

# **“A Quantitative Research on Physicians-Detailers Long-Term Relationships Building, in Prescribed Drug Marketing Contexts”**

To be considered as Competitive Paper

Special Track: Business-to-Business Service Networks

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## **Abstract**

The presented research is part of a doctoral study, which, among others, investigated a wide array of relationship building constituents and effects that may evolve in the context of a physicians –detailers-pharmaceutical companies’ network.

Specifically, for the purposes of this paper, we select the variables *detailer’s listening efficacy*, *detailer’s responsiveness* and *detailer’s reliability*, regarded as relationship-building variables and examine their interpreting powers upon *physicians’ trust* and *physician’s satisfaction from interaction*, regarded as relationship-building effects. In turn, the subsequent effects of trust and satisfaction upon *detailer’s productivity* and *physicians’ commitment* are also examined. Thus, the purpose of the presented research is twofold:

First, to place empirical support upon existing literature regarding long-term relationship building, in a business-to-business service environment, using rigorous quantitative analysis. Second, we aim to examine the extent to which the aforementioned relationships apply, in a physician-detailer interacting context. Indeed, marketing departments of pharmaceutical companies take great pains to nurture their physicians-target groups in their prescribed products operation and efficacy. In this effort, the pharmaceutical representative-detailer plays a catalyst role, as intermediary between the company and the prescribing physician. Thus, pharmaceutical companies’ relationship-building efforts are highly dependent upon their representatives’ approach practices and performance. However, physicians have almost the absolute control of the prescription decision among alternative drugs. Thus, the normative power exercised by the physician towards the approaching pharmaceutical company seems to be highly unbalanced. In this spirit, one should expect that physician-detailer encounters, should not favor the development of long-term relationship traits, i.e., trust and commitment. As a matter of fact, we elicit from existing marketing channels theory that the aforementioned traits would flourish in symmetrical power encounters, thus cited also as facets of symmetrical power. On the other hand, physicians should need the pharmaceutical

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companies' new knowledge, as this evolves through continuous laboratory and clinical research. Especially in new task conditions, i.e., innovative drugs, pharmaceutical companies normally exert influence upon the physicians' prescription decisions, which stems from new knowledge regarding their new drugs' efficacy to better cure of diseases. In this way, pharmaceutical companies' expert power should alleviate the ground between the two interacting parties, thus making their interactions more symmetrical.

In order to test the aforementioned relationships, we built upon existing literature pertaining to relationship marketing in business-to-business markets, the network theory, the sales-force management, the marketing channels and the pharmaceutical marketing theory and developed the research constructs and hypotheses. The preceded exploratory research involved a qualitative research in which 20 physicians were thoroughly interviewed, in order to facilitate us to adopt existing marketing scales in the context of physician-detailer relationships. Specifically, using unstructured interviews with the physicians, we identified the critical issues from the point of the subjects, regarding their interaction expectations with the detailers, and this allowed us to include them in the research instrument.

The final quantitative research instrument was addressed to a research sample of 91 physicians, which responded through personal interviews. Measure validation was achieved by subjecting the research data to a series of confirmatory factor analyses, using structural equation modeling of the AMOS statistical package. As a next step, research hypotheses were tested through a series of regression analyses.

The research findings provide sufficient evidence upon almost all our hypothesized relationships, thus placing evidence that long-term relationship building in the context of physician-detailer interactions, may lead to enhanced detailers' performance, in terms of physician's commitment to the relationship and increased prescription rates. Managerial implications and directions for future research are also derived.

**Keywords:** pharmaceutical marketing, business-to-business service networks, prescribed drug marketing, long term relationships quantitative research

## INTRODUCTION

As driving medical progress and improving health within Europe and worldwide, the research based pharmaceutical industry is a key asset of the European economy, performing in high-technology sectors, with prices reaching €206,500 million, in 2008 (EFPIA, 2009, p.1). Furthermore, the marketing strategies employed in the pharmaceutical industry sharply contrast to those typically adopted in other markets. One of the primary reasons for this difference is that in the prescription drug market there is a distinct breach in the traditional buying decision process: The decision maker is the physician, who chooses among an array of drug alternatives, but it is the patient who takes the drug and ends up paying (either out of pocket, or through health insurance coverage) for the choices made by the physician. In this sense, traditional marketing practices should be adapted to fit to the peculiarities of the prescribed drug marketing. On the other hand, although academics have had a long-standing interest in measurable objective results, to the best of our knowledge, limited attention has been devoted to the study of subjective, behavioral aspects of the pharmaceutical marketing efforts. Furthermore, examination of the subtle variables that may build long term relationships between the pharmaceutical companies' representatives and the physicians, seems to have fallen behind.

