EXPLORING MEDICAL REPRESENTATIVES’ STRATEGIES TO INFLUENCE
DOCTORS’ PRESCRIBING DECISIONS IN VIETNAM

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DEDICATION

This thesis is extremely dedicated to my family, colleagues and close friends who have supported me materially and spiritually during my studies in Umeå, Sweden. Their continuous contributions during my work become a fantastic inspiration on my way to success in life.
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Thanks to all of my informants who gave their valuable time and information to complete my work. Besides them I want to take opportunity to thanks all the people who directly or indirectly give me support to continue my work.

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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GMP</td>
<td>Good manufacturing practices</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium development goals</td>
</tr>
<tr>
<td>IMS</td>
<td>Information management system</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>USA</td>
<td>United State Of America</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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</tbody>
</table>
ABSTRACT

Background: Debates regarding that the influence of medical representatives’ activities on doctors’ prescription process are going on in most nations. In Vietnam, the negative aspects of these issues are being considered by the health authority, as medicine expenditure contributes to a considerable part of healthcare expense.

Objective: The aim of thesis is to explore the promotional approaches used by medical representatives to influence doctors’ prescribing decisions. Furthermore, differences and similarities among the promotional methods of medical representatives (MRs) working in multinational enterprises (MEs), joint stock companies (JSCs) and limited liability companies (LLCs) are also assessed and debated.

Methods and material: Data was collected by qualitative research method through in-depth interviews with nine medical representatives from September to December 2011. The collected data was analyzed using qualitative content analysis.

Results: Promotion activities are implemented in different ways among the three types of company. Amongst pharmaceutical multinational enterprises, the quality of their products is the major factor in the promotion methods. In order to do this, medical representatives from these companies provide information about their medicines to doctors through product seminars and daily meetings. Beneficial information of the medicine’s efficiency is provided as justification for their high price. Some kinds of encouragement for prescribing are presented to doctors as gratitude to their customers. These kinds of promotion activities are also implemented by medical representatives in joint stock companies, who combine providing information of quality improvement of their drugs to compete with both brand and generic medicines. With respect to limited liability companies, prescribing payment for doctors’ and occasional gifts are used as the effective tools to increase their competitiveness.

Conclusion: Due to the differences in products’ characteristics including source and price, medical representatives of the three types of company implement different approaches in promoting their medicines to doctors.

Keywords: medical representatives, qualitative content analysis, doctors’ prescribing decisions.
1. INTRODUCTION

1.1. Public health in pharmacy industry

Article 25 of the Universal Declaration of Human Rights 1948 provided the definition for the “right to health” that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services.”[1]. As a part of the healthcare system, the pharmaceutical industry contributes to its effort regarding provision of medicine that support human beings to fulfill in access “the right to health”.

Firstly, achievements in research and development sector of pharmacy industry played an important role in improving the life quality of patients in all parts of the world. Quality of life and life expectancy of global population have significantly increased by medical inventions. For instance, in recent years, there have been more than 2 million children being saved by vaccines each year. In Africa, the number of deaths caused by measles decreased by 91% with efforts of immunization campaigns between 2000 and 2006. In the past, invention of antibiotic is one of the most important achievements which contribute to saving more than 200 million peoples until now [2]. HIV/AIDS epidemic has been controlled partly by the efforts which developed more than 20 antiretroviral treatments. Different innovations in developing medicines for the treatment of malaria, HIV/ AIDS, cancer and some other kinds of medicine have contributed to save around 3 million lives and 750,000 escaping disability every year. [3]

Beside its contribution for improving global health, the pharmaceutical industry also gives its effort for supporting healthcare system. The co-operation between healthcare sector and pharmaceutical companies was expressed in United Nation Millennium development goals (MDGs) regarding Goal 8 of promoting global partnership for development. Target 8 also shows this collaboration will help low and middle income countries to have an easy access to affordable, essential medicine. On the other hand, the research-based pharmaceutical industry improves the effectiveness of healthcare systems throughout the development of innovations that contribute to reductions on health expenditure [4]. For instance, antibiotic innovations lead to decrease the cost of spending USD 17,000 for major surgery and recovery cost as well as more than 300 days of treatment comparing to old treatment method [5]. Similarly, by developing antibiotics successfully, patients just paid less than USD 1,000 [5] and got safer course of treatment as well as better quality of life.
1.2. The impact of marketing and promotion activities of pharmaceutical companies on healthcare providers

The research-based pharmaceutical industry is the tremendously profitable sector. In 2002, the total profits of the 10 pharmaceutical companies in the Fortune 500 were bigger than those of other 490 companies [6]. Prediction of the Institute for Healthcare Informatics gave number 1,100 billion for scale of that the pharmaceutical market in 2015 with increase of a US$ 210-240 billion increase comparing to US$856 billion in 2010 [7].

The pharmaceutical market is controlled by 10 largest pharmaceutical manufacturers with over one-third market share and relative sales of more than US$10 billion per year and getting profit margins at around 30%. Among them, six companies come from United States and the rest belongs to Europe. In the 21st century, pharmaceutical enterprises in North and South America, Europe and Japan are predicted to continue to occupy the global pharmaceuticals market at 85% market share [8]. However, this ratio is thought to decrease due to expiring of patents in developed markets in some next years. Regarding generic medicines, the market share is increasing with contribution of spending on the leading emerging market. It is predicted that the revenues from generics in 2015 will be US$ 400-430 billion. However, 70 % of this share will come from the developing market [5].

Recently, pharmaceutical industry is suffering the pressure to maintain high sales for getting profit. According to World Health Organization(WHO), there will be “an inherent conflict of interest between the legitimate business goals of manufacturers and the social, medical and economic needs of providers and the public to select and use drugs in the most rational way”[8]. For example, pharmaceutical companies currently spend one-third of all sales revenue on marketing their products - roughly twice what they spend on research and development [8]. About 14% of big pharmaceutical company sales revenues are spent on research and development, while 36% is spent on marketing [9].

According to WHO, promotion is defined as all the informational and persuasive activities provided by manufacturers and distributors with the aim to influence on prescribing, supply, purchase and/or use of medicinal drugs. Pharmaceutical promotion activities refers to activities of medical representatives [10,11] and all other aspects of sales promotion e.g. journal and direct mail advertising [12]; conference exhibitions participation, audio-visual materials usage, drug samples, gifts[13,14,15] and hospitality for medical profession and seminars [16].
The term “medical representative” or “pharmaceutical representative” refers to people who are hired by pharmaceutical companies based on some specific criteria suitable for working as seller. They interact with healthcare providers through activities of providing drug’s information and persuading to use their drugs. Printed product literatures, drug samples and gifts are supporting tools for their work.

Regarding spending for drug marketing and promotion, the pharmaceutical industry spent $13.2 billion in 2000 promoting their products directly to healthcare provider. The main reason for the spending with healthcare provider is these people are responsible for prescribing a specific drug for customer as well as making decision regarding insurance limitation. Because of that, the pharmaceutical industry spent $13.2 billion in 2000 promoting their products on healthcare provider with the largest ratio belonging to form of free samples of new medications given to physicians. Concerning to activities of medical representatives, its budget accounted for a half of spending for drug marketing [17].

Along with large spending on marketing and promotion of pharmaceutical companies, controversies in regards to pharmaceutical marketing and its influence on doctors’ prescriptions has been increasing. These controversies focus on evidences showing its influence on doctors and other health professionals referring kinds of promotion. Effect of these interaction have been analyzed in many studies referring to the effect on the cost of healthcare, the quality of healthcare, prescribing practices and participation in a clinical trial. For examples, studies of Semin in 2006 showed opinion of respondent about a gift such as a medical device could influence prescribing with 54.8-68% [18].

To avoid negative interaction between healthcare providers under influence of large spending on promotion of pharmaceutical companies, WHO published Ethical Criteria for Medicinal Drug Promotion in 1988 to support and encourage the improvement of healthcare through the rational use of medicinal drugs [19]. Following that, IFPMA Code of Pharmaceutical Marketing Practice was published by IFPMA (International federation of pharmaceutical manufactures and associations) providing standards for the ethical promotion of pharmaceutical products to healthcare professionals for guiding appropriate interactions between pharmaceutical companies with healthcare professionals. Baseline standards were built for applying on worldwide scale regarding marketing practice and all promotional communications from the pharmaceutical industry to the medical profession including visual aids, flip charts, leave-behinds, advertisements, gifts and audio-visuals. Additional aspects of Industry relationship
with healthcare professionals was included in revised version in 2006. Regarding the aim of the promotion of this Code, IFPMA want to establish to ethical promotional practices on worldwide scale [20]. In India, basing on this Code organisation of Pharmaceutical Producers of India also made Code for Pharmaceutical Marketing Practice 2010 OPPI with specific local guidelines [21].

1.3. Vietnamese pharmaceutical market

1.3.1. Country background

Through the policy “Doi Moi” (reform) in the mid-1980s, Vietnam became a socialist-oriented market economy, the economy has rapidly grown and been integrated into the world’s economy. Vietnam has become one of the fastest growing economies in Asia with consistent GDP (Gross domestic product) growth of around 7% in recent years (6.78% in 2010 and one of the most potent markets in the Southeast Asia. In 2010 Vietnam was aligned with middle-income countries [22].

