Field of research - Marketing

Corporate reputation in the process of prescribing drugs

THESIS

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INTRODUCTION

The Importance of the Thesis

Every day, around us, we witness a war between companies that target getting a better position in the consumer’s mind. The companies’ deployment of resources and effort is remarkable, taking into consideration the benefits that any firm can win: attention, partners, supporters, clients, collaborators, a place on the market and profitability.

Being considered an intangible asset, the corporate reputation is perceived more and more frequently as a key success factor for a company. Thus, from the perspective of the organization, the reputation – an intangible asset, helps the company to satisfy the needs and expectations of different categories of stakeholders. Analysed from the stakeholders’ perspective, the reputation is associated with their intellectual, emotional and behavioural response, determined by the correlation between the stakeholders’ needs and interests and the company’s shares.

The Structure of the Thesis

The present thesis is structured in two research stages. The first stage of this work consisted of implementing a descriptive research through which I sought to highlight the current state of knowledge in what concerns the corporate reputation, the drug prescription behaviour of doctors, the factors that are taken into consideration by prescribers in making prescription decisions, by analysing these dimensions in terms of marketing research and by trying to operationalize the concepts identified in the analysis of quantitative research.

The first part of the paper contains Chapters I – IV and represents an insight into the definition of corporate reputation, the presentation of its constitutive elements, a multidisciplinary approach of the concept in different fields such as social sciences, marketing, management, economics, finance and accounting, the presentation of the importance of corporate reputation and the measuring of this concept (Chapter I – Conceptual Delimitations of the Notion of Corporate Reputation). The second chapter called – Corporate Reputation and Drug Manufacturers focused on presenting the corporate reputation in different industries, culminating in the pharmaceutical industry. In the third chapter – Determining the Factors that Influence the Decision of Prescription and Recommendation of Drugs, I sought to present in detail the factors that influence the decision of drug prescription and recommendation from the doctors’ point of view, making an analysis of the general framework concerning the drug prescription, of the issue and of the research objectives. The
fourth chapter called – *Theoretical Substantiation concerning the Research Model* presents the theoretical substantiation of the research model based on the information taken from the literature, starting with the creation of the conceptual model of the research, formulating statistical hypotheses and culminating in the description and operationalizing the variables in the research model.

The second stage of the present work was based on carrying out a qualitative and quantitative research that aimed to operationalize the dimensions that were identified in the secondary research stage in order to test the hypotheses and to obtain answers to the established objectives. This second part of the thesis contains chapters V – VI and presents the research methodology applied in the qualitative and quantitative study (Chapter V – *Research Methodology*), respectively emphasizes the results of the survey-based research (Chapter VI – *Results of the Research*). In the chapter concerning the research methodology, I presented in detail the research methods used in the two stages of the study, the first stage being represented by the implementation of eight in-depth interviews using the interview guide as a research tool while the second phase by the organization of a questionnaire-based survey.

The last part of the paper describes the research conclusions, underlining at the same time the contributions made by this doctoral thesis, the managerial implications and limitations associated with this thesis.

**The Aim of the Thesis**

This paper aims to develop a behaviour model in what concerns the process of drug prescription that should identify the decision making factors that determine the doctors’ action of drug prescription.

**The Scientific Process**

The analysis will be customized on 3 counties belonging to the North-East development region of Romania, namely Iasi, Suceava and Botosani.

The research on the concept of ”corporate reputation” in the context of drug prescription will be carried out.

I will also seek to implement the variables to the concept of ”corporate reputation” on the one hand and on the other hand, the variables on which drug prescription is based identified in the literature by comparing them to the Romanian particularities from the above-mentioned geographical area.
The Objectives of the Research

The general objective is to identify the constitutive elements of the corporate reputation and to assess the decision maker factors that determine the action of drug prescription in the context of the local area.

The specific objectives will focus on:

O1: Studying the differences in perception of the following concepts: corporate reputation, communication from pharmaceutical companies, ethical conduct, social responsible behaviour, subjective norm, perceived control and prescribing intention based on gender, age and experience.

O2: Identifying the doctors’ prescribing behaviour in relation to the patients’ needs.

O3: Identifying the importance of the factors that influence doctors in adopting certain drugs of a manufacturing company in their prescription habits.

O4: Identifying the importance, for doctors, of the factors that help them remember the name of the drugs (the name of the brand) in the process of drug prescription to the patient.

O5: Analysing the doctors’ perception on the corporate reputation of the pharmaceutical companies whose products they recommend.

O6: Identifying the constitutive elements that describe the corporate reputation of the pharmaceutical companies from the doctors’ perspective.

