncologists if the sale executive can create value for their practice than that representative has a more impactful influence on changing their prescribing habits. This value is created through a great knowledge of their product and be able to communicate that knowledge in a well versed approachable manner.

Another trend that the researcher noticed that may cause the oncologist to behave or be influenced differently was clinical trials. If oncologist was part of a clinical trial for a specific medicine he/she would gain more experience in using the medicine and would be influenced to try off trial.

Also the researcher deduced that all oncologists reacted differently towards pricing. It depended on what external challenges the oncologists had in their departments. One oncologist was in the private section, thus according to operating procedures that existed in his hospital was acquired to generic substitute when available. Other oncologist were less cost conscious and behaved completely differently, they were more in favor of using expensive medicines if they guaranteed less toxicities

with better responses. The researcher believes that there should be more policies put in place when prescribing medicines due to the wide verities of prices.

The researcher formed an opinion after all interviews that all oncologists behave or react differently towards, sales staff, pricing, clinical trials and marketing tools. Psychologically all oncologists behave differently and there should be a focus on psychometric testing for physicians as they are all differently. Maybe there should be standard operating procedures to follow for all hospitals and this would reduce the differential aspects of prescribing due to consumer biasness. It may be dangerous for an oncologist to form biasness towards one medicine over another as all patients are different and all patients may need to be treated differently.

5.1.3 Regulation

The researcher noticed positive and negative attitudes towards regulatory bodies in the pharmaceutical industry. The main objective of the researcher was to understand weather regulation influenced the prescribing habits of oncologists.

The change to increased prohibitive regulation is due to a number of high profile legal cases in the United States where pharmaceutical companies have paid out multimillion dollar settlements for poor marketing practices. The majority of pharmaceutical companies operating in Ireland are global companies who operate in the most lucrative market the United States. This has led to global companies introducing strict internal regulation policies that are adopted in every market they operate in, this is in conjunction with complying with the standard External regulation policies each country will have in place. In Ireland pharmaceutical companies are regulated under the Irish pharmaceutical healthcare association (IPHA) regulations. The IPHA regulations must be adhered to firstly as they represent the law of Ireland. However the Internal regulations global companies have in place represent in the majority of cases American law and marketing policies which place far greater restrictions on companies marketing practices than IPHA regulation. This has led to companies in

Ireland operating different regulation codes relating to marketing practices. An example being company X can provide International travel to attend a medical conference for hospital doctors, where company Y cannot attend international conferences due to internal regulatory restrictions.

This has led to a situation where pharmaceutical executives and medical hospital doctors are confused and unsure about complying with regulation standards.

Taking Ireland as an example the researcher concluded that IPHA was successful in some parameters but failed in others. IPHA governs the relationship between the oncologist and the representative, the overall trend here is that it is a positive as it shows transparency towards the patients that no oncologists can be influenced by sales members due to the governing body. The negative trend towards IPHA is that some oncologists believe they are too stringent with their policies and are becoming "too Americanized". The researcher noticed the frustration of some Oncologists not knowing what he can actually do when trying to contact industry anymore due to there being so many laws and policies through IPHA. When is it going to be too much? IPHA have now stopped pharmaceutical companies to dispense free branded pens to oncologists due to the influential impact. The researcher noticed the frustration and negative opinion of these new policies being put in place by IPHA.

The researcher learnt that due to regulatory bodies such as the FDA allowing medicines into the American market, this can impact their use of that medicine. It is a great positive for an oncologist to have the IMB (Irish Medical Board) in place as it allows the physician to form an opinion of the medicine immediately. If the drug has been accepted by the IMB then it will be perfectly acceptable to use with the suitable patient.

The negative trend towards regulatory bodies is the minimum cohesion between them. The FDA may approve one drug but the EMA may not. In an oncologists eyes this is a bad experience as they

formulate an opinion about a drug and if that is changed due to conflicting regulatory bodies, which one should they trust?

To conclude internal regulatory bodies like IPHA exist to monitor and control relationships between sales representatives and oncologists to reduce influential prescribing habits and also to show transparency to patients. Regulatory bodies like FDA, and EMA can influence the prescribing habits of oncologists as if the medicine is approved by governing bodies then they are accepted and allowed to be used on the most suitable patient.

5.2 Recommendations

I believe that pharmaceutical companies need to understand their impact when influencing oncologists in Ireland. The evidence from this dissertation suggests that due to branding, customer behavior and regulation oncologists are influenced to prescribe medicines. It is the pharmaceutical industry's duty to communicate detailed and trustworthy data to these physicians as they are treating lifesaving ailments.

For the future I think there should a better understanding at global level of corporate branding and its impacts on physicians at a local level. It may not be the branded medicine that is the influencer as opposed to the corporate brand. Brand loyalty and relationship marketing is another area that global departments need to exploit better. It is obvious from this dissertation that all oncologists are human too and become loyal towards certain brands and towards certain sales staff.

Customer behavior is a robust area that I think should be developed further in regards to the psychological differences between oncologists in Ireland. Most oncologists will treat patients the same but in some cases due to biasness or even an innate cognitive believe some medicines are prescribed over others. There is very little literature to show that there is a correlation between certain psychological traits towards certain prescribing habits.

Regulation I feel is going to become a hot topic in the near future, work needs to be done on the transparency of regulatory bodies such as the FDA and the EMA. Why are some drugs approved over

others? These regulatory bodies are influencers in their own rights and if they have conflicting beliefs it can cause concern amongst oncologists.