GDP per capita in Vietnam increased from US$610 in 1990 to US$2,700 in 2008 and Vietnam became one of the most potent markets in the Southeast Asia and in 2010 Vietnam was aligned with middle-income countries by 2010 [22]. Because of good result of economic growth, living standards also changed and the gap between rich and poor people increased as the consequence of the market economy.

1.3.2. Vietnam health profile

Despite of developing country, Vietnam got good health indicators as showed in table 1 below

Table 1: Health indicators in Vietnam (2009). Source: Data from Global health observatory

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>88,069,000</td>
</tr>
<tr>
<td>Gross national income per capita (PPP international $)</td>
<td>2,700</td>
</tr>
<tr>
<td>Life expectancy at birth m/f (years)</td>
<td>70/74</td>
</tr>
<tr>
<td>Probability of dying under five (per 1 000 live births)</td>
<td>24</td>
</tr>
<tr>
<td>Probability of dying between 15 and 60 years m/f (per 1 000 population)</td>
<td>173/107</td>
</tr>
<tr>
<td>Total expenditure on health per capita (Intl $, 2009)</td>
<td>213</td>
</tr>
<tr>
<td>Probability of dying under five (per 1 000 live births)</td>
<td>7.2</td>
</tr>
</tbody>
</table>
However, Vietnam has still been faced with many health problems causing a serious public health threat. Road accidents kill more than 15,000 people every year, the escalation of HIV/AIDS epidemic and the dramatic increase of some of non-communicable or lifestyle diseases such as tobacco-related diseases, cancer, heart disease and diabetes. Some kinds of communicable diseases such as tuberculosis, dengue and parasitic diseases still remain prevalent [23].

1.3.3. Vietnam health system

Vietnam healthcare system is a mixed public-private provider system, in which the public system plays a key role in health care, especially in policy, prevention, research and training [24]. Regarding public provider system, there are four managerial levels including central, provincial, district, commune and village levels, with the Ministry of Health at the central level. The structure of Vietnam healthcare system is described in figure 1 below.

**Figure 1: Structure of the health care system of Vietnam. Source:** Health Statistics Yearbook 2005. Hanoi: Planning and Finance Department, Ministry of Health of Vietnam
Public healthcare expenditure is funded by the limited State’s budget because Vietnam is still a developing country. State hospitals can’t manage to get modern equipment as well as treatment method because of limited budget. Therefore, the number and quality of service in state hospitals is weak, not enough to cover the demand of patients, especially from the province level to commune level. As a result, expenditure for healthcare is coming more from the private sector. For example, in 2008, health expenditure accounted for 7.3% of GDP, however, contribution of government expenditure was just 38.5% while 61.5% of health expenditure came form was private expenditure. The contribution of private expenditure has increased significantly since the ‘reform’ of the health sector in 1989 [25].

Moreover, the introduction of a new economic policy “Doi moi” in 1986 contributed to increase the out-of-pocket health expenditures as a proportion of private health expenditures from 59% in 1989 to 84% in 1998 [26] and it increased to 90.2% in 2007 according to some studies [27].

Health care expenses have become a financial burden and influenced health care service seeking behavior, especially among the poor.

Among many reasons for the growth in health spending, the increase in medicine prices is estimated to account for 30 per cent of the growth in total health expenditure [28]. The Vietnamese government is spending efforts in developing suitable methods for controlling price of medicines in order to keep prices down.

1.3.4. Vietnam pharmaceutical sector

The fact that Vietnam pharmaceutical industry is still dependant on imported medicine source and imported materials (90%) for manufacturing domestic product which makes it difficult to control medicine price. Pharmaceutical industry did not have enough capacity for supplying key raw materials as well as high quality human resources for manufacturing although the government has focused on developing its domestic production capability [29]. According to WHO, Vietnam’s pharmaceutical industry is developing at 2.5 to 3 on a scale of four classification levels [30]

Level 1: virtually no production, import completely
Level 2: production of a number of generic drugs, the majority of imports
Level 3: a domestic pharmaceutical industry and generic manufacture and export of some pharmaceuticals
Level 4: manufacture of raw materials and invent new drugs
Up to now, according to Ministry of Health, there are around 180 enterprises involved in manufacturing pharmaceutical drugs, of which nearly 80 enterprises have been certified GMP standards of WHO [29].

GMP (Good manufacturing practices) are defined by WHO as “that part of quality assurance which ensures that products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the marketing authorization.” [30].

Most domestic enterprises just focus on producing non specialized kind of medicines, pay less attention and investment in specialized medicines as well as developing pharmaceutical materials. Therefore, products from these enterprises often overlap and do not meet the demands of the market. For instance, active ingredients of local manufacturing enterprises just account for 652/1563 although the number of medicine can meet nearly 50% demand of market. The types of medicine produced by these enterprises are used in lower level hospitals, while the majority of medicines used in higher level national hospitals are foreign medicines. According to the Drug Administration, imported foreign medicines accounted for 90% of the total medicine expenditure of hospitals [29].

Concerning the direct distribution system, medicine in Vietnam pharmaceutical market is distributed directly through two channels of distribution, namely hospitals and pharmacies. According to data of IMS (Information medicine statistic) in 2005, the amount of kind of medicine used in hospitals and in pharmacy shops is 61% and 71% respectively, both of them are produced by domestic companies. Due to the advantages of low cost with improved quality, domestic medicine gain market share quite significantly in hospitals and pharmacies. However, imported medicine accounts for 85% of value even though it is used less. It also shows clearly that Vietnamese pharmaceutical industry still lacks the kind of specialized medicine with high value [29].
1.4. Rationale of thesis

There have been many studies worldwide showing the perceived effects of pharmaceutical industry to doctors’ prescribing choice regarding activities of medical representatives and their promotion.
In Vietnam, few studies have been implemented to explore this effect. Meanwhile, medicine expenditure accounts for a large component of total health care costs in Vietnam. As the result, negative effects from interaction between doctors and medical representatives’ promotion activities will influence quality of healthcare, increase to financial burden, especially for the poor people who face difficulties in accessing medicine.

1.5. Aim of thesis

The aim of thesis is to explore the promotional approaches used by medical representatives to influence doctors’ prescribing decisions. Furthermore, differences and similarities among the promotional methods of medical representatives (MRs) working in multinational enterprises (MEs), joint stock companies (JSCs) and limited liability companies (LLCs) are also assessed and debated.
2. METHODOLOGY

2.1. Study setting
Pharmaceutical supplying chain in Vietnam is mixed by international supplier and domestic supplier. This chain is described in detailed in figure 2 below.

![Diagram of the pharmaceutical supply chain in Vietnam](image)

**Figure 2: The pharmaceutical supply chain in Vietnam.**

**Source:** Tuan Anh Nguyen. Thesis for the degree of Doctor of Philosophy. Medicine price and pricing policy in Vietnam. School of Public Health & Community Medicine, Faculty of Medicine, University of New South Wales, Australia. April 2011
According to Drug administration of Vietnam, regarding manufacturing and supplying sector, there are around 800 enterprises engaging on these activities in the Vietnamese pharmaceutical market [31].

Regarding imported medicine, international pharmaceutical manufacturers are responsible for supplying for Vietnam pharmaceutical market through international distributors or local distributors. Brand imported medicines come from some of international pharmaceutical manufacturers corporations such as Pfizer, GlaxoSmithKline, Sanofi-Aventis, Novartis, and AstraZeneca. In term of generic imported medicine, small to medium sized generic companies from India and China provide large amount of this kind of medicine [31].

According to regulations of Ministry of Health, foreign enterprises are not permitted to distribute directly to hospitals and pharmacies. As the result, these enterprises often distribute through foreign distributors and domestic distributor. There are three international distributors for pharmaceutical and health care products in Vietnam namely Zuellig Pharma, Diethelm and Mega Product with market share more than 50% because they are very professional undertaken marketing and promotion as well as they set up the imported price and the selling price of their products, as well as undertaking marketing and promotion [31].

There are more than 438 foreign enterprises in pharmaceutical market doing their business through representative offices in Hanoi and Hochiminh, the two biggest cities in Vietnam [32]. Domestic medicine manufacturers include State-owned enterprises (SOEs), Limited Liability Companies (LLCs), Joint Stock Companies (JSCs), Joint Ventures, and 100 per cent foreign-owned companies. Regarding domestic pharmaceutical companies, there are around 171 pharmaceutical manufacturers including 93 pharmaceutical manufacturing enterprises producing western medicine and 78 enterprises producing tradition medicine [32].