O7: Analysing the influence of the corporate reputation on the doctors’ intention of drug prescription.

The Working Hypotheses

The fundamental hypothesis of this paper is that the solid corporate reputation, built on an ethical behaviour and an active initiative of corporate social responsibility (social responsible behaviour), influences the drug prescription behaviour (prescription intention).

The specific hypotheses will focus on:

H1: The fact that there is a significant direct connection between the doctors’ perception on the corporate reputation of the pharmaceutical companies and the drug prescription intention.

H2: The fact that there is a significant direct connection between the doctors’ perception on the corporate reputation and the social responsibility behaviour of the pharmaceutical companies.
H3: The fact that there is a significant direct connection between the social responsibility behaviour of the pharmaceutical companies and the doctors’ perception of the ethical behaviour of these companies.

H4: The fact that there is a significant direct connection between the doctors’ perception on the corporate reputation and the ethical behaviour of the pharmaceutical companies.

H5: The fact that there is a significant connection between the communication of the pharmaceutical companies and the prescription intention through the medium of corporate reputation.

H6: The fact that there is a significant connection between the image of the medical representatives of the pharmaceutical companies and the prescription intention through the medium of corporate reputation.

H7: The doctors’ drug prescription intention being influenced by the subjective norm concerning prescription.

H8: The doctors’ drug prescription intention being influenced by the perceived control in adopting the prescription behaviour.

The Working Methodology

In order to deepen the topic addressed and to identify the information relevant to this research, I developed a study called "The Corporate Reputation in the Drug Prescription Process", based on a working methodology centred on carrying out both a descriptive analysis and an explanatory one. The choice of the two types of research was motivated by the different contributions of each of them to achieve the aim of this paper, respectively to solve the research problem and implicitly to gain a better understanding of the phenomenon and the analysed dimensions.

The qualitative study carried out in the descriptive stage of the research was represented by organizing semi-structured in-depth interviews using the interview guide as a research tool, the interviews being applied to a sample of doctors that could prescribe drugs. For this professional category, there were 8 in-depth interviews, and the results from this stage were going to be used in the completion of the research tool.

In order to achieve the survey-based quantitative research using the questionnaire as research tool, the doctors answered the questionnaire both during direct meetings in their own medical offices and also using an indirect communication channel, the e-mail. In the explanatory stage, I analysed the doctors’ attitudes and perceptions towards various factors that could contribute to influencing their intention of recommending or prescribing a drug to
a patient based on the corporate reputation and I also evaluated the extent to which the corporate reputation of a pharmaceutical company influences the process of recommending or prescribing drugs to a patient; the research was conducted between June 2013 and June 2014.

The size of the target sample was 200 doctors and after the questionnaire was applied, 177 of them were valid.

**The Expected Results**

Understanding the behaviours that trigger the action of drug prescription in doctors by analysing the factors that influence this type of behaviour is one of the expected results of this work.

Translated into the category of prescribers (doctors), the reputation of a pharmaceutical company can serve as determining factor in the decision of drug prescription to patients, after correlating the patient’s needs and the corporate performances regarding the marketed pharmaceutical products. Thus, I intend to demonstrate that a good corporate reputation can increase the credibility of the pharmaceutical company, positively influencing the doctors’ drug prescription.

Understanding how the doctors make decisions about prescribing drugs to patients can be achieved by developing a conceptual model that contains several categories of factors that may influence the decision making process of prescription. In this way, through this paper, I expect to reach a conclusion that refers to the fact that non-clinical external stimuli such as the promotion from the pharmaceutical companies, these companies’ reputation, the relationships doctors – medical representatives, influence the doctors’ prescribing behaviour.

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**CHAPTER 1. CONCEPTUAL DELIMITATIONS OF THE NOTION OF CORPORATE REPUTATION**

**1.1. Conceptual Clarifications**

Studying the literature in order to deepen the concept of corporate reputation revealed a series of tangential concepts such as corporate image, corporate brand, corporate social responsibility, all of them having in common the adjective *corporate*. The corporate aspect common to the above-mentioned concepts is found in the communication strategy of a company with its targeted public.
1.2. Definition of Corporate Reputation

A wide variety of academic sources and not only have offered a range of definitions for the concept of corporate reputation. According to the American Heritage Dictionary (1970: 600),

1 reputation is "the general way in which an individual is perceived by the public".