Also I think there is a lack of literature on external policies put in place by regulatory bodies such as IPHA. Who governs their policies? I believe the current marketing practices adopted by pharmaceutical companies in Ireland have proven to be lucrative and successful over a number of years, however the evidence is clear from the research findings that relationships between hospital doctors and pharmaceutical representatives is constantly evolving. Hospital doctors due to time constraints no longer have the opportunity to meet as regularly with representatives as previously experienced.

A lot of work needs to be done at local level and at global level to obtain a more transparent platform to allow companies influence medical staff but all within the right controlled parameters.

Self Reflection On Own Learning 6

6.1 Reflective Learning

The purpose of this chapter is to outline the approach to learning that was undertaken, to identify new skills that were acquired or developed throughout the process and the self-reflection of the author during the compilation of the research dissertation. The author will apply the theory to uncover his learning style. The skills acquired, developed and identified during the learning journey will be documented to allow for future development to be outlined.

Bolton (2010) defined reflective learning as the process of 'paying critical attention to the practical values and theories which inform everyday actions, by examining practice reflectively and reflexively. This leads to development insights'. This author aims to analyze and evaluate their learning process throughout the research dissertation.

6.2 The Importance of Reflective Learning

The practice of reflective learning has been around for decades with academia devoting much time and effort into the process and its benefits. Schön (1987) recognizes the significant contribution of critical reflection in the development of professional knowledge while Boyd and Fales (1983) define reflection as 'the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self and which results in a changed conceptual perspective'

Over the course of the Masters critical thinking was an important tool required not only for successful grades, but for the development of students to required full fill the master's program. Furthermore authors such as Paul (1995) identifies ten elements "that are present in all thinkers about any problem" the author argues about the value of these elements of reasoning, once we progress from thought which is purely associated and undisciplined, to thinking which is conceptual and inferential, thinking which attempts in some intelligible way to figure something out, in short, to reasoning, then it is helpful to concentrate on what can be called "the elements of reasoning" (Paul 1997)

Critical thinking is primarily concerned with turning experiences into meaningful learning which are what this chapter hopes to achieve.

6.3 Learning Styles

The term learning styles refers to the view that different people learn information in different ways. It can no longer be assumed that individual students will achieve academically by being taught the same way. As further research is conducted greater effort should be made to adopt new methods and techniques which may complement the different learning styles currently researched. In recent decades, the concept of learning styles has gained considerable influence. Following on from (Bolton

2010), the theory of reflective learning.

Klob (1984) discusses the process of learning and attempts to define it as the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it. Klob believes that learning will take place at its optimal level when the learner has an adequate balance of the four abilities; concrete experience ability, reflective observation ability, abstract conceptualization ability and active experimentation ability. His cycle represented below, would suggest that optimal learning must pass through each phase, this will allow the grasped knowledge to be transformed into a mental model which can then be applied. David klob (1984) discovered that the four combinations of perceiving and processing determine the four learning styles.

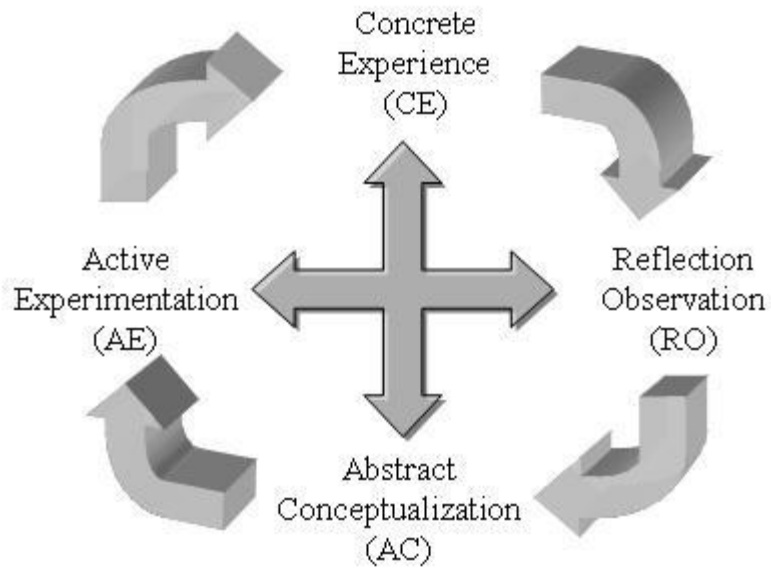

Figure 2. Experimental Learning Cycle (Kolb, 1984)

Klobs model therefore works on two levels, the four-stage cycle as the diagram demonstrates and a four type definition of learning styles

1. Diverging (CE/RO)

2. Assimilating (AC/RO)
3. Converging (AC/AE)
4. Accommodating (CE/AE)

In an extended version of Kolb's learning cycle, Kolb's four learning styles are depicted; Accommodating, Diverging, Converging and Assimilating.