The number of enterprises with a GMP - WHO standard is 53, accounting for 57% in total of enterprises, 24 enterprises get GMP-ASEAN standard (ASEAN: The Association of Southeast Asian Nations) [32]. The leading manufacturing pharmaceutical enterprises include Haugiang JSC, Vinapharm, and Domesco. Regarding the manufacturing structure, domestic enterprises focus on producing broad spectrum antibiotics, vitamins and pain killers, without investment on manufacturing specialized medicines such as drugs for treating diabetes or cardiovascular disease to meet real market needs. Many enterprises are small scale, and almost all the materials for producing medicines depend on importing from China, India and other countries.
Moreover, some enterprises also produce similar products calling “me too medicine” to brand medicines of foreign companies. As the result, the products from domestic companies often overlap and compete with each other in a very small market share [33,34].

In this study, nine medical representatives working for pharmaceutical companies in Hanoi were interviewed. All of them are responsible for promoting antibiotics for respiratory infections. The reason for this choice is based on the fact that antibiotics are supplied by all the three companies above described, and these medicines are used in a large numbers of prescriptions in Vietnam.

Five participants came from foreign companies which are multinational enterprises, promoting famous brand products. These pharmaceutical multinational corporations establish their representative offices in Vietnam to promote sale of their products.

Two participants came from joint stock companies which manufacture domestic products. Joint stock companies are business enterprises characterized by its separate legal existence and the sharing of ownership between shareholders, whose liability is limited.

Two participants came from limited liability companies which import generic products from small-medium sized manufactures enterprises. A limited liability company is a flexible form of enterprise that blends elements of partnership and corporate structures. It is a legal form of company that provides limited liability to its owner.

2.2. Research methodology

2.2.1. Qualitative content analysis

Qualitative research method was used to collect data through in-depth interview over the phone in this study. Qualitative content analysis focus on highlighting the voices of the participants, and aims to provide understanding for a given issue. It is especially useful when exploring detailed information focusing on opinion, behaviors, experiences and social contexts regarding specific group of people [35], which was the aim of this study.

There are three kind of collecting data method in qualitative research: participant observation, in-depth interviews, and focus group discussions. Depending on the characteristic of collected data, the researcher will choose one or combine these methods [35]. In this study, I choose in-depth interview for collecting data because the research topic – the strategies used by MRs’ to influence doctors’ prescribing choices- is quite sensitive.
Regarding the data analysis qualitative content analysis was used. The goal of this method is to provide knowledge and understand research issues through texts from participants for describing about what, who, why in contextual meaning of the context.

2.2.2. Description of data collection process

In this study, nine medical representatives working for pharmaceutical companies in Hanoi were interviewed. All of them had extensive working experience as medical representatives. Informants came from different backgrounds about pharmaceutical sectors including: 1) senior pharmacists, 2) medium pharmacists and 3) those with a non-pharmacy background. The participants were selected through a purposive and snow ball sampling technique.

Researcher selected participants who “are articulate, reflective and willing to share with the interviewer”[(36, p.127)] due to sensitive matters of study. Detailed information of participant are provided in table 2 below

**Table 2: Experiences and job title of medical representatives**

<table>
<thead>
<tr>
<th>Code</th>
<th>Working Experience</th>
<th>Type of company</th>
<th>Job title</th>
<th>Duration interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6 years</td>
<td>Multinational enterprise</td>
<td>MR</td>
<td>1h and 02 min</td>
</tr>
<tr>
<td>2</td>
<td>More than 11 years</td>
<td>Multinational enterprise</td>
<td>MR</td>
<td>1h and 15 min</td>
</tr>
<tr>
<td>3</td>
<td>1.5 years</td>
<td>Multinational enterprise</td>
<td>MR</td>
<td>55 min</td>
</tr>
<tr>
<td>4</td>
<td>More than 3 years</td>
<td>Multinational enterprise</td>
<td>MR</td>
<td>1h and 20 min</td>
</tr>
<tr>
<td>5</td>
<td>1 year and 3 months</td>
<td>Multinational enterprise</td>
<td>MR</td>
<td>1h 10 min</td>
</tr>
<tr>
<td>6</td>
<td>More than 11 years</td>
<td>Limited liability company</td>
<td>MR</td>
<td>1h 20 min</td>
</tr>
<tr>
<td>7</td>
<td>More than 7 years</td>
<td>Limited liability company</td>
<td>Director</td>
<td>1h 15 min</td>
</tr>
<tr>
<td>8</td>
<td>More than 6 years</td>
<td>Joint stock company</td>
<td>Seller</td>
<td>50 min</td>
</tr>
<tr>
<td>9</td>
<td>6.5 years</td>
<td>Joint stock company</td>
<td>Seller</td>
<td>1h and 10 min</td>
</tr>
</tbody>
</table>
All the informants were contacted by phone. The informants were asked whether they would be willing to participate in the study. After getting their participation, the researcher asked them about which kind of interview they prefer to choose between telephone or Skype and scheduled for the interview. Almost all the interviews were rescheduled one or more times because the participants were busy. Basic information regarding the study was also provided during the preliminary phone conversation and email.

Before the actual interview, the researcher managed to explain some contents of the research topic that could become sensitive, for example policies of the company regarding how to influence doctors. Researcher also mentioned about her working background as medical representative for 5 years ago during talking. This share helped researcher build participants’ trust and free atmosphere for sharing their opinions, especially in some sensitive questions. This preliminary short chatting also provided the opportunity to interact more with the informants and helped the researcher to minimize the communication gap, to build trust and later allowed a free discussion in interview. Consent and privacy for informant were always assured. The method of collecting data by in depth interviewing through recording were also explained to the participants. At first, some informants felt unsecure about participating in this study and then they agreed to do it after the researcher explained clearly and more in detail about study. However, they also mentioned that some type of information they do not want to share.

Before starting the actual data collection, one pilot interview was conducted with a medical representatives from a foreign company to evaluate the application of the interview guide, how questions could be posed and what new questions could arise during the interview. A pilot interview was a crucial step for evaluating the cooperating attitude of the informant when asked about sensitive issues, and enabled the researcher to choose suitable approaches later. It also helped to assess the time required for the interview. An interview topic guide was used to conduct interviews, as a way of focusing the interview to ensure that similar data were collected from each participant. The following issues were covered in the interview guide such as experience working as medical representative, content of training programs, how they prepare for their meeting, etc. Table 3 below showed the interview topic guide used.
Table 3: Interview topic guide

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Could you tell me about the time you start to work as medical representatives</td>
</tr>
<tr>
<td>2.</td>
<td>What did you often prepare for the meeting with doctors?</td>
</tr>
<tr>
<td>3.</td>
<td>Regarding doctors’ information, could you tell me which information, the way you collected and the aim of collecting doctors’ information</td>
</tr>
<tr>
<td>4.</td>
<td>What was the content of your meetings with doctors?</td>
</tr>
<tr>
<td>5.</td>
<td>Could you tell me about detailed product training of your company such as content, frequency, peoples who take in charge of training?</td>
</tr>
<tr>
<td>6.</td>
<td>Apart from product training, which other training programs did your company provide?</td>
</tr>
<tr>
<td>7.</td>
<td>How did you feel about effect of training programs in supporting your work?</td>
</tr>
<tr>
<td>8.</td>
<td>Could you tell me about the way you check usage level of your product?</td>
</tr>
<tr>
<td>9.</td>
<td>Concerning your competitors, which activities did you implement to cope with them?</td>
</tr>
<tr>
<td>10.</td>
<td>Could you tell me detailed ways to convince doctor to prescribe your product based on characteristics of your product?</td>
</tr>
<tr>
<td>11.</td>
<td>How do your company support for doctors through encouragement?</td>
</tr>
</tbody>
</table>

The list of topic areas, some of them with associated questions, was developed after reviewing the literature and refined during the analysis of interview.

After the potential participants were contacted and the informed consent was granted, the researcher asked them about a suitable time for conducting the phone interview on Skype, Yahoo Messenger or ordinary phone, depending on the interviewee wishes. Eight of the interviews were conducted by Yahoo Messenger and Skype and one interview through ordinary phone. The interviews were conducted from September to December 2011. The interviews lasted between 45 to 75 minutes. All interviews were recorded using a digital mp3 recorder. The language used in the interviews was Vietnamese. Interviews were conducted until saturation was reached; meaning that no additional information relevant to the research question emerged.

All interviews were conducted by the researcher alone. The interviews were started with a briefing session as recommended by Kvale (1996) [37]. The briefing session included some informal talk, thanking for willingness to participate in the study and introduction about the study. The briefing session was followed by asking their informed consent for recording. All of the approached participants were consented.

An interview log was maintained for each interview. Following Dahlgren et al (2007) “notes were taken during interviews to guide the discussion and also to record impressions and feelings.
during the interview. These notes were further utilized at the analysis step to augment open coding and to guide analysis, considering their importance as a data source.”[38,p.127].

At the end of the interviews, the researcher asked the informants whether she could return to them in case further clarification was needed. All the informants were willing to accept this request.

All the interviews were transcribed into Vietnamese by the researcher and later checked one by one for accuracy. Participants’ names and identities were not included as part of the transcripts to assure confidentiality.

Part of the interviews and all of the codes were translated into English. Afterwards, the transcripts were analyzed using qualitative content analysis.