Approaching the concept of corporate reputation can be facilitated by using the keywords: reputation, corporate and respectively stakeholder. The Romanian Language Dictionary gives us the following definitions of the first two words:

REPUTÁŢIE, reputaţii, s. f. Public opinion, favourable or unfavourable, about someone or something; how someone is known or appreciated. ♦ Renown, fame

A special approach of the concept of corporate reputation is due to Kimberly Goldstein (2010), who defines it as the sum of all performances/behaviours and past and present communication of a company. In other words, the reputation is equivalent to performance and behaviour to which communication is added over the time.

\[
\text{Reputation} = \sum_{\text{time}} \text{Sum of images} = \sum_{\text{time}} (\text{Performance} + \text{Behaviour}) + \text{Communication}
\]

The way in which this concept is defined emphasizes the idea that reputation can be managed. This aspect is due to the three constituents detailing the concept of reputation: behaviour, performance and communication that a company can control to some extent. The only factor that is not explicitly mentioned is the temporal one.

1.2.1. Constitutive Elements of the Corporate Reputation

The results of a 2006 study (Butterick, K., 2011), carried by the Weber Shandwick company in partnership with the Reputation Institute highlighted six central attributes that form the constitutive elements of the corporate reputation:

- Corporate reputation, by supporting social causes, demonstrating responsibility to the environment or to the community/society;

---

• Communication, characterized by transparency and company’s openness to dialogue;
• Products and services: providing high-quality, innovative products and services that ensure consumers’ satisfaction;
• Talent: correctly rewarding employees, promoting diversity and showing abilities to attract and keep staff;
• Financial metrics: staying ahead of the competition and showing a state of financial health and of the value of long-term investments;
• Leadership: showing good governance and leadership characterized by ethics.

1.3. Multidisciplinary Approach of the Corporate Reputation

Reviewing the theoretical literature on the concept of corporate reputation brings out contributions from academics and practitioners in order to understand the use of corporate reputation by organizations, being structured along five dominant perspectives: marketing (public relations), management, economics, sociological sciences, respectively finance and accounting.

Table 1.1. – Definition of corporate reputation in different research areas

<table>
<thead>
<tr>
<th>Research area</th>
<th>Definition</th>
<th>References, authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>Consumers’ expectations and convictions about a company’s product quality</td>
<td>Shapiro, C., (1982, 1983)</td>
</tr>
<tr>
<td>Sociology</td>
<td>Collective agreement about the attributes or achievements of an actor, based on what the relevant public knows about that actor</td>
<td>Camic, C., (1992)</td>
</tr>
<tr>
<td>Strategic Management</td>
<td>Attribute or set of attributes associated with a company based on its previous actions</td>
<td>Weigelt, K., Camerer, C., (1988)</td>
</tr>
<tr>
<td></td>
<td>Public’s cumulative assessment of a company over the time</td>
<td>Roberts, P., Dowling, G., 2002</td>
</tr>
<tr>
<td></td>
<td>Stakeholders’ knowledge and emotional reactions to the firm</td>
<td>Hall, R., (1992); Fombrun, C. J., (1996)</td>
</tr>
<tr>
<td>Marketing</td>
<td>Determining an attribute’s degree of consistency in time from an entity</td>
<td>Herbig, P., Milewicz, J., (1995)</td>
</tr>
<tr>
<td></td>
<td>A value judgement about a company’s attributes that develop in time as a result of a consistent performance backed up by an efficient communication</td>
<td>Gray, E. R., Balmer, J. M. T., (1998)</td>
</tr>
</tbody>
</table>

1.4. The Importance of the Corporate Reputation

The development of a large number of indexes that measure corporate reputation show the importance of reputation and finding one’s company on a list such as *the most admired companies in the world* of the Fortune magazine is an accomplishment for any company.

Roberts and Dowling (2002) found out that the companies with good financial results and a positive reputation have a higher probability of maintaining their financial performance in time. A strong reputation can contribute both to achieving favourable financial results and also to helping the company to quickly recover in case of profit decrease in comparison with an organization that doesn’t have exceptional reputation.

1.5. Who is Responsible for Building a Good Corporate Reputation?

Most companies have Public Relation departments in order to manage the corporate reputation. The public relation companies also describe their activity in terms of reputation management.

In the pharmaceutical industry, when it comes to building corporate reputation and brand image, brand managers play an important role due to the fact that pharmaceutical brand must be strengthened in order to win the trust of the professional environment, represented by doctors and pharmacists (Panigyrakis, G. G., Veloutsou, C., 1999).

1.6. Measurement of the Corporate Reputation

Reputation is an aggregate evaluation carried out by concerned interest groups (stakeholders) about how well a certain organization meets their expectations, based on the way the organization behaved in the past (Wartick, S., 1992). As an evaluation, reputation can be favourable or unfavourable.