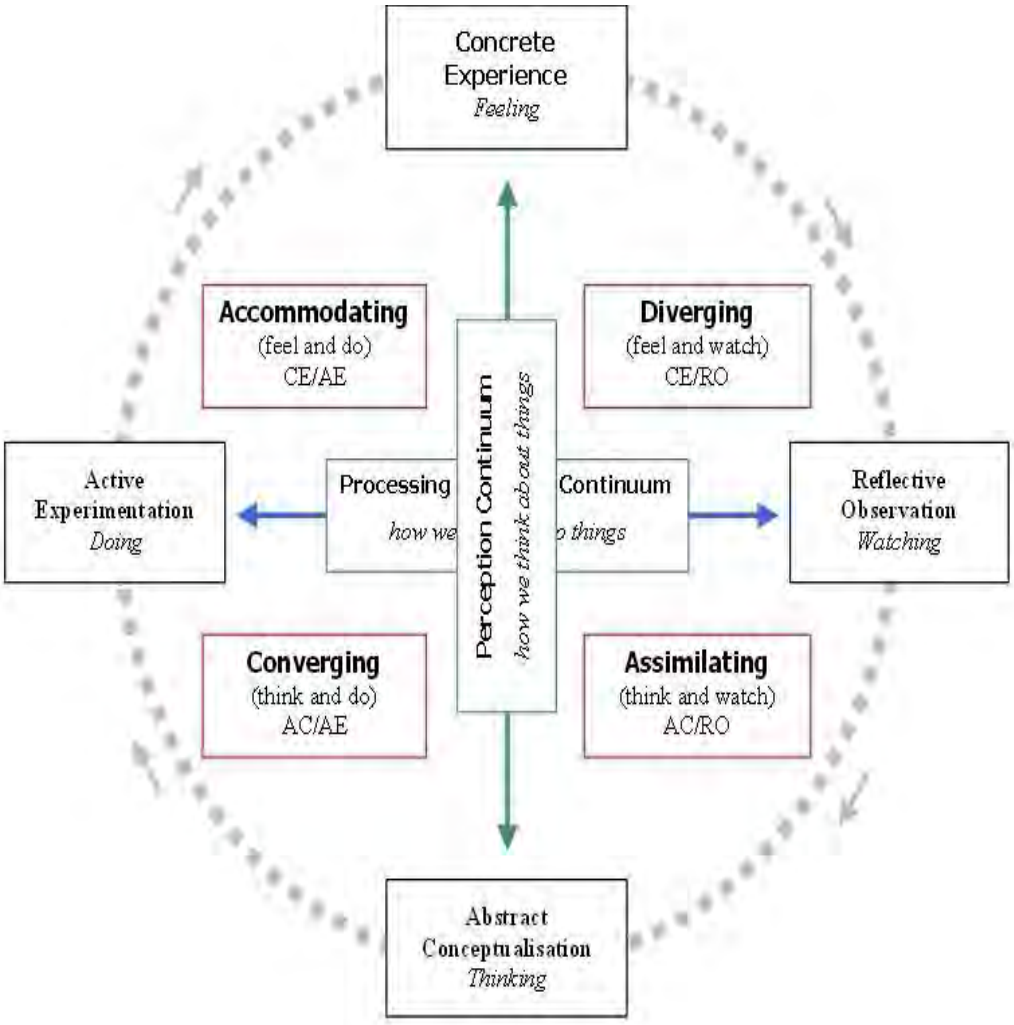

Figure 3 Adaptation of Kolb's Learning Styles, Chapman (2006)

Understanding your own learning style and subsequently the learning styles of the people you interact with will enable learning according to the preferred method.

-Diverging (feeling and watching) – (CE/RO)

People who are sensitive to feelings and emotions, which see all the different perspectives, they tend to watch rather than take part, while gathering information often using imagination to solve problems. Brainstorming situations suit people with a diverging learning style along with work taken place in group situations.

-Assimilating (watching and thinking)- (AC/RO)

The assimilating learning approach is the logical practical approach. Facts and concepts take preference over people and ideas. This learning style leads to excellent understanding of information, and organizing the information in a clear logical format. In formal learning situations this style may have preference for reading along with lectures, exploring analytical models while thinking everything through often working in science type careers.

-Converging (doing and thinking) – (AC/AE)

People with a converging style are fantastic at solving problems, using their learning to find solutions to practical issues. This learning style leads to solving technical tasks to the detriment of interpersonal skills. People with a converging learning style generally like to experiment with new ideas, whilst working towards practical solutions.

-Accommodating (doing and feeling) – (CE/AE)

The accommodating learning style is 'hands on', relying on gut feeling over logic. People with the accommodating learning style tend to use other peoples analysis, taking the practical approach to getting tasks completed. This learning style is suited best to situations that require initiative to be shown and actions to be taken. Team work is suited to this learning style to complete tasks successfully. People with accommodating learning styles like to set goals and work towards achieving goals through set objectives.

Peter Honey and Alan Mumford (1986) developed their own learning system as a variation on the klob learning model. There is strong similarity between the klob learning styles and Honey and Mumford styles or stages. Honey and Mumford refer to the terms 'activist', 'reflector', 'theorist' and pragmatist as the four stages

- Activist = Accommodating
- Reflector = Diverging
- Theorist = Assimilating
- Pragmatist = Converging

I believe the learning style best suited to me is that of the activist/accommodator. While attracted to new challenges in both my personal and working life, I take a practical approach to situations, choosing to get involved hands on capacity in an effort to get jobs completed. I work best in team situations

where I tend to rely on other members for information, then taking the information yet acting on instinct.

The accommodating learning style served me well throughout the master's course as I specialized in Marketing where the majority of the work required was in group structures where teamwork was necessary.