2.3 Data analysis
Data were analyzed using qualitative content analysis, guided by Graneheim and Lundman (2004) [39].

In this research, both manifest and latent content were looked for when performing qualitative content analysis. For manifest content, it showed what the text says, deals with the content aspect and describes the visible, obvious components [40,41]. Latent content refers to an interpretation of the underlying meaning of the text [40,41].

The process of content analysis was followed as described by Graneheim and Lundman, moving from: 1) selecting the unit of analysis - meaning unit-, 2) condensing, 3) abstracting through coding, 4) grouping the codes into categories and finally 5) developing a theme.

The meaning units were highlighted as a first step. Meaning units refer to groups of words or statement that tell about the same central meaning, it has been referred to as a content unit or coding unit [42].

The second step in the analysis was to develop condensed units, which means distillation with the abstract quality of a text and still keep the core of the text.

The third step abstraction was implemented regarding aggregation and interpretation on a higher logical level [43]. According to Coffey and Atkinson [44, p.32], “codes are tools to think with” and “heuristic devices” because labeling a condensed unit with a code allows the data to be thought about in new and different ways but need to understood regarding context.
After getting all the codes from the collected data, the important step was developing categories. Krippendorff [45] mentions that “a category refers to a group of content that share a commonality and categories must be exhaustive and mutually exclusive. A category will answer the question “What” and can be identified as a thread throughout the codes”. It is the reason a category is considered as descriptive level of content and mentioned as expression of the manifest content of the text.

All of categories were gathered together to develop a theme that showed the underlying meaning of the text. Baxter (1991)[42] defines themes as threads of meaning that recur in domain after domain. A theme will answer the question “How” thus we consider a theme as an expression of the latent content analysis.

A detailed example of the analysis process, showing development of a category from transcript text via open coding and categories, is provided in a table 4 below

Table 4: Example of coding process: a selected meaning unit with condensed unit, a selected codes and the category the code refer to are present

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Condensed unit</th>
<th>Codes</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Doctor information</strong>&lt;br&gt;Firstly, I had to find out doctors’ information to determine if it is my objective. It was the most basic thing that all of medical representatives were trained before going to see a doctor.&lt;br&gt;I found some information relating to characteristics or hobbies of doctors. Actually, those things were private, not relating to academic information of work but it might help me to reach to them easier</td>
<td>Finding out information on doctors before meeting them&lt;br&gt;Private information about doctors for approaching</td>
<td>Targeting&lt;br&gt;Careful preparation&lt;br&gt;Selective approach</td>
<td>Getting to know the target</td>
</tr>
</tbody>
</table>
2.4. Ethical considerations

The ethical considerations were strictly followed throughout the research process, as depicted by Kvale (1996)[37] in his book because of the ethical issues of this study and sensitive information providing by participants.

All informants were explained clearly about the research purpose in order to allow them an informed decision on whether to participate or not in the study.

The researcher also confirmed about informed consent and ensured confidentiality for the informants regarding private information, for example the name of the participant, name of participant’s company, or name of product in publishing.

The researcher also clarified that informants could refuse any question they did not want to answer.

The researcher did not give any incentives for the informants to get their participation in this research and got consent information concerning the medical representatives' work.

The place for the interview was chosen by the informants, in a way that enabled them privacy and confidentiality.
3. RESULT

Throughout the analysis of the interviews with medical representatives, one theme and four categories emerged. The theme that emerged was: promotional approaches of medical representatives to influence doctors’ prescribing decisions. This theme cross-cut four categories including learning product and selling skills, getting to know the target, constructing competitive advantage based on quality or price and encouragement for prescribing. Comparisons between medical representatives from multinational enterprises and domestic companies including joint stock companies and limited liability companies were elaborated for each category. Table 5 below presents four categories with detailed descriptions for each of categories regarding three kinds of companies above.
**Table 5:** List of categories referring to promotional approaches of medical representatives to influence doctors’ prescribing decisions

<table>
<thead>
<tr>
<th>Category</th>
<th>Multinational enterprise</th>
<th>Limited liability company</th>
<th>Joint stock company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning product and selling skills</td>
<td>Professional medical representative through well product and selling skills training</td>
<td>Simple pharmacy seller due to limited training programs</td>
<td>Simple pharmacy seller due to limited training programs</td>
</tr>
<tr>
<td>Getting to know the target</td>
<td>-Doctors’ professional and personal information</td>
<td>-Doctors’ professional and personal information</td>
<td>-Doctors’ information</td>
</tr>
<tr>
<td></td>
<td>- Competitors’ information</td>
<td>- Competitors’ information</td>
<td>- Competitors’ information</td>
</tr>
<tr>
<td></td>
<td>- Sales checking data as reference for targeting</td>
<td>- Sales checking data as reference for targeting</td>
<td>- Exact sales checking data for prescribing payment</td>
</tr>
<tr>
<td>Constructing competitive advantage based on quality or price</td>
<td>- High quality of brand medicine as key advantage for ensuring treatment effect and coping with prescribing payment request</td>
<td>- Cheaper price</td>
<td>- Cheaper price</td>
</tr>
<tr>
<td></td>
<td>- Prioritize doctors concerning with treatment effect more than prescribing payment request</td>
<td>- Prescribing payment support as key promotion</td>
<td>- Evidence of improved product quality</td>
</tr>
<tr>
<td></td>
<td>- High quality of brand medicine as explanation for high price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouragement for prescribing</td>
<td>- Building close relationship</td>
<td>- Building close relationship</td>
<td>- Building close relationship</td>
</tr>
<tr>
<td></td>
<td>- Limited gift for special events</td>
<td>- Gifts for all special events</td>
<td>- Customer conference annually, company arranged trips annually, medical related sponsor</td>
</tr>
<tr>
<td></td>
<td>- Meals for seminar, sponsoring for taking part conferences, medical related sponsor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Prescribing payment refers to amount of money that medical representative of limited liability companies pay for doctors depending on the amount of their medicine was prescribed.
3.1. Learning product and selling skills
This category describes crucial skills and knowledge that medical representatives need to learn in order to be able to sell the drugs. Medical representatives get knowledge that is not limited to indication related information, but include very detailed characteristic of the drugs that help them understand product advantage and disadvantage. Medical representatives are also provided with disease related deep knowledge for supporting their product presentation. Besides knowledge on the product, medical representatives are also provided with a variety of skills for example presentation skills, targeting skills and approaching skills as effective support for practical issues. Depending on the type of company and type of product, training programs differ from each other. Table 6 below describes some differences in training for medical representatives of three types of pharmaceutical companies in Vietnam.

Table 6. Category “Learning product selling skills”

<table>
<thead>
<tr>
<th>Multinational enterprises (MEs)</th>
<th>Joint stock companies (JSCs) and limited liability companies (LLCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Own training department for supporting medical representatives</td>
<td>- Limited skill training program</td>
</tr>
<tr>
<td>- Detailed product information training and disease related knowledge</td>
<td>- Poor support</td>
</tr>
<tr>
<td>- Variety of skills and techniques for selling product</td>
<td>- Self training for product knowledge</td>
</tr>
<tr>
<td>- Building professional working style and self security feeling for medical representative</td>
<td>- Misunderstanding detailed product information due to lower professional backgrounds of medical representatives</td>
</tr>
</tbody>
</table>

Regarding multinational enterprises, they had their own training department that provide medical representatives on country scale with a variety of training programs including detailed product information and useful selling skills for convincing doctor

“My company had a specific department which is called training department for whole country, South Central and North region. They arranged frequency of training programs, detailed product information and techniques regarding product presentation.”(Interviewee 5-ME)
Frequency of training programs, including product training and skills training, depended on each company but the participants expressed that they were comprehensive and periodic.

“I was trained four times annually including product training and selling skills. In emergency cases, they will give more. E.g., when my company received some crucial information update, they could hold a training program to inform it.” (Interviewee 4-ME)

During product training programs, disease related professional knowledge as well as detailed product information was provided in different ways. For example, participant described that their company could invite some doctors to talk about disease or share treatment experiences. They also pointed out how they were provided with detailed documents on clinical trials and manufacturing information relating particular drugs.

“I know already basic indication information of active elements while studying in university. However, you don’t know why some brand medicine including same element get higher effect. Trainer will provide you with product related detailed information, for examples special manufacturing techniques and then explain its contribution to well effect. If you do not know about that, you will easily misunderstand that any medicine including cefuroxim with that dosage will be same effect. Moreover, trainers also give you clinical researches to prove effect of brand medicine. It is the reason I feel more confident and believe in my product to convince doctor.” (Interviewee 3-ME)

Moreover, trainers also provide medical representatives with special techniques to effectively emphasize some competitive advantages of the product they promoted.

“Recently, my company has held a training program meanwhile trainers provide me with theory of meeting in 5 minutes or 1 minute. I was taught to present some characteristic of product in 5 minutes in case of doctor are so free. Otherwise, I just talked about one characteristic of product in 1 minute by key message. It was really helpful because doctors were quite busy and I also couldn’t repeat all of my product information every meeting. Key messages also helped me remind doctor my product more effectively than only remind them about name of product. When you could remind them about characteristic of your product, it was much more effective for prescribing than reminding only name of product.” (Interviewee 2-ME)
Besides that, the training department in MEs provided medical representatives with a variety of useful skills and techniques such as targeting.