Given the evaluating nature of the reputation, it is necessary to have a reference point in the measuring process. Thus, the interest groups compare what they know about an organization with specific standards to determine whether the organization meets their expectations about how it should behave.

1.6.1. Criteria Used to Assess Corporate Reputation

The vast concern to evaluate the corporate reputation was influenced by the fact that it was studied in various research areas and by publishing top charts of the best performing companies whose appreciations are based on reputation.
Business ethics is found in all evaluation criteria of the companies. In what concerns the quality that the consumer gets, it is required that the companies offer guarantees. The work environment should be characterized by the existence of anti-discrimination policies, the guarantee of safety in the workplace and the respect of the employee’s rights. From the perspective of the management quality, ethical behaviour involves governing in the stakeholders’ interest and also in the interest of the company’s shareholders.

1.6.2. Risks of the Corporate Reputation

The results of a study conducted by the Weber Shandwick company on a sample of 950 CEOs from 11 countries in North America, Europe, Asia and Brazil on reputational risks revealed that the main reputational risks for the company are financial irregularities, with 72%, followed by unethical behaviour (68%).

1.7. Relationship Corporate Reputation – Business Ethics

The central element that connects business ethics - corporate reputation is the stakeholder theory (theory of public participation) developed by R. Freeman in 1984.

According to specialists of the Institute of Business Ethics \(^2\), the concept of corporate responsibility is the expression of ethical values that a company acquires. The conclusion is that the basis of social responsibility is to be found in adopting an ethical behaviour.

1.8. Relationship Corporate Reputation – Corporate Responsibility

In recent years, practitioners and academics have shown a growing interest both in studying reputation and also in how it relates to other concepts such as responsibility (Brammer, S., Pavelin, S., 2006; Fombrun, C. J., 2005). This interest is due to the fact that elements of responsibility were perceived as key factors of reputation. The antecedents of a favourable reputation have been suggested by including standards of corporate social responsibility (CSR), philanthropic actions, and also developing trusted relationships with interest groups.

\(^2\) ***http://www.ibe.org.uk/
CHAPTER 2. CORPORATE REPUTATION AND DRUG MANUFACTURERS

2.1. Corporate Reputation in Industry

The reputation of a company can be affected by the reputation of the industry in which it operates. Some companies operate in sectors of industry and commerce that have a poor reputation. Companies can meet all the requirements to get a good reputation - a good corporate governance, corporate social responsibility and innovation in the business, they can provide excellent customer service, but if they have the misfortune to work in an industry that has a bad reputation, they will have to face an increasing public relations battle. An industry can “benefit” from a negative reputation because of the business practices in the past or because of the way the public perceives its activity has changed.

2.2. Corporate Reputation in Pharmaceutical Industry

Over the years, the pharmaceutical industry has faced a series of challenges when it comes to corporate reputation. Setting an appropriate price, the existence of a critical political environment constantly changing, the potential dangers that product features can cause, and also brand myopia are some of the difficulties that pharmaceutical companies have to face given the nature of the industry in which they operate. Consequently, the pharmaceutical sector is one where building and maintaining a high corporate reputation is a difficult but very important task.

The most obvious form of competition for a pharmaceutical company is when it competes with other companies in the sector. The companies operating in the pharmaceutical industry face at the same time a competition coming from the manufacturers of generic drugs. These are different from the brand pharmaceutical companies because they invest little in the research - development of new drugs and prefer to manufacture primary versions once the patent of a brand drug expires.

Brand myopia is a marketing term used to describe a situation in which similar companies that operate in the same activity sector find it difficult to differentiate themselves in the public eye. Brand myopia is a problem in several industries but it is more prominent in the pharmaceutical one.

2.3. The Pharmaceutical Market in Romania

The basic drugs market in Romania, as in other countries, has grown in recent years. This growth was due to the fact that many new successful drugs have become generic and, thus, could be produced by any pharmaceutical company. In addition, some large companies, which previously only produced new drugs, have also opened generic divisions in recent
years. This explains why the generic drug market is growing, while new drug market is in stagnation.

As for the Romanian pharmaceutical market actors, they are producers and distributors, the latter being mostly also importers.

2.4. Drug Consumption in Romania

For Romanians, health becomes a priority only when it is threatened and therefore, following the same principle, they resort more to treatment than prevention; moreover, they resort to self-medication treatments which, most often, only worsen their situation. Self-medication is a public health issue but also a danger, especially since the Romanians are not aware of the importance of a medical consultation and of the risks of self-medication.

The Romanians are used to consuming non-prescription drugs, each family having a small cabinet for storing them at home. Sociologists say that the phenomenon is caused by hypochondria, but also by people’s habit of having a drug stock like they used to have before the fall of communism.