Having researched Klobs along with Honey and Mumford's learning styles I am better able to understand how I work best with other learning styles, whilst better understanding where group members are approaching situations from diverse learning styles. The learning styles researched also highlighted areas where it is necessary for me to personally develop to better equip me when dealing with future work projects involving colleagues. In particular I would like to develop skills associated with the diverging styles such as gathering information, then watching others, rather than jumping into situations in hands on manner. I believe there are areas of the diverging style of learning where I have improved during the course of the master's experience, with group brainstorming for ideas an area I now have great confidence in. This is an area we returned to on many occasions as part of the marketing group assignment.

As part of a team throughout the master's course, I enjoyed the dynamics involved the brainstorming previously mentioned and the hands on approach necessary to ensure tasks are completed to deadlines. I now believe I work best as part of a team in the company of others.

There was a cautious apprehension at the prospect of the individual nature of the research dissertation, where analytical skills are required to excel, this is a further area of the assimilating learning style where I hope to continue to improve in the future.

6.4 The Masters' Experience

In September 2011 I entered the master's program with excitement and trepidation in equal measure. I had not taken part in structured education since graduating from my undergraduate degree in 2005. This gap in my education left me feeling unsure about the

challenges that lay ahead in the master's program.

I had worked in pharmaceutical sales since 2007 where communication, questioning and presentation skills were, as part of the role undertaken, developed and analyzed regularly. I realized at an early stage into the lecture series that after years of working alongside accommodating learning styles and extrovert personalities, I had changed considerably from the student who completed the undergraduate course in 2005.

I was leading the class questions from the outset, whilst requesting presentation roles as part of the group assignments.

Many of the communication skills discussed were developed prior to commencement of the master's program however, during the learning modules, and assignment tasks I was able to develop new skills such as analytical reading and critical evaluation.

During the group assignments there were situations where disagreements arose, I learned over the duration of the course to have a greater understanding of learning styles and personalities. I believe there is a role for every participating team member; through greater understanding of learning styles it is easier to maximize potential for success by fitting the style with a given task.

Towards the end of the master's experience I have taken great confidence from developing friendships with classmates from many different working and cultural backgrounds, also in the knowledge that I have the ability to learn and develop academically in stressful environments.

6.5 Group Work

Coming from a Chemistry degree and working in pharmaceutical sales, entering into the master's program I would have considered the opportunity to work in groups on assignments as part of the master's program as a positive, as I have years of business experience working as part of a team. However it did not take me long to realize the difference between working as part of a team in a

professional environment with clear chains of command, specific designated roles, and a level of expertise in your field of choice, contrasted with the grouping together of individuals from different academic backgrounds along with diverse working and cultural backgrounds. Teams of like-minded individuals with similar accommodating learning styles was what I was used to dealing with, it transpired that the group formed as part of the marketing program contained all the learning styles reflected earlier including diverging, assimilating and converging styles to add to my accommodating learning style. This created a team of diverse individuals who had little understanding of how to go about achieving success. In the beginning the group in accordance with Gersick's (1989) punctuated equilibrium model for groups we experienced the initial period of inertia suffering from groupthink where team members were not prepared to enter outside their comfort zones.

Due to a lack of assignment progression, heated debates took place allowing for group members to realize the difference in learning styles; this was a key moment as it also broke the cycle of inertia with leaders emerging within the group and opinions being shared. According to Aritzeta et al. (2007) people within groups show preference for certain behavio'rs or roles and not for others. This was a factor in our success as we realized the strengths associated with the different learning styles, helping the group to utilize strengths by assigning these strengths to specific tasks involved in the assignment.

6.6 Individual Work

Like many of my fellow post graduate students the first few weeks of lectures and in particular the first assignment were met with trepidation. The trepidation experienced in semester one was greatly reduced by the second semester where I began to enjoy the opportunity to experience conceptual thinking and critical analysis, whilst learning how to engage in a more productive platform with team members with different learning styles. The opportunity to review literature and debate theories gave me great confidence in my ability to complete the course; this confidence was reflected across the part time class by semester two as many of the students began to ask assertive

questions and debate theories in class.

6.7 Choosing a Dissertation Topic

Choosing a topic for my dissertation proved to be a more difficult challenge than anticipated. My preference was to look at the obesity epidemic in Ireland with particular focus on sugar in everyday products and the subsequent health issues, however having worked in the pharmaceutical industry for seven years with a vast amount of sales experience across many therapeutic areas, also the fact that my current employers have funded part of the cost of completing the MBA, it was decided in conjunction with my employers to look at the area of branding in the pharmaceutical industry.

6.8 Challenges Faced

Once the dissertation topic was chosen I realized the main challenges I would face would be the collection of the data. My interviewees were all extreme professionals, I believed it would prove difficult to gather the necessary data due to busy schedules and time constraints hospital doctors' face. My Qualitative analysis involved semi structured interviews, as this involved communication skills this is an area I believe I was competent in from my working experience.

On reflection I learned about the order of questions, as they have great influence on the quality of the data collected. For future projects involving interviews I will now have the experience necessary to ask more pertinent questions.