“That program taught me how to establish some priority targets in my work, for examples which hospital give me high sales for concentrating. It also taught me how to find doctors who give high sales and then helped me to decide how much resources and time I should spend to get my target effectively.” (Interviewee 1-ME)

During these training programs, medical representatives would practice the theories they received during training programs through some situations they might face in reality. A medical representative described these activities:

“I could ask the trainer to solve some difficulty cases in reality because they had so much experience to help me. Sometimes, we had to role play with real doctors whom trainers invite for practicing our selling skills. We have ever held “Idol company” to choose the best performance representatives.” (Interviewee 5-ME)

These comprehensive and periodic training programs contributed to medical representatives’ success. It also helped them feel more confident and build an image of professional competence that enabled them to convince doctors to prescribe the drugs they promoted.

“Maybe you couldn’t feel or see its effect immediately when you just finished it already or after a short time. However, after a long working time, I found that it helped me a lot. Comparing to medical representatives who were not trained much or seriously, many doctors or I felt that my product belongs to higher level when I presented it. Doctors also believed me more than them. Actually, after working for five years or more than, it helped me to create attractive talking style.” (Interviewee 2-ME)

On the contrary, medical representatives from joint stock companies and limited liability companies referred that they received limited training programs in regard to both product training and skills training. These companies hardly had one specific department for supporting product information. Therefore, medical representatives just received little support from professional trainers for this activity.
“When I opened my own company, I rent a pharmacist for registering the establishment license and this pharmacist would be responsible for training for employees. This trainer did not work permanently, they just came to company for training as I requested them. Before that, I would give them some basic product information, they could manage to get more information for training.” (Interviewee 7-LLC)

Even when medical representatives expressed that they received some support from their companies, they still confirmed that their training could not compare to the one arranged by the foreign companies.

“My company didn’t provide formal product training for new employee. They just gave some basic information about my product and company in an introduction meeting before starting working. Actually, they still organized some training day at specific time every year but it was not so professionally done.” (Interviewee 9-JSC)

Regarding the content of the training, medical representatives from both limited liability companies and joint stock companies mentioned that at the end they had to prepare the product information by themselves.

“Some kind of antibiotic in my company is simple so our training just show which type it belongs to, some of its advantages or the price of the product. Generally, they just provided some information like that, other product information I had to read the brochure to get it for presenting with doctors.” (Interviewee 6-LLC)

“I had to be responsible all kind of products of my company in one specific hospital. Information of these products I got it by myself. My company just provided us with some course of selling skills.”(Interviewee 8- JSC)

Regarding the professional background of medical representative in limited liability companies and joint stock companies, their level was often lower comparing to medical representative of foreign companies whose recruitment condition is to have a pharmaceutical university degree. As the result, medical representatives from these companies attempted to hide their limited knowledge and felt unsecure, e.g they might misunderstand product information.

“When I read some information such as antibiotic mechanism, clearance level or level of medicine in plasma, I was not clear about that. Therefore, I just emphasized basic indication.
I never mentioned about that because they are doctor, maybe they knew it.”(Interviewee 6 - LLC).

Regarding selling skills, medical representatives from joint stock companies and limited liability companies described that the programs offered by their companies were poor both in term of periodicity and quality.

“My company often provided it after they got enough new employees, generally at the beginning of the year. They collect all of employees in marketing department for training including managers. It was the same for every year, no specific training for old employees.”(Interviewee 8-JSC)

“They just gave me one or two courses relating to communication skill or presentation skill when I worked here. I saw that most of limited liability companies do not provide some training programs like that.”(Interviewee 6-LLC)

3.2. Getting to know the target
This category refers to the doctor related information that medical representatives collect from different sources before they meet with the doctors. Medical representative try to access detailed target doctor information including professional information that will enable them to classify the doctor according to his/her level of influence and sales. Personal information regarding doctors is also collected for supporting their work. Similarly, medical representatives also managed to get information on their competitors -namely medical representatives from others companies visiting the same doctors - concerning product characteristic and business strategy. Sales data checking was one important part in the process of information collection, especially for medical representatives from limited liability companies. These medical representatives pay money for sale data provider to get exact number, however this action is forbidden in joint stock companies and foreign companies. Based on this information, medical representatives will choose the appropriate approach and will be able to use resources more effectively. Sources for this information come from other medical representatives, nurses and pharmacy officers or from Internet. Table 7 below shows information collecting of medical representatives referring to category “Getting know the target”
### Table 7: Category “Getting to know the target”

<table>
<thead>
<tr>
<th>Multinational enterprises and joint stock companies</th>
<th>Limited liability companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting detailed doctors’ information for targeting</td>
<td>Sales data checking</td>
</tr>
<tr>
<td>Collecting competitors’ information</td>
<td>- Reference for targeting</td>
</tr>
<tr>
<td>Sales data checking</td>
<td>- Good relationship or small gifts for sales data provider</td>
</tr>
<tr>
<td>- Reference for targeting</td>
<td>- Need exact sales data for paying prescribing payment</td>
</tr>
<tr>
<td>- Good relationship or small gifts for sales data provider</td>
<td>- Free for sales data provider</td>
</tr>
</tbody>
</table>

Regarding detailed target doctor information, medical representatives of multinational enterprises, joint stock companies and limited liability companies will collect information on doctors’ position in the department and the number of patients they treat among others.

“I had to know whether doctors I meet is my target so I will focus on their position in the department, how they influence the others in their department in using medicine. After they used my medicine already, I could ask them if they have their own private clinic or they work for another place to get more sales.” (Interviewee 2-ME)

“If my doctor had important position and wanted to be respected more appriciately, I would try to give prominence them more than others doctors or I could invite them to work as speaker or chairman in some suitable conferences. They would be satisfied about that.” (Interviewee 4-ME).

Private information regarding the target doctor is also important since it contributes to build a good relationship between medical representative and the doctors he/she approaches.

“Other their private information such as their family, their children or some things they are caring were also important. When I talked to them about that, I would express my concern or share some relevant information. It might help me to be closer to them and got their esteem. Because of that, I could ask their help more easily.” (Interviewee -ME).

Medical representatives also pointed out the importance of collecting competitors’ information, for example sources of drugs of competitors, price of drugs and activities for promoting those drugs. Information about competitors and doctors’ information is collected through difference sources namely observation of medical representatives, asking other medical representatives and asking other doctors. According to a medical representative, their friends are also medical
representative from different companies so they could know those doctors. He/she also could ask others doctors who were close to them and these doctors also knew about the doctors that he/she wanted to ask.

Nurses or pharmacy sellers are also sources for this information because they work closely to doctors. Besides that, those people also play an important role for providing sales data checking. For medical representative from limited liability companies, sales data checking is an essential part of their work since they base on the amount of sales for paying prescribing fee for the doctors.

“I forced to get exact number of medicine that doctor prescribe to pay for them. I collected it every week or every month” (Interviewee 7-LLC)

To get support from nurses, medical representatives referred how they had to build a close relationship or gave them some small gift such as pen or notebook. To get exact sales data from pharmacy sellers, medical representative will have to pay them a small fee.

“Number of medicine from pharmacy sellers was the most exact so in case of I can’t get that number from nurse of department I will use this method. I paid for them money every month for their work, around 50.000 VND (nearly 20sek) for small hospital and 120.000 VND (40sek) for bigger hospital.” (Interviewee 7-LLC)

On the contrary, for medical representatives from foreign companies, checking sales data was just a reference for getting the amount of medicine the doctor used which may enable medical representatives to adjust their approach with the doctor. As a result, they did not have to get exact sales data and consequently they did not put much effort on this task. Moreover, they could not pay for pharmacy sellers to get it. They just used the help from pharmacy sellers, pharmacy officers in hospital and nurses in department or basing on their own observation around pharmacy shops to get approximate data on sales.

“It was not so difficult if you try to be friend with a specifi seller in shop. Sometimes, I gave them some our gimmicks such as pen, raincoat or invited them drink something. I did not have anything more to give to them.” (Interviewee 5-ME)
3.3. **Constructing competitive advantage based on quality or price**

This category shows how medical representatives (MRs) influence doctors to prescribe based on their competitive advantage referring to quality and/or price. Product quality and price of product were key factors for choosing different approaches as well as using suitable resources. Regarding multinational enterprises, high quality was presented as the main advantage for advertising their drugs. This included focusing on the alleged good treatment effect as well as serving for ignoring the disadvantage of their high price. To support the argument of quality, medical representatives from these companies provided series of evidences such as informative brochures, reports of clinical trials as well as detailed product presentation confirming treatment effect. Throughout these activities, MRs managed to build doctors’ trust by infusing their drugs with a high quality image.

On the contrary to foreign companies, MRs of limited liability companies used the cheaper price of their product to counter attack the doctors' comments regarding the alleged lower quality of their product. They also paid prescribing fee for doctors as a key argument for convincing them to prescribe their drugs.