With this study we start filling this void. Specifically, in this paper we present a part from a doctoral research study, which investigated a vast array of antecedents and outcomes of long-term relationship building in prescribing drug marketing contexts.

A better understanding of the detailer-physician interactions, would pave the way for pharmaceutical marketing to aiming at enhanced value, through sustainable relationships with physicians.

Specifically, the purposes of the presented paper are:

- a. To develop appropriate constructs for physicians-detailers long-term relationship building antecedents and outcomes, and,
- b. To examine the relationships among the aforementioned constructs.

The organization of the paper flows as follows. The next section lays the groundwork by briefly reviewing the relevant literature and develops research hypotheses. The third section is concerned with the methodology issues. The paper ends with the discussion of the findings, limitations and directions for future research.

## THEORETICAL BACKGROUND

Pharmaceutical marketing departments take great pains to nurture their physicians-target groups in their prescribed products' efficacy. In this effort, the pharmaceutical representative-detailer plays a catalyst role, as the intermediary between the company and the prescribing physician. Thus, pharmaceutical companies' communicative efforts are highly dependent upon their representatives' dialogic capabilities to convey the appropriate messages and optimize communication results. However, physicians seem to have almost the absolute control of decision making among alternative prescribing drugs. For example, doctors are absolutely free to choose among alternative medicines, with similar indications and contradictions in order to prescribe to their patients, except only for the case of severe illnesses, which posits some restrictions from the point of the state. Thus, physician's authority would proclaim the existence of power of a normative type over decision making, which is also met in the marketing literature under the labels asymmetrical, or unbalanced (French and Raven, 1959). At the same time, communication has been characterized as the vehicle, or means of power exercise (Thorelli, 1986), thus preempting the existence of low

levels of relational communication interactions within the physician-detailer context. In this spirit, one should expect that physician-detailer interactions should be unfavorable to the development of long-term relationship traits, i.e., trust and commitment. Indeed, the aforementioned traits may flourish in symmetrical power environments, thus cited also as facets of symmetrical power (Mohr and Nevin, 1990). From another point of view, physicians should need the pharmaceutical companies' new knowledge, as this evolves through continuous laboratory and clinical research. Especially in new task conditions, i.e., in the case of innovative drugs, pharmaceutical companies normally exert influence upon the physicians' prescription decisions, which stems from new knowledge regarding their new drugs' efficacy to better cure of diseases. Indeed, as far as the new drugs are concerned, physicians might experience high ambiguity regarding multiple issues, i.e. side-effects, application issues, or efficacy. In this sense, the decision making regarding the subject matter may be characterized as highly unstructured, which preempts high levels of information flows in order to resolve ambiguity (Daft and Macintosh, 1981). As a matter of course, pharmaceutical companies may exert power of an expert type, thus alleviating the ground between the two interacting parties and make the relationship more symmetrical.

On the other hand, delving into the marketing literature, we elicit that communication may be regarded as the art of enhancing relational approaching. For example, Bantham, Celuch and Kasouf (2003, p.269) suggest that awareness of, and willingness to address dialectical tensions and communication behaviors may serve as enablers in relationships.

Furthermore, Sheth and Parvatuyar (2000, p.332) cite that long-term relationships may be built around communication, trust and negotiation in a process described as the first stage of relationship building. Thus, throughout the relationship marketing literature, relational communication is met as both an enabler (i.e. an antecedent) and a vehicle (i.e. an outcome) of symmetrical types of power conveying relational interactions.