6.9 Future Applications of Learning

As I currently work for a global pharmaceutical company in as specialized hospital sales role, I operate in a therapeutic area quite separate too many of my sales and marketing colleagues. My motivation for taking part in the MBA program was to improve myself academically but also to look at the industry from a new perspective. This I believe has been achieved through my participation in the MBA program; it has given me the confidence to explore new internal opportunities as they present, in areas outside my sales comfort zone in particular the opportunity now to take part in global marketing roles within the pharmaceutical industry. The MBA program has taught me to recognize academic weaknesses that may be developed in future courses, particularly in the Finance area where I struggled with the module undertaken. This is an area I now wish to develop through a diploma course, in an effort to achieve my career goals.

References

1. Abraham, J., (2005) Regulating the Drugs Industry Transparently, BMJ: British Medical Journal (International Edition). Vol. 331 Issue 7516, p528-529. 2p.
2. Adams, G. And Schvaneveldt, J. (1991) Understanding Research Methods. (2nd edn) New York: Longman
3. Aitken, M. et al (2009), *"Prescription drug spending trends in the United States: looking beyond the turning point",* Health affairs, Vol.28, No. 1, w1. 51-60
4. Alkhateeb, F.M., Baidoo, P., Mikulskis, M., Danielle, C., Gill, Howell, A., Mehraeen, B.,Weidner, C. (2011) "Is certification for pharmaceutical sales representatives necessary?", International Journal of Pharmaceutical and Healthcare Marketing, Vol. 5 Iss: 3, pp.222 – 233
5. Backhaus, J. (1983), Competition, Innovation and Regulation in the Pharmaceutical Industry, Managerial & Decision Economics, Vol. 4, Issue.2 P107-121
6. Bass, B. M, (1985), Leadership and Performance Beyond Expectations, NY: Free Press, New York
7. Baumer, David L. Poindexter, J. C. Earp, Julie. (2007), Can Regulation of Distribution of Pharmaceutical Products Coexist With Advances in Information Technology, Journal of Internet Law. , Vol. 11 Issue 2, p1-24.
8. Bell, J. (2005) Doing Your Research Project, (4th Edn.) Buckingham, Open University Press. Blumberg et al., 2005
9. Blumberg, B., Cooper, D.R., Schindler, S. P., (2005), Business Research Methods, McGraw and Hill, London
10. Bolton, G. (2010), Reflective Practice Writing & Professional Development, (3rd Edn) Sage Publications, London.
11. Bowe C; Firn D (2004) Rising prices and controversial treatments have cast a shadow over the pharmaceutical industry just as political scrutiny is increasing. Companies believe they can win the arguments available
12. Brandt, R., Baker-Prewitt, J., (1997), Linking Customer Satisfaction, Value, and Loyalty to Business Results: Cincinnati
13. Brassington, F. *(2006): Principles of marketing,* 4th Edition
14. Bryman, A. (2007): *Business research methods,* 2ND Edition.
15. Buusman, A., Andersen, M., Merrild, C., Elverdam, B. (2007) "Factors Influencing GP's choice between drug's in a therapeutic drug group". Scandinavian Journal of Primary Health Care, 25: p208-213
16. Canadian Medical Association Journal. (2002), Drug marketing: Unsafe at any dose? Vol. 167 Issue 9, p981-981
17. Carroll, B.A. and Ahuvia, A.C. (2006), *"Some antecedents and outcomes of brand love"*, Marketing Letters, Vol. 17 No. 2, pp. 79-89.
18. Cavusgil, E., Calantone, R. (2011) Are Pharmaceutical Marketing Decisions Calibrated to Communications Effects?. Health Marketing Quarterly, Vol. 28 Issue 4, p317-336, 20p
19. Contemporary Management Research (2011), Vol. 7, No. 2, P 143-156

20. Crigger, N., Barnes, K., Junko, A., Rahal, S., Sheek, C. Nurse Practitioners' perceptions and participation in pharmaceutical marketing, *Journal of Advanced Nursing*, Vol. 65(3), pp. 525-533.
21. Deacon, D., Pickering, M., Golding, P., and Murdock, G. (1999) " Researching Communications", *A Practical Guide to Methods in Media and Cultural Analysis*, Hooder Arnold, Oxford University, New York
22. Denzin, K, Norman. *The SAGE handbook of qualitative research,* 4th Edition.
23. Dey, I. (1993) Qualitative Data Analysis, Routledge, London
24. Di Lorenzo, T., High, J. (1998)"Antitrust and Competition Historically Considered", *Economic Enquiry* July p423-35
25. Dibb, S. et al. (2006): *Marketing Concepts and Strategies,* 5th Edition, Houghton Mifflin
26. DiCicco-Bioom, B, Crahtree BF (2006), "The qualitative research interview" Medical *Education*. Iss. *40, Vol.4, P 314-321.*
27. Drugs & Therapy Perspectives. (2006), *Assessment of direct-to-consumer advertising of prescription drugs must consider the implications on appropriate drug use* Vol. 22 Issue 11, p24-26.
28. Dubey, J. et al, (2010) *"Pharmaceutical innovation and generic challenge: recent trends and casual factors"* Internal journal of Pharmaceutical and healthcare Marketing. Vol. 4 No. 2, pp. 175-190
29. Earl-Slater, A. (2006), Recent Developments in Regulating the Pharmaceutical Business in the European Business Review, Vol.96 Issue 1
30. Easterby-Smith, M. Thorpe, R. Jackson, P. And Lowe, A. (2008) Management Research (3rd edn) London
31. Easterby-Smith, M., Thorpe, R., & Lowe, A. (2002). *Management Research: An Introduction* (2nd ed.) London, UK: SAGE.
32. Evans, J.R., Mathur, A., (2005) "The Value of Online Surveys" Internet
33. Fischer, M.J (1999), "*No let up in prescription drug cost rises seen",* National underwriter Life and Health, Vol. 29, p. 4
34. Fisher, colin, (2004): *Researching and writing a dissertation,* 1st Edition, Pearson Educational Limited, UK.
35. Fournier, S. (1998), *"Consumers and their brands: developing relationship theory in consumer research"*, Journal of Consumer Research, Vol. 24 No. 4, pp. 343-74.
36. Gagnon, M., Lexchin J. (2008), The Cost of Pushing Pills: A New Estimate of Pharmaceutical Promotion Expenditures in the United States, Plos Medicine
37. Gill, J. and Johnson, P. (2002) *Research Methods for Managers* (3rd Edn) London
38. Golec, Joseph; Hegde, Shantaram; Vernon, John A. (2010) Pharmaceutical R&D Spending and Threats of Price Regulation, Journal of Financial & Quantitative Analysis. , Vol. 45 Issue 1, p239-264.
39. Grabowski, H. (2004), *"Are the economics of pharmaceutical research and development changing? Productivity, patents and political pressures",* Pharmacoeconomics, Vol. 22, Suppl. 2, pp. 15-24
40. Grande, D., (2010), limiting the Influence of Pharmaceutical Industry gifts on Physicians: Self-Regulation or Government Intervention? JGIM: *Journal of General Internal Medicine*, Vol.25 Issue 1 p79-83.
41. Haralambros, M., Holborn, M. (1993) "Sociology: Themes and Perspectives", Collins 3RD. Edition