MRs of joint stock companies tried to build doctors’ trust for their product combining both the arguments quality and price. They expressed how the quality of their drug is socially felt as having improved and they could offer lower prices compared to brand drugs of multinational enterprises. Table 8 describes methods that medical representatives use to influence doctors referring to category “Constructing competitive advantage based on quality or price”
In regards to quality of product, medical representatives from multinational enterprises provided doctors with a variety of evidences for building doctors’ trust and then convinced doctors to choose their product.

First of all, a medical representative of multinational enterprise mentioned that “their products are manufactured by leading factories with high standards for producing process” as assurance for belief of high quality.

Secondly, the treatment effect of the product was portrayed in detailed through informative brochures and reports of clinical trials. The brochures described manufacturing techniques, stressing the high quality of the processes involved. The brochures also provide result of clinical trials comparing the treatment effect of the drugs with that of other medicines. “This information was very helpful to explain high quality of my product for convincing doctor. If doctors did not know about that, they might easily misunderstand, for
example any medicine including cefuroxim with that dosage will be same effect. Similarly, clinical researches included the number of patients such as 12,000 with succeed rate is more than 90% also helped doctor to choose the best effective medicine for specific indication.” (Interviewee 3- ME)

Third, medical representative managed their resources to present product information, especially clinical trials in a detailed way through small seminars that supplement the information provided in brochures. Small seminars might take different forms depending on different companies sponsoring them, e.g. group detailing, group presentation, group discussion for whole department.

In these small seminars, medical representatives also addressed doctors’ comments about the product and take time to solve misunderstanding about the product usage or its treatment effect as the quotation below

“This conference looked like for small family so they can give any comment they think, quite comfortably and I also felt free to answer all of their questions.” (Interviewee 2-ME)

These small seminars also served as a reminder to use the product referring to main product information such as indication, dosage, clinical trials on about treatment effect or new update information. It also made more advantage for attaching doctors’ concentration on product information

“Group presentations are very good because we can present information about my product fully and doctor can concentrate on hearing because they are often busy to listen to whole information of product. In these presentations, they force to hear”. (Interviewee 2-ME)

Depending on the particular structure of each department, presentations took place in the department or in a restaurant. Presentations in the department were perceived as more convenient for doctors, but medical representatives also expressed that time for these presentation was limited

(Some departments just arranged presentation in their own department such as department of surgery. So we forced to make it after their meeting every morning. At that time, we just presented around 7-10 minutes, not enough time for discussion. However, these presentations also had their own advantage for prescribing medicine because doctor will visit patients after that for prescribing immediately.” (Interviewee 4-ME)
Presentations in restaurant did not only serve as product presentation but were also perceived as a good chance for approaching doctors and getting closer to them in a more informal environment.

“We talked part it at lunch time or in afternoon in a restaurant near their hospital or let them choose some kind of restaurant which they like. After we presented product, all of people will eat together. It really helped me create a closer relationship with them because I feel more convenient to share our opinion each other.” (Interviewee 2-ME)

Because cost for presentation in restaurant was much higher than in department, medical representative described that frequency and place for these presentations also depended on the budget of the company as well as the aim of this presentation.

“Budget for each of doctor was 20USD maximum. Every year, we just took part one for each department or 2-3 times for very special cases because our budget was limited. Moreover, it was just first step for convincing doctor, not the most important factor for getting it so that I had to concern about effect as well as necessary need for choosing this method.”(Interviewee 5-ME)

On a larger scale, MEs organized big conferences for launching new products or for reminding old products for a whole region or a specific province. They mentioned that these conferences often take part with around 100 doctors participating. In these conferences, the company invited some high prestige doctors or specialists as speakers or chairmans.

Through these activities for product presentation, medical representatives of MEs contributed to build doctors’ trust on their product. They prioritized the argument of high quality to convince doctors to choose their product. They also used this factor to overcome the fact that they can not pay prescribing payment for doctors

“We forced to accept that we can’t cover whole market. However, we tried to emphasize on quality of our brand medicine to compete other competitors because some doctors still prefer to choose brand medicine as brand name. It was also one of the ways we try to competitive with generic medicine because our principle did not allow us to give prescribing payment for doctors. Doctors knew about that already, but we still mentioned again to avoid their request.” (Interviewee 2-ME)
Medical representatives from MEs also prioritized doctors who were not concerned to prescribing payment. They emphasized safety and good treatment effect as assurance for doctors’ prestige and satisfied treatment demands of doctors.

“At first, I was very confused to handle prescribing payment offer of limited liability companies because my company did not have it. However, I recognized that I still find suitable doctors for selling my medicine. E.g., I could choose head of department or vice of department who make decision in their department for medicine usage or these people are enough rich not to concern prescribing payment. Overall, if I could choose right target doctors, my product still have competitive advantage to get target.” (Interviewee 4-ME)

Concerning the high price of the product, medical representative from MEs transformed this weakness in an advantage by arguing that high price was a consequence of higher quality of their products. Because of that, they argued, the treatment period will be shorter as well as total cost for whole treatment will be lower.

“Products of my company were brand medicine with high quality so high price was relevant to its own value. It was opposite to products which offer prescribing payment for doctors because its price also included that payment. So its real price was much lower than selling price.” (Interviewee 4-ME)

As regard to limited liability companies, medical representatives managed to convince doctors to use their products based on arguments that combined the advantage of getting prescribing payment and a cheaper price for competing with foreign companies and joint stock companies.

Medical representatives of these limited liability companies perceived that products of foreign companies were the best but they also remarked that difference between their product and the products’ of foreign companies was not evident. Consequently, they combined both the arguments of cheap price and the benefit of prescribing payment for convincing doctors.

“I say that price of my product is easy for choosing due to cheaper price, especially for patient with limited budget. I also mention about our policy of prescribing payment for doctor. I see that many doctors do not refuse it immediately. As my experiences, I found that most doctor still accept it if I'm patient to convince them by this way.” (Interviewee 7-LLC)

Concerning coping with other limited liability companies, differences on quality product between their product and that of other companies were mentioned through imported source.
Products from European countries would be better than product of China. Doctors also liked it more than product of India or Korea if they knew about that. I also suggested doctors can test my product because its real effect will prove quality of my product the most exactly.” (Interviewee 6-LLC)

Difference among policy on prescribing payment of limited liability companies depended on imported source of product and sales scale of target market. This difference also contributed to competition among these limited liability companies to get market share as well as protect their market.

“The price of product import from China was very cheap, so they could give very high prescribing payment. Our product came from European countries, its own price was much higher so we could not pay high prescribing payment comparing to them.”(Interviewee 6-LLC)

“If I found that some doctor can provide me with high sales while they are using product of other companies, I will apply larger prescribing payment to convincing doctor share market. I did not use prescribing payment to get whole market share immediately. After that, I will combine some other policies to get more market share step by step.”(Interviewee 7-LLC)

Different limited liability companies might apply abnormal prescribing payment to get market share, for examples prescribing fee around 50% for doctors. To solve these cases, a medical representative mentioned that:

“I forced to apply higher prescribing payment temporarily to protect market combining exploring the reasons for explaining to doctors.”(Interviewee 7-LLC)

Regarding joins stock companies, in recent years, they have improved the quality of their products by applying modern technologies and importing high quality materials. Consequently, medical representatives of these companies also pointed out this aspect together with the advantage of a cheaper price when competing with others companies.

Comparing to limited liability companies, the product quality of these companies was explicitly mentioned, grounded on arguments of modern manufacturing technologies and good source of materials

“My company got GDP criteria already. My company was also one of the biggest companies belonging to the top of 20 leading pharmaceutical companies in Vietnam market.
Therefore, they felt more confident than product of limited liability companies because they believed in quality of these high position companies.” (Interviewee 9-JSC)

“The quality of injected antibiotic almost depended on material while my company just imported and separated it smaller dosage. So, its quality couldn’t be influenced so much by manufacturing technology like tablet manufacturing.” (Interviewee 8-JSC)

Regarding competing with brand medicine, medical representatives of joint stock companies expressed that they believed that brand drugs had higher treatment effect but they also managed to highlight quality of their own product.

“My antibiotic was proved biology equivalence to brand medicine. We made a research in National pediatric institution to prove no difference between my product and one brand medicine. So I often showed doctors about this evidence to create their belief. However, not many doctors believed that because they think that made it in Vietnam so it was not confident.” (Interviewee 9-JSC).