In this research we don't focus on the communication facets per se, i.e., whether the communication is relational vs. discrete, to use Mohr and Nevin's terminology (1990, 4), but rather on the detailer's communicational abilities to inspire relational traits of trust, satisfaction and commitment, regarded also as building blocks of long-term relationships. For example, Lovelock (2001, p. 232) argues that instrumental and interpersonal factors may function much like facilitating and enhancing factors in the services marketing literature, with instrumental factors constituting the basis for starting a relationship, while interpersonal factors help to cement the relationship. In that case, instrumental factors may be critical determinants of satisfaction during early stages of relationship development, while interpersonal factors will be drivers during later stages (Lovelock 2001, p.625). Along the following lines we analyze the variables participating in the presented piece of research.

## RELATIONSHIP BUILDING ANTECEDENTS

### *Detailer's listening efficacy*

According to Bantham, Celuch and Kasouf (2003, p.267), communication skills that typically aimed at improving interpersonal relationships include: non-defensive listening, that is, focusing attention on what a partner is saying rather than being preoccupied with future responses; active listening, including nonverbal encouragers as well as accurate summarizing of partner communication; self-disclosure, the sharing of needs, feelings, and specific requests; and editing, self-censoring of attentive and communication responses.

More specifically, salesperson listening has been defined as "the cognitive process of actively sensing, interpreting, evaluating and responding to the verbal and nonverbal messages of present or potential customers" (Castleberry and Shepherd 1993, p. 36). Comer and Drollinger

(1999, p. 22) develop the concept of “active emphatic listening” and suggest that it is an effective enhancement for sales presentation delivery, particularly in question-and-answer sessions designed to probe customer’s needs. Along similar lines, Williams, Spiro and Fine (1990, p. 37) speculate that attention to nonverbal cues (i.e. implying active listening skills by the interacting actor) during the sales presentation would have a direct impact on communication effectiveness.

#### *Detailer’s responsiveness*

Marketing literature categorize responsiveness as an integral part of customer orientation. For example, Williams and Attaway (1996, p. 39) define customer orientation as “a philosophy and behavior directed toward determining and understanding the needs of the target buyer and adapting the selling organization's response in order to satisfy those needs better than the competition”. In the same spirit, White, Varadarajan and Dacin (2003, p. 63) state that in order to survive and prosper in a competitive marketplace, an organization must strive to respond continuously to opportunities and threats posed by a changing environment.

Holweg (2005, p. 608) resembles responsiveness to flexibility. More specifically, Reichhart and Holweg (2007, p. 10) in a more in-depth analysis, view responsiveness as the speed with which the system can adjust its output within the available range of four external flexibility types: product, mix, volume and delivery, in response to an external stimulus, e.g. a customer order. However, in the prescribing pharmaceutical industry, price, product and marketing channel policies (i.e., reflecting product and price exchanges) are highly subjected to government decisions, thus they limit responsiveness options to the area of detailer-physician interactions, per se. In this sense, detailers have to be responsive in a narrower and more focused set of options, i.e. to the successful sequential information and social exchange episodes. As a matter of fact, the preliminary phase of our research placed additional support to the aforementioned argument. Indeed, a few distinguished participating detailers cited that their physician customers would highly appreciate willingness to bring scientific evidence, or answering their calls promptly. At the same time, the same interviewed detailers cited instances of a good relationship, with a physician, who, nevertheless, would arise a lot of complaints and grouch when they had forgotten to bring something they were asked, especially scientific data.

#### *Detailer’s reliability*

Throughout the marketing literature, the terms reliability and credibility are used interchangeably. Thus, Ganesan (1994, p. 5) refers to the concept to sustain that within the marketing channel credibility is based upon objective experience, such as a vendor’s fairness in the treatment of other channel members over time. The reliability dimension relates to the partner's intentions and his ability to keep promises. The sales presentation helps build reliability. In mastering and delivering a well-designed, professional presentation, the sales representative demonstrates expertise. A polished presentation is an excellent opportunity for the sales representative to demonstrate him/herself as a credible sale professional. This potential is especially important in the marketing of services, i.e. the subject matter (Hershey 2005, p. 49), where credibility and trust become surrogates for tangible product features. Reliability, in turn, can contribute to the development of trust between the buyer and the seller.