CHAPTER 3. DETERMINING THE FACTORS THAT INFLUENCE THE DECISION OF PRESCRIPTION AND RECOMMENDATION OF DRUGS

3.1. General Framework of Drug Prescription by Doctors

In the pharmaceutical industry, the drug purchasing decision is often of a mixed nature, involving the doctor-patient relationship. Making the prescription decision, the relative influence of each part in making the decision and also the antecedent factors that influence the prescriptive behaviour are interest topics for different categories of stakeholders. Out of these, the most important stakeholders are the clients, since they are the end users of the pharmaceutical products and the doctors who, most frequently, have the final responsibility for making the prescription decision, acting as intermediaries between the pharmaceutical companies and the patients.

3.1.1. The Research Problem

The research problem is to set the extent to which the corporate reputation of drug manufacturers influences the doctors’ prescriptive behaviour, customizing the analysis on the three counties from the North-East development region of Romania (Iasi – Suceava – Botosani). The research problem related to this paper refers to a component of the marketing
microenvironment – *the interest group made up of doctors*, who intervene in the drug-buying process of the end users that follows the prescription.

### 3.1.2. The Conceptual Framework of the Research

The study of mechanisms that underlie the adoption of a behaviour started from the premise that most of the decisions made in the clinical practice are of an individual nature (Godin, G., Belanger-Gravel, A., Eccles, M., Grimshaw, J., 2008). At the base of human behaviour, there are cognitive mechanisms that increase the role and importance of the individual decision in adopting that behaviour. The way in which behaviour changes occur regarding the prescription of drugs has been studied from the perspective of the analysis of the Theory of Planned Behaviour (TPB). The theory of planned behaviour was studied in various areas of interest concerning the formation of a decision (Ajzen I., 1985, 1991). TPB is part of the social cognitive theory that sees individuals as rational actors who process information before forming certain behavioural intentions, which are then converted into actual behaviour (Ajzen, I., 1991).

The model based on the theory of planned behaviour starts from the premise that intention (decision) is determined by the individual’s attitudes (opinions concerning adopting the behaviour, multiplied by the evaluation of the decision results), subjective norms (perception that people who are important appreciate or not the behaviour, emphasized by the motivation to comply) and by the perceived control over the behaviour (the availability of resources, the possibility to act).

### CHAPTER 4. THEORETICAL SUBSTANTIATION CONCERNING THE RESEARCH MODEL

#### 4.1. The Conceptual Model of the Research

Based on the information extracted from the literature, I built a conceptual model in order to explain the prescribing behaviour performed by doctors, by highlighting the influence relations that occur between different non-pharmaceutical variables.
Figure 1. The proposed conceptual model concerning the relations between the non-pharmaceutical factors and their influence on the doctors’ drug prescription intention

The relations between the variables in the described model in Fig. 4.1 can be represented in the form of statistical equations as follows:

\[ Y_1 = a_1 + b_1 x_1 + c_1 x_2 + d_1 x_3 + e \]

where,

- \( Y_1 \) – Prescription intention
- \( x_1 \) – Corporate reputation
- \( x_2 \) – Subjective norm
- \( x_3 \) – Perceived control
- \( a_1 \) – Regression constant
- \( b_1, c_1, d_1 \) – Regression coefficients of the independent variables in the regression equation
- \( e \) – Error variable

\[ Y_2 = a + b x_1 + c x_2 + d x_3 + g x_4 + e \]

where,
Y₂ – Corporate reputation
x₁ – Communication
x₂ – Ethical behaviour
x₃ – Social responsible behaviour
x₄ – Medical representatives’ image
a – Regression constant
b, c, d, g- Regression coefficients of the independent variables in the regression equation
e – Error variable

4.3. The Research Model Variables

The diversity of drug brands and of the companies that produce and sell them make it difficult for those who recommend or prescribe drugs to decide on a certain pharmaceutical product. An important decision factor in the recommendation is represented by the sales professionals who become part of this process which may change clinical behaviours and prescription habits of the pharmaceutical products. The scientific information presented by medical representatives should be described in terms of learning opportunities and improvement of the problem solving process so that all participants in the medical process could benefit - doctors, patients and medical representatives.

CHAPTER 6. RESULTS OF THE RESEARCH

6.1. The Structure of the Sample

The sample studied in order to analyse the topic of interest - the prescription of drugs to patients can be described by the fact that in the research participated 106 women, and 71 men, representing 59.9% and respectively 40.1% of the participants. Most of the interviewed doctors have ages ranging from 41 to 50, that is 37.9% of the total, followed by those having ages from 51 to 60 representing 36.3% of the respondent doctors. In the analysed sample, there were no respondent doctors under the age of 30.