Besides referring to quality product, the cheaper price of their products was always mentioned as a strong argument for convincing doctors by pointing out the government’s policy on paying for patients with state insurance

“Because ministry of health has been removing some high price product out list of medicine that are paid by government budget and gave some regulation to reduce abusing high price product, cheaper products will help doctor less pressure for choosing medicine.” (Interviewee 9-JSC)

3.4. Encouragement for prescribing
This category is about how medical representatives managed to influence doctor to choose their product through building close relationship with doctors as well as provide them with some incentives. Medical representative made an effort to become closer to doctors by spending much time on talking about a variety of subjects relevant to the doctors based on information that they collected previously or combining product presentation through meals together. After becoming closer, medical representative felt easier to ask doctor to choose their product. Moreover, medical representatives also expressed their appreciation to doctor by giving gift for special events. Besides that, they provided doctors with some incentives of company to satisfy many kinds of doctor’s requests such as medical related sponsor, support for talking part scientific conferences or holiday vacation. Depending on each type of company, medical representative
will follow different ways for sponsoring. Table 9 below give detailed information about influencing on doctor regarding category “encouragement for prescribing”

**Table 9: Category “Encouragement for prescribing”**

<table>
<thead>
<tr>
<th>Multinational enterprises</th>
<th>Limited liability company</th>
<th>Joint stock company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building friendship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gift for special event</td>
<td>- Flexible gift for special event</td>
<td>- Customer conference annually</td>
</tr>
<tr>
<td>- Invitation for meal in restaurant combining product presentation</td>
<td>- Chance for scientific conferences</td>
<td>- Company arranged trips annually</td>
</tr>
<tr>
<td>- Chance for scientific conferences</td>
<td>- Medical related sponsor following to company policy</td>
<td></td>
</tr>
<tr>
<td>- Doctors’request related sponsor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The importance of building a good relationship with doctors was mentioned by medical representatives from all types of companies. Regarding medical representatives from multinational enterprises, it played an important role in their work.

“If I had a good relationship with doctors, they will be willing to choose my product if I ask them to do that. I also felt more comfortable to do that. Based on good relationships, I got success to persuade some department to use it and maintain high sales for a long time. Actually, it was not only originated from the good quality of this product, but also came from good relationship between me and them.” (Interviewee 2-ME)

“A good relationship contributed to 30% for choosing my product. Limited liability companies always pay prescribing fee for doctor while my company does not give them anything. They liked me so they still prescribed my product.” (Interviewee 2-ME)
Building a good relationship was also important for medical representatives from limited liability companies and joint stock companies. They mentioned that a closer relationship will help them create doctors’ trust for their product because

“When doctors trusted you, they could transfer this trust to the product you promote. It is clear that if two people do not know each other, it is difficult to persuade. So if you knew someone and also believe each other, it was easier for you to talk about your product and created their trust about that product. Similarly, when you showed them that you really took care of them, they would respect it and were willing to help you. You could see in the same company, some people they got more success than others people because they created a better relationship with their customer.”(Interviewee 6-LLC)

To build a good relationship with doctors, medical representatives often used their personal information. For example, a MR from a joint stock company mentioned that they may get information on the doctor’s son birthday date and provide a present for him on his birthday.

Including personal information on the chats with doctors - e.g. asking about children to female doctors or about housing prices with male doctors - was considered by medical representatives from multinational enterprises as a good way to as make meetings less boring and helping doctors get away from their daily stressful routines.

“The doctors’ work was very hard. They forced to treat so many people in short time, they also had to listen to complain of patients about their status. In that case, if medical representatives always gave brochure and present their product, doctors might feel comfortably, their feeling was not well to get it especially they were heard in a passive way to get more something new.”(Interviewee 2-ME)

In order to build a good relationship with doctors, medical representative often gave them some gifts for special events. In multinational enterprises, medical representatives received limited amount of arranged gifts to give to doctors in these occasions

“Every year, my company bought some Lunar New Year gift such as pack of candy, cookies to give to doctors, around 15 packs for each of medical representative. We chose some important doctors to give it because it was not so much.”(Interviewee 1-ME)

Medical representative from multinational enterprises were able to give some small gifts for personal occasions e.g. for ceremony of establishing department or birthday.
“My company would be responsible for buy specific gifts such as flowers. Sometimes, I might buy some mufflers as others gift for doctor. My company did not allow to do that, but it was not so expensive so I could afford. They respected it even though it was just small gift but they knew that I cared about their characteristic or hobbies.” (Interviewee 4-ME)

The amount of gifts for these occasions were limited, so medical representative of multinational enterprises did not cover all

“Many multinational enterprises like my company did not have gift for birthday of doctors or international women day. Therefore, I just called them for greetings or did not dare to meet them on that day” (Interviewee 5-ME)

Regarding joint stock companies, medical representatives shared that they did not care so much about these thing

“I was not pressured by high sales so I did not care much about doctor’s characteristic or private information like this.” (Interviewee 9-JSC)

On the contrary, medical representatives from limited liability companies really cared about some of these occasions, e.g. preparing gifts for New Year event or Vietnamese Physician Day in advance. The policy of these companies was more flexible regarding choosing gifts or other things

“I sent them some money for instead of gifts because some newspaper talked some bad things about relationship between doctor and medical representatives in recent time.(Interviewee 7-LLC)

Regarding multinational enterprises, they applied another kind of support for doctors by providing meals in restaurant combining product presentation or managed to sponsor doctors for talking part in scientific conferences.

“For some VIP doctors who prescribed very high sales we sponsored them for scientific conferences in foreign country which also related to product of company, around 3-4 people each year. Similarly, we could invite more doctors for some different conferences in Vietnam but they were also key doctors.”(Interviewee 4-ME)

Similarly, joint stock companies also hold customer conference or arranged some trips every year to famous places.
“Every year, my company often held large customer conference with valuable gifts for whole country. Moreover, we also took part two or three trip each year for key doctor, often one long trip and two short 2-3 days trip.” (Interviewee 9- joint stock company)

Medical related sponsorships were also accepted as sponsoring for doctors

“We bought it for the department has high potential sales and then doctors will give thank letter for this sponsor.” We could not give cash because the policy of my company did not allow that. (Interviewee 5-ME)

“Some cases, they wanted to sponsor by cash so I forced to tell lie my manager that I planned buy some equipment for them. When I got money, I will gave it to them” (Interviewee 8-JSC).

4. DISCUSSION

This study was performed to explore influence of medical representatives’ promotional activities on doctors’ prescribing choice. In addition, it aims to compare promotion activities of medical representatives from multinational enterprises, joint stock companies and limited liability companies. Using a qualitative research methodology basing on collecting information from in-depth interviews with medical representatives from these companies, the study found interesting results referring to specific settings of Vietnam.

4.1 The influence of the products’ characteristics to promotional approaches

Regarding product quality, products of multinational enterprises in this study are almost brand medicine from leading corporations. As the result, they tried to build high quality image for their brand product through expressing suitable information to take advantage of brand medicine as well as reduce disadvantage of high price. To support these strategies, multinational enterprises spent large resources for training programs including product and selling skills.

On the contrary, products of joint stock companies and limited liability companies in this study are generic medicine and these companies do not focus so much on offering products seminar. To cope with brand medicine in convincing doctors, medical representative of joint stock companies and limited liability companies also tried to persuade doctors to believe more on their product by providing some information to prove quality of their product including
• Imported material source from countries with developed pharmaceutical industry
• Information of getting GMP for ensuring quality of product
• Proof bio equivalence serving for comparing brand medicine
• High position in Vietnamese pharmaceutical industry

Despite of providing the above reasons, the pharmaceutical industry in Vietnam according to WHO is just level of 2.5 – 3 and domestic pharmaceutical companies in Vietnam just focus on producing broad spectrum antibiotics, vitamins and pain killers, without investment on manufacturing specialized medicines [31]. Moreover, the number of domestic manufacturers that got GMP-WHO - an important criteria for assurance quality of product- is just a half of the total of manufactures in Vietnam [33]. Therefore, product of domestic companies did not meet a variety of treatment demand of doctors and then do no create belief in quality of domestic product for choosing domestic product.

More importantly, domestic manufacturers can not manage to build doctor's belief in their generic product quality because they lack confident evidences to prove bioequivalence comparing to brand medicine as mentioned by medical representative of this company.

In Vietnam, there are neither official regulations nor guidelines for implementing about bioequivalence researches until now. Generic medicines, including imported generic medicine, account for 80% of market share causing difficulties in convincing doctors choosing domestic generic medicine, since they do not have any evidence for comparing. Moreover, lack of this regulation do not boost domestic producer investing more resources for getting qualified product to get competitive balance with imported medicine. If the Ministry of Health could build testing criteria soon, domestic producer will be forced to apply it in order to get competitive advantage in confirming quality of product and building brand for their products. Actually, there are few domestic manufactures asked by the National Institute of quality control to test bioequivalence of some of their generic product. However its value was limited because Vietnam does not have official testing centre, so this testing is just based on some guidelines of other countries whose criteria is not suitable to real situations in Vietnam causing limitations in its application [47]

Similarly, medical representatives of limited liability companies also mention unclear evidences for evaluating treatment basing on source of product although they confirmed that product quality of foreign companies is better. The data from the study of Tuan Anh Nguyen showed that
there remains a stronger trust in famous brand medicines - which are produced by multinational corporation in Western Europe or North America such as US or France, compared with a weaker trust on their generic versions. That belief also applies for generic medicines from pharmaceutical companies from this place compared to product sources from Eastern Europe such as Poland. [46]. Reason for this thought is imported products of limited liability companies in Vietnam often come from generic small and medium companies in China or India which its quality is often lower than countries with high developed pharmaceutical industry tradition [32].