### RELATIONSHIP BUILDING OUTCOMES

In regard to the relationship building outcomes, we specify physician’s trust, satisfaction, commitment and productivity. Specifically, for the purposes of our research, we depict trust

and satisfaction as the direct outcomes of a relational approach, whereas detailer's productivity and physician's commitment are presented as subsequent effects of trust and satisfaction. Indeed, Gounaris (2005) has found that in most business-to-business exchanges, achieving a sale is not the fulfillment of an effort but rather an event in a broader endeavor to build and sustain a long-term relationship with the customer and see that sales keep coming. There is now a lot of empirical evidence to support the logical assumption that this could play a critical role as well in business to customer relationships. These studies conclude that where a relationship already exists, higher levels of commitment will be generated by virtue of the presence of trust, and that higher levels of both sales and loyalty will accrue as a consequence (Anderson and Weitz, 1989; Dwyer et al., 1987). Thus, first we discuss the effects of relationship building antecedents upon trust and satisfaction, whereas detailer's productivity and physician's commitment are examined as subsequent effects, as discussed in the following sessions.

#### *Physicians' trust*

Traditionally, trust has been studied in the context of long-term relationships (Kasper-Fuehrer and Ashkanasyb 2001), which means that trust is described as being history-dependent. Anderson and Weitz, (1989, p. 312) define trust broadly as "one party's belief that its needs will be fulfilled in the future by actions undertaken by the other party". Furthermore, trust is essential in many relationship activities, especially those where the service, or product cannot be evaluated immediately, and where rules and regulations are not enough to predict the behavior of other parties and to reduce the relationship complexity (i.e., the case under research) (Lee, Huynh and Hirschheim 2009, p.58). Likewise, trust may be even more important in most services than other marketing contexts because the customer is essentially buying "a promise" (Macintosh 2009 p. 298). "To trust the other is also to gamble upon the capability of the individual actually to be able to act with integrity" (Giddens, 1994, p. 138). Anderson and Narus (1990, p. 45) also state that trust is "the firm's belief that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that will result in negative actions for the firm."

#### *Physician's satisfaction from interaction with the detailer*

Customers are recognized as reason de entrée for an organization. They are the origin and the purpose of product development and improvement. Product or service improvements that do not meet customers' needs and expectations will be a total waste for the organization. Customer satisfaction should therefore be the objective and drive of continuous improvement (Jabnoun, 2001). Overall satisfaction is defined as "pleasurable fulfillment" and is an effective response (Oliver, 1999 p.34). Focusing to the detailer-physician relationship satisfaction should be the result of a series of successful transaction experiences rather, than an one-off transaction.

#### *Detailer's productivity*

Detailer's productivity is a major tool for their performance evaluation. In order to be successful, a detailer should be successful in convincing the doctors to prefer the brand he/she is promoting over other alternative brands. Artis and Harris (2007, p. 14) in their work about learning and sales performance, stated that confidence in using self-directed learning skills may be more important than actually having strong skills. Furthermore, Ryerson (2008 p.190) found that sales are higher as relationships evolve from a transactional to a relationship orientation. In this study we operationalize detailer's productivity in terms of physician's prescribing share, i.e. the percentage of physician's total prescriptions that may be accounted to the brand that the detailer represents. This term is used in conjunction to customer share,

used in the business-to-business marketing, which represents the percentage of a customer's total sales accounted to a specific provider.