In terms of medical practice, in the studied sample most of the interviewed doctors fall into the category of those having between 21 and 30 years of medical experience, that is 41.2%.

Regarding the interviewed doctors’ specialty, 59.3% of them belonged to Family Medicine, followed by Internal Medicine doctors with 28.2%.
6.2. Validation and Testing Scales Used for the Analysed Dimensions

For each studied dimension, the Cronbach α coefficient was used to test the degree of validity for the scales used in this analysis. In table 1, there are the Cronbach α coefficient values for each of the studied dimension and also a series of information obtained from the descriptive analysis that was conducted.

Table 1. – The results of the trust analysis

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation</td>
<td>4</td>
<td>0.787</td>
</tr>
<tr>
<td>Pharmaceutical companies communication</td>
<td>4</td>
<td>0.471</td>
</tr>
<tr>
<td>Attitude towards the medical representatives</td>
<td>6</td>
<td>0.670</td>
</tr>
<tr>
<td>Social corporate responsibility</td>
<td>6</td>
<td>0.802</td>
</tr>
<tr>
<td>Ethical behaviour of pharmaceutical companies</td>
<td>8</td>
<td>0.830</td>
</tr>
<tr>
<td>Perceived control</td>
<td>4</td>
<td>0.732</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>4</td>
<td>0.382</td>
</tr>
<tr>
<td>Prescription intention</td>
<td>6</td>
<td>0.529</td>
</tr>
</tbody>
</table>

6.3. Results concerning the Objectives of the Research

The analysis of the relations established between phenomena in order to forecast the dependent variable prescription intention according to independent factors such as reputation, subjective norm, and perceived control was based on multiple regression analysis.

Studying the perceived control variable was approached from the perspective of the patients’ interest in making the final decision of the prescription by their involvement in the discussions with the prescribers. The regression model that resulted had the following from:

Prescription intention = 2.266 + 0.259 * Reputation + 0.107 * Subjective norm + 0.093 * Perceived control + e.

The interpretation of this equation reveals that if we keep constant the influence of variables subjective norm and perceived control and if the reputation improves by one unit, then the drug prescription intention will increase on average by 0.259 units. However, if we
keep constant the influence of variables reputation and subjective norm and if the value of the perceived control index increases by one unit, then the prescription intention will improve by 0.093 units on average. Furthermore, if we keep constant the simultaneous influence of variables reputation and perceived control and if the subjective norm increases by one unit, the drug prescription intention will improve by 0.107 units on average.

Moreover, I wanted to highlight an equation through which the constituent factors of reputation contribute to modifying this variable. The resulting regression model had the following form:

\[ \text{Reputation} = 2.358 - 0.112 \times \text{Communication} + 0.434 \times \text{Medical representative attitude} - 0.200 \times \text{Responsible behaviour} + 0.331 \times \text{Ethical behaviour} + e. \]

The interpretation of this equation reveals that if we keep constant the influence of variables attitude towards the medical representatives, social responsibility behaviour and ethical behaviour and the communication improves by one unit, then the pharmaceutical company’s reputation will decrease by 0.112 units on average. However, if we keep constant the influence of variables communication, responsible behaviour and ethical behaviour and if the attitude towards the medical representatives increases by one unit, then the reputation improves by 0.434 units on average.

6.4. Testing the Research Hypotheses

The testing the hypotheses of this research emphasized certain aspects taken from the literature, the results being detailed below. The Spearman non-parametric correlation analysis revealed that there is a statistically significant, direct connection between pharmaceutical companies’ corporate reputation and the doctors’ drug prescription intention, hypothesis H1 being, thus, confirmed. The calculated value of the determination coefficient showed that the drug prescription intention is influenced by the variable corporate reputation with a rate of 16%.

The analysis on the concept of corporate reputation revealed the existence of some component dimensions that belong and influence the stakeholders’ perception of a company’s general reputation. The value of the correlation coefficient obtained in the correlation analysis confirmed hypothesis H2, underlining the fact that the pharmaceutical companies’ social responsible behaviour influences and directly contributes to the evaluation of their reputation in the perspective of the analysed stakeholder category – doctors. Based on the calculated determination coefficient, I concluded that if pharmaceutical companies adopt social responsibility behaviour, the variation of the corporate reputation is influenced with a rate of 62.7%.
Starting from the approach of a company's ethical behaviour by analysing the concept of corporate social responsibility, which is considered the base of ethical values that a company adopts, I wanted to test the hypothesis that there is a connection between ethical behaviour and social responsibility of drug producing companies. The result of the correlation coefficient shows that the hypothesis was confirmed for a level of trust of 99%. The relationship between the two variables analysed in terms of the determination coefficient indicates a 30.5% share of influence of the socially responsible behaviour of pharmaceutical companies on doctors' perceptions about ethical behaviour.