To solve the disadvantage of the perceived lower quality of their medicines, medical representatives of domestic companies manage to use the advantage of cheaper price. They also mention the unavailability of clear evidence on quality differences between their medicines and brand medicines. However, advantage of cheaper price of domestic product is explained by lack of investing research and development. The WHO requirements for domestic pharmaceutical manufacturers to comply with GMP standards become compulsory for all of pharmaceutical in upcoming years and competitive pressure is leading to increase investment in this sector causing increase in medicine's prices. Moreover, if cheaper products of domestic companies still do not meet treatment demands, they will not be prescribed by doctors.

Regarding cheaper price of imported generic medicine of limited liability companies, the source of product come from small-medium size companies in Asia, and this contributing to their advantage because price of products from these companies is much lower than brand medicine. To influence doctor’s prescribing choice for these cheap generic medicines with expectations of lower quality, one main promotional policy of limited liability companies is prescribing payment or commission for doctors. According to data of Tuan Anh Nguyen, if they do not give prescribing payment, their products are not prescribed. Prescribing payment was a common reason for high prices of generic medicines in Vietnam as mentioned in this study. As the result, patients have to pay a higher price, because it includes informal payment which contributes to 40-60 %. This informal payment includes payment to authorities, prescribing payment for prescribers and payment for hospital pharmaceutical department, in order to get the right for supplying medicine in hospital [46].

Comparing to multinational enterprises, joint stock companies and limited liability companies did not invest resources on both product and selling skill training. The majority of medical representatives of these companies get product information through brochures by themselves,
together with isolated days for product training for new employees or few simple training courses each year to help medical representatives to work better. Meanwhile, the medical qualifications requested of medical representative from these companies is lower than from foreign companies, and in some cases medical representatives from domestic companies did not have a medical related background. Actually, these cases break the regulations of the Ministry of Health, which stipulates that employees working as medical representative need medium medical related degree, at least. According to our study, these companies do not care so much about background of employee. They just focus on providing employees with basic information of product and manage to persuade doctors by promotional policies.

4.2 Encouragement for prescribers

Different kinds of incentives or encouragement were applied to influence doctors’ prescriptions, depending on policy regulations of each company as well as their own specific characteristic referring to quality product and price.

In general, multinational enterprises and joint stock companies in Vietnam managed to use professional related incentives to influence doctors’ prescriptions e.g. gifts, meals in seminars, sponsor for taking part scientific conferences, trips and equipment related sponsor. Meanwhile, limited liability companies in this study took advantage of using gifts for occasions and especially prescribing fee based on the using amount of medicine as main tools for convincing doctors.

Sponsoring for trips

There is a small difference between multinational enterprises and joint stock companies in sponsoring trips for doctors. While joint stock companies cover scientific conference and holiday trips, multinational enterprises just accept to sponsor for trips combining scientific purpose due to policies of these foreign companies. Regulations of the Ministry of Health show that pharmaceutical companies are not allowed to sponsor trips like holiday trips. Comparing to other pharmaceutical companies all over the world, sponsoring scientific conference is one kind of popular method that these companies have applied for a long time for influencing doctors.
Gift

The amount of gifts and gimmicks that foreign companies give to doctors are decreasing in Vietnam due to regulation of these companies regarding cutting down this sponsorship according to policy changes. The effects of this sponsorship were evaluated by many studies when analyzing the influence of pharmaceutical companies on doctors. Regarding joint stock companies, this method is still applied to doctors. Limited liability companies focus on this method to take more advantage for influencing doctor due to flexible policy of this company. Studies in other settings mentioned this phenomenon and guidelines were issued to reduce the influence of gifts on prescribing doctors’ behavior [48]. Regulations of The Massachussets Department of Public Health were implemented form July 1, 2009 gave strict restrictions on gifts for doctors. It banned all kind of gifts apart from the provision of modest meals [49].

Meals

Foreign companies in Vietnam often combine product seminars with meals in restaurants for influencing doctors’ prescription – throughout providing benefit for doctors as well as building closer relationship in friendly environment. This kind of encouragement appeared in of the majority of the studies about interaction between physicians and medical representatives with negative evaluations about its effect on prescribing. In 2004, according to data of IMS Health - a company monitoring the industry’s finance - $10,000 per practicing American physician was spent on free meals, free continuing medical education (CME) training, free trips to conferences, and payments for various servicers by pharmaceutical companies [50].

Medical equipment related sponsor

Both multinational enterprises and joint stock companies applied this kind of sponsorship. This kind of encouragement also gets some criticisms regarding ethical issues. As mentioned in this study, medical representative can give cash to doctors instead of using the money for buying medical equipment.

4.3. Measures to ensure trustworthiness

Criteria for accessing trustworthiness in qualitative research include credibility, transferability, dependability, confirmability [38]

Credibility ensures validity of study referring to what researcher intended to seek by using their methods. The findings of research should come from real data provided by participants, and the researcher should make efforts to interact. Applied to my research, credibility was
enhanced by becoming familiar with the interview transcriptions by reading them several times, both in the translated English version and in the Vietnamese version. Texts of interviews were reviewed carefully during data analyses and notes were taken. Some questions referring to sensitive part of topic were listened as much as possible to get exact ideas and make it clear.

Transferability criteria refer to the efforts made to achieve analytical generalization - not statistical generalization - because of the characteristic of qualitative research, e.g. purposive sampling. However, by applying transferability criteria, results of research can transfer to other context if complex characteristics of context in qualitative research are accessible to the reader. To enhance transferability, I have provided detailed information on the context and the steps carried out when conducting this study.

Dependability refers to the possibility of implementing an emergent design, the ability to manage change during the research process. In my study, emergent design was applied to access a variety of information from different kinds of companies and exploring the way medical representative influence on doctors’ prescribing choice.

The last criteria, confirmability express neutrality of data. In this study, researcher manage to check it by checking misunderstanding contents of the interview due to phone interview or some sensitive parts of the study issues. Moreover, researcher tried to put pre-understandings into brackets to ensure neutrality of data by avoiding giving examples regarding working experience of researcher in questions to interviewee.

4.4. Researcher’s position
Concerning the role of the researcher in qualitative research as outsider or insider, in this study I consider myself as an insider because I worked as medical representative for five years in Vietnam. Being an insider allowed me to better grasp the characteristics of the context. It also helped me to get access to potential participants and to create better rapport with them during the interviews. However, I also recognize that even if I tried to put my pre-understanding into brackets, my previous experiences and knowledge could have influenced the results.

4.5. Strengths and limitations of the study
Due to my pre understanding about medical representatives’ work, when I asked interviewee to share descriptions of their work, they think that I’m also insider so they need not explain in detailed their daily activities or promotion strategies. Especially, for the case of interviewees from foreign companies, they did not say in depth because my background was also medical representative of foreign company. It could be leading to lack of some information for recording even I understand clearly this context study. Moreover, each kind of companies including
foreign companies also had specific strategies just applying for their own characteristics. To solve this problem, I tried to put my pre understanding into bracket to encourage interviewees to share in detailed with the aim of avoiding lack of information and difficulties in data analyzing.

Regarding background of medical representative, researcher also tried to ensure confirmability of data by reducing using working experiences for encouraging interviewee to share their own opinions in the process of collecting data as well as using this experience in analyzing results to get the aim of research.

Concerning about content of research, some interviewee refused some sensitive information relating to promotional activities of their companies due to bad effect in publishing it.

To determine more detailed about medical representatives’ promotional activites, this research can not manage to obtain information from perspectives of doctors or manager of companies

Regarding imbalance in number of interviewee among three kinds of companies, it relates to emergent design of research. I recognized that small number of participants from JSCs and LLCs could have been bad to results in term of diversity of participant. However, limitation of time did not enable me to conduct more interviews.

5. CONCLUSION

The study has analyzed promotional activities of medical representatives from multinational enterprises, joint stock companies and limited liability companies aiming to influence doctors’ prescribing choices in Vietnam. The results reveal that medical representatives of multinational enterprises persuade doctors by concentrating on building the reputation products’ image with high quality and reliability which is also used to explain the very high cost of their medicines. Moreover, encouragement for prescribing is presented to influence doctors’ prescribing choices.

Medical representatives in multinational enterprises are well trained in order to implement their missions successfully. Conversely, medical representatives of both joint stock companies and limited liability companies have totally different strategies to convince their customers. Medical representatives of joint stock companies provide the high quality proofs of their generic medicines with similar encouragement for prescribing. In fact, the strategies to achieve the high
quality products of joint stock companies is that they invest in advanced technology systems to produce the high standard quality medicines which improve the competiveness for the output products. However, doctors are less convinced by the quality of medicines produced by joint stock companies compared with brand names, due to the alleged low standard of Vietnamese joint stock manufacturers. Recommendation for this issue is that the national government should build effective systemic strategies to support the domestic pharmaceutical productions. In terms of limited liability companies, the strategies for raising sale are informal payment for prescription of doctors and occasional gifts.

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