#### *Physicians' commitment*

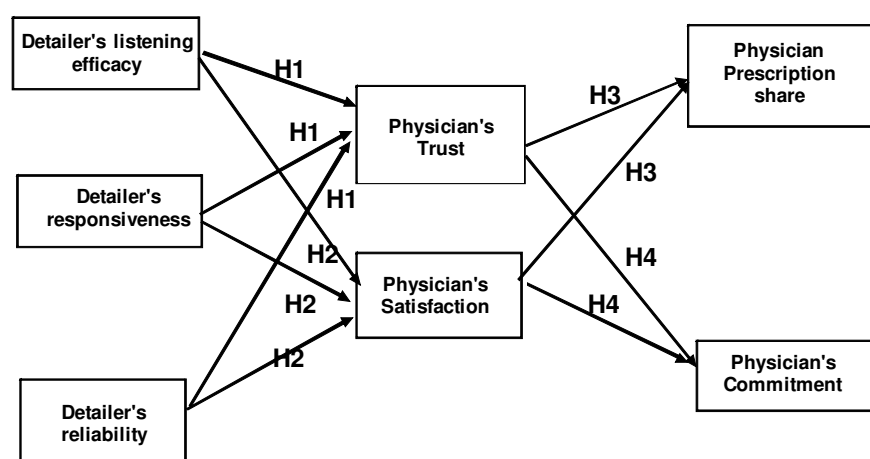
Moorman, Zaltman, and Deshpandé (1992, p. 316) define commitment as an enduring desire to maintain a valued relationship. Similarly, Gremler and Brown (1996, p. 173) define customer loyalty, which is very similar to commitment, as "the degree to which a customer exhibits repeated purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider and considers using only this provider when a need for this service arises". There are a few reasons in bibliography to explain why a customer would prefer to cooperate with one seller over the other. For example, Rusbult and Buunk (1993, p. 180) sustain that commitment represents a long-term orientation, including feelings of attachment to a partner and desire to maintain a relationship, for better or worse. Similarly, Oliver (1997, p. 392) defines loyalty as a deeply rooted need "to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand, or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior".

### HYPOTHESIZED RELATIONSHIPS

#### EFFECTS OF RELATIONSHIP BUILDING ANTECEDENTS UPON DIRECT RELATIONSHIP BUILDING OUTCOMES

The hypothesized relationships of our study are illustrated on Figure 1.

**Figure1.**



#### Conceptual Model and Hypothesized Relationships.

First, listening is the most used, but least understood component of communication processes, as it is presumed to be a critical skill for successful salespeople to build trusting and open relationships with customers (Ramsey, Sohi 1997 p.127). Similarly, Kainen and Boyd (2007,

p.62) sustain that successful sales people proactively listen to the other party's critical issues, connect their own ideas to them and do so in a conversational manner that confirms their own technical talent and creates trust. Thus, effective use of question and answer sessions can help the detailer customize the message to meet the needs of the physician more precisely. In turn, follow-ups with those physicians who requested more information may lead to more contacts and help transmute contacts to trust, commitment and prescriptions. Along similar lines, Stettner (1988) indicates that salespersons may build trust and give their guests the freedom to express themselves openly, by asking the right questions and creating an atmosphere of fairness and genuine concern, which preempts enhanced listening skills. As a matter of fact, at the exploratory qualitative phase of our research, an interviewed physician stressed the importance of detailers' active listening, by stating that "...many pharmaceutical representatives, come here to tell their own stories, they never quite listen to what we are saying." In this way the doctor exposed her/his feelings of dissatisfaction towards the detailers with poor listening skills.

Indeed, Hershey (2005 p.43) found that sales representatives who make use of proportionately greater amounts of strategic-level communication were more effective in developing trust with customers, than representatives who did not emphasize strategic-level communication.

As far as the relationship between responsiveness and trust is concerned, Teven and Winters (2007 p.478) argue that effective prescribing sales representatives carefully listen to physicians' descriptions of their patient's conditions and tailor their influence messages, both verbal and nonverbal, accordingly. Indeed, Gummerus et al. (2004, p. 183) found a positive link between trust and responsiveness and characterized it as a dimension of functional quality. The authors justified their finding by saying that responsiveness represents a quick response to requests which is likely to increase perceived convenience and diminish uncertainty, and thus it is an important way for companies to show that they are customer-oriented and act benevolently toward customers, thus affecting trust.

Finally, considering the relationship between detailer's reliability and trust, Hershey (2005 p.42, 43) provides some evidence on the argument that trust is based in large part on the credibility the sales representative has developed with the buyer. In the same spirit, Doney and Cannon's (1997, p. 36) define trust in buyer/supplier relations, as "the perceived credibility and benevolence of a target of trust". This definition is relevant in a business-to-business services context. Buyers try to reduce the perceived risk surrounding the service purchase by selecting service firms they can trust – those deemed capable of performing reliably and who have demonstrated an interest in the buyer's well being.