42. High, J.C. (1997) Regulation: Economic Theory and History, University of Michigan Press
43. Hollis, A. (2003): *The anti-competitive effects of brand-controlled pseudo-generics in the Canadian pharmaceutical industry"* Canadian public policy, Vol 29, No.1, pp.21-32
44. http://www.hse.ie/eng/services/Publications/corporate/HSE%20Annual%20Report%202010.pdf
45. http://www.ipha.ie/news/latest-news.aspx?article=bfe9dcd0-7ae8-4f11-989a-875322ee8bc7
46. Hüntelmann, A. C. (2011) Pharmaceutical Markets in the German Empire. Profits Between Risk, Altruism and Regulation. .. *Historical Social Research*, Vol. 36 Issue 3, p182-201, 20p
47. IPHA.ie (www.IPHA.ie, accessed Aug 2013)
48. Jack, A. (2005) EU prepares to resist drug groups' transatlantic drift
49. Jack, A. (2011) GSK charge underlines regulatory fears in London
50. Jambulingam, T.,Sharma R., Ghani, W. (2009) Wealth effects of the pharmaceutical industry-physician interaction compliance guidelines on large pharmaceutical companies International Journal of Pharmaceutical and Healthcare Marketing, Jan 1, Vol. 3, Issue 3
51. Janakiraman, R., Dutta, S., Sismeiro, C. and Stern, P. (2008), "Physcians' persistence and its implications for their response to promotion of prescription drugs", *Management Science,* Vol. 54 No. 6, pp. 1080-93
52. Jayakody, J. A. S. K., Sanjeewani, W. M. A. (2006)., The impact of transformational leadership behaviour of salespersons on their customer relationship marketing behavior. *International Journal of Bank Marketing*, 22(7), 461-447.
53. Johnson, P. And Clark, M. (2006) 'Mapping the Terrain: An Overview of Business and Management Research Methodologies'.
54. Keegan J.W., Green, M.C. (2008) Global Marketing Fifth Edition
55. King, N. (2004) "Using interviews in qualitative research" in Cassel and G Symon. *"Essential Guide to Qualitative Methods in Organizational Research".* London P 11-12
56. Kvesic, D.Z. (2008), *"Product lifecycle management: marketing strategies for the pharmaceutical industry",* Journal of medical marketing, Vol. 8, No. 4, pp. 293-301
57. Lexchin, J., Kohler, Jillian C. (2011) The Danger of Imperfect Regulation, *International Journal of Risk & Safety in Medicine*., Vol. 23 Issue 4, p233-240. 8p.
58. Lo, B., Field, M., (2008) (Documenting These Relationships); A National Survey of Physician-Industry Relationships, 356 New Eng. J. Med. Issue 1742 p 1746-47
59. Maddox, M. L. (1999) The use of Pharmaceutical Web Sites for Prescription Drug Information and Product Requests, *Journal of Product and Brand Management*, Vol. 8, Issue 6
60. Malhotra, N. K., Peterson, M., (2001) "Marketing Research in the New Millennium: Emerging Issues and Trends", *Marketing Intelligence & Planning*, Vol. 19, No 4. P 216-235
61. Mathew, J., Deborah F., Spake, Z. F. (2008) "Consumer attitudes toward pharmaceutical direct-to-consumer advertising: An empirical study and the role of income", *International Journal of Pharmaceutical and Healthcare Marketing*, Vol. 2 Iss: 2, pp.117 – 133
62. Medical, marketing and media. (2002) Vol.37, Issue 6, p 8
63. Milliken, J., (2001) "Qualitative Research and Marketing Management" Focus on Management History, Management Decision, Vol.39, No 1. P 71-77
64. Morgan, R. M., Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), P 1-38.