Studying the importance of business ethics in relation to corporate reputation, in terms of the stakeholder theory led me to check the hypothesis that the ethical behaviour of pharmaceutical companies influences the formation of corporate reputation. The recorded value for correlation coefficient between the two analysed variables showed that a direct, positive and high intensity connection is statistically significant. Starting from this correlation coefficient, I then calculated the value of the determination coefficient and I found out that 57.4% of the corporate reputation is due to the ethical behaviour of the pharmaceutical companies.

The research hypothesis concerning the identification variable between the pharmaceutical companies’ communication and the drug prescription intention was confirmed, the percentage obtained by the mediating effect being of 92.5%. This suggests that the corporate reputation has a significantly statistical and completely mediating effect between the pharmaceutical companies’ communication and the drug prescription intention.

The hypothesis regarding the identification of a mediating effect of the corporate reputation between the image of medical representatives of the pharmaceutical companies and the drug prescription intention revealed that the share of the mediating effect out of the total effect was 178%. Thus, corporate reputation has a significantly statistical and completely mediating effect between the medical representatives of the pharmaceutical companies and the drug prescription intention.

When planning this paper, I proposed to identify the influence of the variables subjective norm and perceived control over the doctor’s drug prescription. The results showed that the doctors’ drug prescription intention is directly influenced by the subjective norm, with 2.95%, and by the variable perceived control, 10.3%.
CONCLUSIONS OF THE RESEARCH

Understanding the behaviours that lead to doctors’ drug prescription was thoroughly studied in the literature from the perspective of the social cognitive theory, by analysing the variables prescription intention and behaviour (Conner, M., Sparks, P., 2005). Also, the theoretical deepening of the topic concerning doctors’ drug prescription (Eccles, M. P., et al., 2006) led to finding out the major part that intention has on the behaviour itself, emphasizing at the same time that the various constructs through which the cognitive theories are highlighted (Theory of Planned Behaviour/Motivated Action Theory) can predict intention and behaviour among different medical groups.

The consulted literature brought into focus the doctor-patient relationship in the process of drug prescription, a relationship that is heavily influenced by the marketing actions of pharmaceutical companies, of which the most common are direct promotion to the end user or direct promotion to prescribers, through medical representatives. Another conclusion drawn from the research conducted by Linda L. Barrett (2005) which aimed to investigate the doctors’ attitudes on prescribing generic drugs was the fact that the doctors’ drug prescription is influenced by the patients’ expectations and needs. These aspects point out that the decision making process of drug prescription is subject to various sources of pressure.

Starting from the identified research problem, this paper proposed to develop a behaviour model regarding the process of doctors’ drug prescription, customizing the analysis on 3 of the counties belonging to the North-East development region in Romania, namely Iasi, Suceava, Botosani.

The quantitative research took the form of a questionnaire-based survey in which prescribers were asked about attitudes and perceptions they had formed regarding various factors that could influence the drug recommendation and prescription intention. Both the prescription drugs and the over-the-counter ones were the object of doctors’ recommendation and prescription.

Contributions

Both its purpose and the results of the statistical analysis, make this research a starting point for the Romanian pharmaceutical companies in order to understand how doctors recommend or prescribe drugs to their patients, so that they could improve their image, their corporate reputation and implicitly increase trust in the pharmaceutical products they market.
The originality of this work was to carry out a study based on the reputation of the pharmaceutical companies in the context of drug prescription by the analysed category of prescribers, i.e. doctors. Among the success factors of a company, this research focused on addressing a concept that was less studied in the literature, corporate reputation, and the paper aimed to analyse the connection between corporate reputation of drug manufacturers and the drug prescription. Thus, this paper can be a first step in studying the perceptions of an important stakeholder category when it comes to patients’ purchasing drugs — the prescribing doctors, who are directly intervening in the relationship that pharmaceutical companies have with the end user.

Based on the information from the literature, I developed a conceptual model in order to explain the doctors’ prescription behaviour, by emphasizing the influence relations that occur between different non-pharmaceutical variables. The development of the study conceptual model started from the Ajzen’ theory (1991) concerning the formation of the individual behaviour, taking into consideration the simultaneous action of attitude, subjective norm and perceived control.