Along similar lines, Morgan and Hunt (1994, p. 23) define trust as "one party's confidence in an exchange partner's reliability and integrity." Likewise, Singh and Sirdeshmukh's (2000, p. 155) define trust as a "customer's overall evaluation given to a company's capability to fulfill the promised performance in a reliable and honest manner." In the same spirit a customer's trust in a salesperson may be defined as "a confident belief that the salesperson can be relied upon to behave in such a manner that the long-term interest of the customer will be served" (Crosby et al. 1990, p. 70). From the aforementioned views one may elicit that trust and reliability may be used interchangeably, however, there seems to be a fine line that distinguishes reliability as antecedent of trust, which follows as a normal effect.

Furthermore, when customers perceive that a salesperson listens actively to what they say and responds in an appropriate manner, they may feel that their interpersonal needs of inclusion, control, and affection are being fulfilled, and hence they are more likely to be satisfied in their dealings with that salesperson (Ramsey, Sohi 1997 p.130). We hypothesize that:



Stated formally, in the detailer-physician interaction context:

**H1: Detailer's listening efficacy, responsiveness and reliability, regarded as relationship building antecedents will be related to physician's trust on the detailer, regarded as a relationship building outcome.**

**H2: Detailer's listening efficacy, responsiveness and reliability, regarded as relationship building antecedents will be related to physician's satisfaction from interaction with the detailer, regarded as a relationship building outcome.**

EFFECTS OF DIRECT RELATIONSHIP BUILDING OUTCOMES, I.E. TRUST AND SATISFACTION, UPON SUBSEQUENT RELATIONSHIP BUILDING OUTCOMES, I.E., COMMITMENT AND PRODUCTIVITY.

As shown of Figure 1, trust and satisfaction are considered as direct relationship building outcomes, whereas, commitment and productivity play the role of subsequent relationship building effects.

To begin with, trust plays a critical role in the development of long-term relationship and in facilitating exchange relationship. Common sales objectives, that are considered necessary pre-cursors for successful selling, include the establishment of trust and the development of a long-term relationship between the seller and the buyer. Without trust, organizations will cooperate with their service providers only under a system of formal and legal rules (Lee, Huynh and Hirschheim 2009 p.55). Delving into the marketing literature, we elicit that trust plays a critical role in the development of long-term relationships and in facilitating exchange relationships, i.e. leading to enhanced productivity. This type of a committed and long-term relationship is perceived as a dynamic process, as the parties mutually demonstrate their trustworthiness through specific sequential interactions (Lee, Huynh and Hirschheim 2009, p.62). Indeed, Doney, Barry and Abratt (2007, p.1109) found that trust plays an important part in developing loyalty commitment and business opportunities.

Likewise, Anderson and Weitz (1989, p.320) suggest that "stable dyads are characterized by cordial interpersonal relationships. This underscores the importance of trust.... Older relationships are more trusting". In dynamic, diverse environments, trust enhances commitment and directly affects financial performance. Along similar lines, Palmatier, Dant and Grewal (2007 p.189), referring to dynamic markets, suggest that customers may reward trusted sellers because they acknowledge the value of trust with additional sales and higher prices. Moreover, Rauyruen and Miller (2007, p. 28) showed that overall satisfaction and perception of service quality may influence purchase intentions, i.e., productivity. Similarly, Chandrashekar et al. (2007, p.160) found a relationship between satisfaction and customer retention. These researchers implied that weakly held satisfaction would not translate into loyalty and that only strongly held satisfaction would be potent and translate into loyalty. Stated formally in the context of detailer-physician interaction,

**H3: Physicians' trust on the interacting detailer and physician's satisfaction from interaction with the detailer will be related to the detailer's productivity.**