65. Moss, G.D. (2007), *Pharmaceuticals-Where's the Brand logic? Branding Lessons and Strategy,* Pharmaceuticals Products Press (an imprint of The Haworth Press), New York, NY.
66. Neuman. et al (2000) "*Workbook for Social Research ethods:* ua litative and ua ntitative Approaches, Fourth Edition .
67. Norris, V.P. (1984), *"The economic effects of advertising: a review of the literature",* Current issues and research in advertising, Vol. 7 No. 2, pp. 39-134
68. Park, C.S. and Srinivasan, V. (1994) "A survey based method for measuring and understanding brand equity and its extendibility", *Journal of Marketing research,* Vol. 31, pp. 271-88
69. Park, C.W., MacInnis, D.J. and Priester, J.R. (2009), *"Research directions on strong brand relationships"*, in MacInnis, D.J., Park, C.W. and Priester, J.R. (Eds), Handbook of Brand Relationships, Society for Consumer Psychology, M.E. Sharpe, Armonk, NY and London, pp. 379-93.
70. Park, C.W., MacInnis, D.J. and Priester, J.R. (2009), "Research directions on strong brand relationships", in MacInnis, D.J., Park, C.W. and Priester, J.R. (Eds*), Handbook of Brand Relationships, Society for Consumer Psychology, M.E. Sharpe, Armonk, NY and London*, pp. 379-93.
71. Park, J.W., Kim, K.H. and Kim, J.K. (2002), *"Acceptance of brand extensions: interactive influences of product category similarity, typicality of claimed benefits, and brand relationship quality",* Advances in Consumer Research, Vol. 29, pp. 190-8.
72. Patton (2002)
73. Patwardhan, H. et al (2011) "*Brand romance: a complementary approach to explain emotional attachment toward brands"* p.p 297-318
74. Popper, K.M., LaFrancis, N., Robert, W. (1994). The drug Lag: A 20- Year Analysis of Six Country Markets*, Journal of Public Policy & Marketing*, Vol. 13, Issue 2, P290-299
75. Regulatory Regime: (2011) US Pharma & Health Report, Issue 4 P15-29
76. Reiffen, D. and Ward, M.R (2005): "*Generic drug industry dynamics", The review of economics and statistics,* Vol. 87 No. 1, p.p 37-49
77. Research, Vol. 15, No. 2 P 195-219
78. Robson, C. (2002) Real World Research (2nd edn) Oxford: Blackwell
79. Robson, C. (2003) Real World Research (3rd edn) Oxford: Blackwell
80. Rod, M., Ashill Nicholas J., Carruthers J. (2007) Pharmaceutical Marketing Return-On-Investment: A European Perspective, International Journal of Pharmaceutical and Healthcare Marketing, Vol. 1, Issue 2
81. Rodwin, M.A. (2011) *Reforming* Pharmaceutical Industry-Physician Financial Relationships: Lessons from the United States, France, and Japan. *Journal of Law, Medicine & Ethics*, Vol. 39 Issue 4, p662-670, 9p
82. Ross, D.B. (2007), Overdose: How Excessive Government Regulation
83. Ross, J. S., Gross, C. P., Krumholz, H. M. (2012) *Promoting* Transparency in Pharmaceutical Industry-Sponsored Research*. American Journal of Public Health*, Vol. 102 Issue 1, p72-80, 9p
84. Rotfield, Herbert. J. (2009) "Function and problems of brand name pharmaceuticals", *Journal of product and brand management",* Vol. 4. pp. 240-241