In this paper, I proposed two regression equations where, on the one hand, I considered the doctors’ drug prescription intention as a variable dependent on the influence of the factors corporate reputation, subjective norm and perceived control and, on the other hand I considered the drug producers’ corporate reputation as a variable dependent on the simultaneous variation of the variables pharmaceutical companies’ communication, attitude towards medical representatives, ethical behaviour and social responsible behaviour. Also, this paper contributes to developing and checking the current state of knowledge by testing the connections between the variables of the proposed research model, following the contributions of previous researches.

Based on the research model proposed in the fourth chapter of this paper, the thesis aimed to capture the role of mediating factor that the corporate reputation has in the relationship between pharmaceutical companies’ communication and the drug prescription intention on the one hand, and in the relationship between the image that the medical representatives of the these companies have and the prescription intention, on the other hand. The results show that the drug manufacturers’ corporate reputation plays a mediating role with a significant impact on doctors’ drug prescription.
Managerial Implications

The theoretical and practical substantiation of this research has managerial implications for the pharmaceutical companies in Romania, taking into consideration the study of the phenomenon of *drug prescription by prescribing doctors* in relation to various factors, insisting on the role that corporate reputation has on the prescription intention.

A first important implication that pharmaceutical companies should take into account is to try and build trust-based relationships with the public categories with whom they directly interact, namely the doctors through medical representatives, or indirectly, namely the end drug user. These trust-based relationships contribute to building and consolidating the corporate brand of the pharmaceutical companies and implicitly influence in a favourable way the corporate reputation, an intangible asset that organizations in the pharmaceutical industry could use as a key success factor.

In the context of pharmaceutical industry, when it comes to building corporate reputation and brand image, brand managers play an important part because the pharmaceutical brand must be consolidated in order to win the trust of the professional environment, represented by doctors and pharmacists (Panigyrakis, G. G., Veloutsou, C., 1999). In order to maximize the value of reputation, the pharmaceutical companies should make reputation management a fundamental part of the corporate culture and of the system value.

The results of the study show that, at the present time, a strong point of the pharmaceutical companies in the drug prescription process is given by the favourable perception that doctors have about medical representatives. However, there is a a weak point of the pharmaceutical companies and it is represented by the corporate social responsibility activity, a constituent element of the reputation that is poorly capitalized and this could lead to an unfavourable influence of the corporate reputation.

Based on the conclusions drawn from the practical study with managerial value for the pharmaceutical companies, one of the relevant factors for a doctor in remembering a drug name when he/she recommends or prescribes it to a patient is represented by the association of the drug name with its active substance.

The general conclusion drawn from the research results indicates that the reputation of the pharmaceutical companies help maintaining trust in their pharmaceutical products which then influences the doctors’ prescription habits.
Research Limitations

This research work – Corporate Reputation in the Process of Drug Prescription presents a series of limitations that will be highlighted below.

The scientific process followed in this paper shows significant potential for future research studies given the importance of building and maintaining a favourable image and a good reputation for a company in general, in the context of a current saturated market and hence intense competition.

The reduced number of research studies on the influence of corporate reputation on doctors’ drug prescription was a major impediment in the theoretical substantiation of this paper and in developing a research tool.

This paper focused on creating a research tool based on contributions to the literature by previous research studies, bringing together a series of scales that measure different constructs that had been tested on markets that could be characterized differently from the sample used in the present research.

Another limitation of the present research concerns the study of the investigated phenomena on a single category of prescribers - doctors.

The commercial approach of the factors that could influence the doctors’ prescribing behaviour was done by taking out from the analysis the clinical-pharmaceutical factors such as the patient’s history, the condition to be treated, the features of the prescribed drugs, etc and that represented another limitation of the present work.

In what concerns the working methodology of the research, the use of the non-probability convenience sampling that doesn’t allow generalizing the conclusions of the study to the entire target group in Romania is another important limitation of the present work. Also, another difficulty was encountered in the process of data collecting for the study that used the online questionnaire-based survey since the response rate was 15.3% in filling the research tool.

Future Research Directions

Given the limitations of this paper, we propose as future research directions the extension to more counties and regions of the country of the research study on influencing factors of the drug prescription intention by using quota sampling.

A future research requires creating and testing a measuring scale for the factors that help building corporate reputation or influence the prescription behaviour on the Romanian market.
Moreover, another course of action would be to highlight the parallel analysis of the pharmacists’ and doctors’ attitudes and perceptions to different factors that may influence the drug recommendation or prescription to patients. Another further research could be a comparative analysis of the perception that prescriber categories, doctors and pharmacists, have of corporate reputation.

The research topic on the corporate reputation of the drug manufacturers in the entire North-East of Romania or in several regions of the country, carrying out comparative analyses of the stakeholders’ perceptions would be another proposal for a future research.
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