As far as the relationships of trust and satisfaction with both physician's commitment and detailer's productivity are concerned, we place some piece of theoretical evidence along the following lines. Thus, greater levels of trust increase affective commitment and expectations of continuity (Geyskens, Steenkamp and Kumar, 1998 p.232). Trust acts as a buffer that

facilitates the agreement and execution of transactions (Kasper-Fuehrera and Ashkanasyb 2001). Moreover, trust leads the involved parties to focus more on the 'positive' motivation, because of a sense of affiliation and identification with each other, and this may be a stimulus to focus less on calculative reasons for attachment to a supplier firm (Ruyter et al., 2001). The above arguments found empirical support from Ganesan's (1994) study that showed that the more the vendor gains in trust, the more committed the buyers become. Similar empirical findings can also be found in the studies of Achrol (1991) and Morgan and Hunt (1994). When Kumar et al. (2003) studied the relationship intentions, argued that customers having high relationship intention are not opportunistic, and they try to keep it in the long-term. These customers possess a high affinity towards, are emotionally attached to, and possess great amount of trust in the firm, the brand, the intermediaries, or any combination of these. It can be argued that trust leads to a high level of affective commitment, or, in other words, a strong desire to maintain a relationship (Crosby et al. 1990, Konovsky et al. 1991). Thus, trust is a central tenet of customer retention. Moreover, trust takes on even greater importance in the arena of business-to-business services, especially in the field of pharmaceuticals. Physicians face the complexity of examining many intangible aspects of the industry's offering. Coupled with the uncertain outcome of the new drug performance, since pharmaceuticals are experienced goods, physicians must consider aspects of the relationship that suggest a company is aligned with the physician's future needs and objectives, thus preempting the long-term horizon of the relationship.

Furthermore, several theoretical and empirical studies have placed evidence upon the link of satisfaction with customer retention and loyalty. For example, Kotler (1994, p. 20) characterizes satisfaction as the key to customer retention. We hypothesize that:

**H4: Physicians' trust on the interacting detailer and physician's satisfaction from interaction with the detailer will be related to physician's commitment to the relationship.**

## METHODOLOGY

### DATA, SAMPLE CHARACTERISTICS AND RESPONSE RATE

A random sample of general practitioners and specialists was drawn from the database of physicians' union located in five major cities in Greece. All the selected subjects were first contacted through the telephone. Among them, 150 physicians gave consent to participate through personal interview. Finally, a sample of 91 physicians fully completed the research instrument, producing a 60.7% total response rate. Respondents were between 36 to 61 years of age, whereas the age class category of 36-45 was the most frequently met, comprising 47.5% of the sample. In regard to specialization, our sample comprised 27,5% pathologists, 18,7% urologists, 14,3% orthopedics, 10% cardiologists, with the remaining percentage representing other specialties. The research design involved two phases: (i) an exploratory phase, which comprised the literature review and the collection of qualitative primary data from 20 physicians used as key informants in order to adapt relationship marketing scales in our research specific context, and (ii) the main research which involved the construction of the quantitative research instrument and the primary data collection from the 91 participant physicians.

In order to examine the possible presence of non-response bias, the sample was divided into groups of early (first wave) and late (second wave) respondents (Sujan, 1986). The late respondents imitated the non-respondents, whereas the early respondents simulated the respondents in the sample. For the questionnaire items measuring each construct described in

the hypotheses, the values were summed. Then, t-tests were performed in order to examine the differences in these measures between early and late respondents. No meaningful differences were identified. As a result, response bias seemed not to present a serious problem in the study. Further statistical analyses showed no meaningful differences in our responded sample, in regard to number of patients, age category, or level of postgraduate studies. Likewise, no meaningful differences were found in regard to employment sector, i.e., private vs. public hospital and social security vs. private health care provider.

## MEASURES

All variables presented in the study, were developed following the guidelines suggested by Churchill (1979).

Thus, in order to operationalize the constructs of our study, we primarily drew upon the relationship marketing, pharmaceutical marketing and sales-management literatures. As a next step, we conducted personal unstructured interviews with approximately 20 physicians. The purposes of these interviews were to: a) clarify and confirm incidents of detailer-physician interactions, and b) reassure the applicability of the constituent relationship marketing variables in the context of a detailer-physician encounter.

All the constructs, with the exception of the one referring to the detailer's productivity, were multi-item and scored on 5-point Likert-scales, anchored by "strongly disagree" and "strongly agree".