85. Rothman, D. J., McDonald, W.J, Berkowitz, C.D, et al. (2009), Professional Medical Associations and Their Relationships with Industry: A Proposal for Controlling Conflict of Interest. JAMA; Vol 301, P1367-1372
86. Rowley, J. (2005) "The Four C's of Customer Loyalty" Marketing Intelligence & Planning, Emerald group Publishing LTD, Vol. 23, Issue.6, P574-581
87. Royne, M.B. and Meyers, S.D. (2008), *Recognizing consumer issues in DTC pharmaceutical advertising"* Journal of consumer affairs, Vol. 42, pp. 60-80
88. Sanyal, S.H. et al (2013), "Conceptualization of branding: strategy based on the Indian pharma sector", *Journal of pharmaceutical and Healthcare marketing,* Vol. 7 No. 2, 2013 pp. 175-198
89. Saunders, M., Lewis, P., Thornhill, A. (2009) Research Methods for Business Students, Fifth Edition
90. Scharitzer, Dieter; Kollarits, Harald C. (2000), satisfied customers: profitable customer relationships: pharmaceutical marketing: how pharmaceutical sales representatives can achieve economic success through relationship management...Total Quality Management. Vol. 11 Issue 7, pS956
91. Schon, D. (1987) Educating the Reflective Practioner, Jossey-Bass, San Francisco
92. Sillup, P. G., Porth, S.J. (2008) Ethical Issues in the Pharmaceutical Industry: An Analysis of US Newspapers. International Journal of Pharmaceutical and Healthcare Marketing, Vol. 2, Issue 3.
93. Sood, N., De Vires, H., Gutierrez, I., Lakdawalla, D.N., Goldman, D.P., (2009) The effect of Regulation on Pharmaceutical Revenues: Experience in Nineteen Countries. Health Affairs, Vol. 28, Issue 1, P125-137
94. Sotelo, J. (2006), Regulation of Clinical Research Sponsored by Pharmaceutical Companies: A Proposal. Plos Medicine, Vol. 3, Issue 6 p306-347
95. Stoltzfus, T. J., (2010), Oversight of Marketing Relationships Between Physicians and the Drug and Device Industry: American Journal of Law and Medicine, P 326-342
96. Tashakkori, A. AND Teddlie, C. (2003) Handbook of Mixed Methods in Social Behavioural Research. Thousand Oaks, CA: Sage
97. Taylor & Bogdan, (1998)
98. Tootelian, D.H., Gaedeke, R.M. and Schlacter, J. (1988), "Branded versus generic prescription drugs; perceptions of risk, efficacy, safety, and value", *Journal of health care Marketing,* Vol. 8 No. 3, pp. 26-29
99. U.S Pharma & Healthcare Report, (2012), Regulatory Regime, Issue. 1, P15-28
100. Vogel, D*. (1998) The* Globalization of Pharmaceutical Regulation Governance, Vol. 11 Issue 1, p1, 22p
101. Vukasovic, Tina. (2009), "*Searching for competitive advantage with the aid of the brand potential index"*
102. Waheed, K.A., Jaleel, M., Laeequddin, M., (2011),"Prescription loyalty behavior of physcians: an empirical study in India", *Journal of Pharmaceutical and Healthcare Marketing,* Vol. 5. No. 4, Pp. 279-298
103. Wasuja, S., Sagar, M., Sushil. (2012), "Cognitive bias in salespersons in specialty drug selling of pharmaceutical industry" *Journal of Pharmaceutical and Healthcare Marketing,* Vol. 6 No. 4, pp. 310-335
104. Wazana, A. (2000), *Physicians and the pharmaceutical industry: is a gift ever just a gift?"* Journal of the American Medical association, Vol. 283, pp. 373-80

105. Wiley, J., (2007) Journal of Public Affairs J. Public Affairs 7: 135-147 Published online (www.interscience.wiley.com) P .253
106. Wilson, P.H., Strutton, D. and Farris, T.M. II (2002), "Investigating the perceptual aspects of sales training", *Journal of Personal Selling and Sales Management,* Vol. 12 No. 2, pp. 77-86.
107. Wood, Donna J. (1982) Regulation and Innovation in the Pharmaceutical Industry Academy of Management Proceedings. P 361-365.
108. Yin, R.K. (2003) Case Study Research: Design and Method Third Edition. London: Sage

Appendices 8

8.1

Appendix 1

Semi Structured Interview questions

The influence of branding and brand loyalty interview questions were designed to primarily answer.

- Is a strong brand in pharmaceuticals vital for a medicine to succeed in the Irish Pharmaceutical market?
- Are Brand names influential when remember medicines?
- Does the origin of the medicine affect the Oncologists use of that medicine?
- Does the adverse effects with one brand influence the oncologists use over another?
- Can an Oncologist become loyal to a specific brand?
- Does relationship marketing and global pharmaceutical marketing influence the prescribing habits of Irish Oncologists?
- Can Irish Oncologists decide to prescribe a brand due to the corporate image of the pharmaceutical company?

The influence of consumer behavior and regulatory challenges interview questions were designed to primarily answer.

- Are Irish Oncologists manipulated by global marketing strategies in what medicines they use in their practice?
- Can the number of sales staff or marketers locally, affect Oncologists prescribing habits?
- Does the government body HSE influence what is prescribed by the Oncologists due to national budgets?
- Will the branded drugs' price affect the prescribing habits of Irish Oncologists?
- Are Irish Oncologists aware of the difference between generic prices and Branded?
- Are Irish Oncologists aware of the generic substitutions that are going on in hospitals with medicines such as antracyclines and taxanes?
- Would the adverse effects of generic drugs influence oncologists in using these medicines?
- Are oncologists in Ireland up to speed with regulatory bodies such as FDA, EMA, and IMB when prescribing medicines?
- Can reference pricing affect what medicines Irish Oncologists can prescribe?

8.2

Appendix 2

IPHA Marketing Guidelines:

Promotion of Medicines

The pharmaceutical industry is the primary source of information about its products and recognises its responsibility for ensuring that this information is accurate and does not mislead.

Promotional and advertising activities are essential as a means of informing physicians and health care professionals about the availability and use of new medicines and to alert prescribers to new uses for existing medications. This type of information supplements physicians' existing knowledge and enables them to provide more effective patient treatment by considering the most up to date remedies.

The advertising of medicinal products in Ireland is regulated by the Medicinal Products (Control of Advertising) Regulations, 2007. These Regulations enact in Irish law Directive 2001/83/EC as amended by Directive 2004/27/EC relating to medicinal products for human use.

IPHA is active in ensuring the highest possible standards of advertising and promotion of both prescription and non-prescription or consumer healthcare medicines to both healthcare professionals and the general public alike. It does so by administering a number of Codes of Practice, in particular, the Code of Marketing Practice for the Pharmaceutical Industry and the Code of Advertising Standards for the Consumer Healthcare Industry which set out detailed guidance to assist pharmaceutical companies in complying with the Medicinal Products (Control of Advertising) Regulations, 2007. The objective of these Codes is to ensure the highest possible standards in the promotion and advertising of medicines.