For the purposes of our study, first we asked the participant physicians whether they could single out a detailer from all the rest visiting detailers, as being the most successful. Although that the multi-criterion of success is somehow subjective and ambiguous, our aim was to address the respondents' mind to a visiting detailer that they might distinguish from the rest. The hint was that favourable dyad interactions, by inference, may lead to favourable impressions pertaining to the degree of success of the subject matter, i.e., as long as a detailer is the most favourable, he/she would be also successful. In turn, all the research questions shared the common premise: *"having in mind the detailer, whom you have distinguished as the most successful of all the detailers that visit you, please cite the degree to which you agree with the following statements..."*

Finally, the variable detailer's productivity was measured by asking the respondent physicians to consider the percentage of their total prescriptions that they might account to the brand that their distinguished detailer represented.

As it will be explained below, each of these scales were unidimensional and reliable, and this led us to use the summing index of each scale in the series of regression analyses, in order to test the explanatory capabilities of our independent variables.

Table 1 provides some descriptive statistics, scale reliabilities, along with the intercorrelations among the constructs themselves<sup>3</sup>.

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<sup>3</sup> Details about the scale items of the constructs are available upon request.

Table 1

Summary statistics and construct correlations							
Variables	Intercorrelations						
	1	2	3	4	5	6	7
1 Listening Efficacy	1,000						
2 Responsiveness	.496**	1,000					
3 Reliability	.578*	.612**	1,000				
4 Trust	.421*	.480**	.482**	1,000			
6 Satisfaction	.513**	.643**	.564**	.456**	1,000		
5 Commitment	.263**	.525**	.403**	.391**	.301**	1,000	
7 Productivity	.151	.349**	.349**	.285**	.311**	.347**	1,000
Number of items in scale	5	5	5	4	5	8	1
Mean	20.91	19.58	20.07	16.09	18.90	33.06	5.6
Standard Deviation	2.11	2.84	2.29	1.93	3.07	3.44	2.14
Coefficient Alpha	.849	.852	.833	.713	.778	.906	-
** significance at 0.05							
* significance at 0.1							

#### *Detailer's relationship building antecedents*

As cited above, for the purposes of the presented paper, amid a few communication traits that may contribute to the relationship building process, we focus on detailers' listening efficacy, responsiveness and reliability.

The relative measures were developed to agree with existing relationship marketing theory scales, though adapted to fit to a detailer-physician transaction context, as explained in the methodology section. Specifically, for the construct *detailer's listening efficacy* we used items from the scales of Sujana et. al. (1994), and Ramsey and Sohi's (1997). For example, we used such items, as: "*the detailer seems to listen to what I have to say very carefully*", and "*the detailer doesn't rush to speak before I have finished what I am saying*".

Similarly, for the construct *detailer's responsiveness* we adapted items from the scales of Parasuraman, Zeithalm and Berry (1998) and Coulter & Coulter (2003), i.e., "*the detailer responds to my enquires on time*", and "*the detailer carries out his/her tasks in due time*". Likewise, for the construct *detailer's reliability* we built upon the scales of Parasuraman, Zeithalm and Berry (1998), using such items, as: "*the detailer makes sure that I could reach him/her whenever needed*", and "*the detailer is always well organized and prepared*", to mention few of them. In turn, the purification procedure resulted in: (1) a five-item scale for the *detailer's listening efficacy*, (2) a five-item scale for the *detailer's responsiveness* and, (3) a five-item scale for the *detailer's reliability*.

#### *Detailer's relationship building outcomes*

These measures were developed to agree with existing relationship marketing scales (Coulter & Coulter, 2003; Anderson & Weitz, 1989), though adapted to fit with the research context and were tapped by: (1) a four-item scale for *physician's trust upon the detailer*, i.e. "*the detailer is someone I may trust*"; (2) an eight-item scale for *physician's satisfaction from the detailer*, i.e., "*I am totally satisfied from the fact, that he/she keeps his/her promises*"; (3) a five-item scale for *physician's commitment to the detailer*, i.e. "*I am willing to maintain the cooperation I have with this detailer*"; finally, (4) a single item for *detailer's productivity*, that was scored on a 0-100 ratio scale. Specifically, we use the term "*detailer's productivity*" to indentify the perceived annual physician's prescription share (in conjunction to the

business-to-business marketing term “customer share”), considering physicians as business-to-business customers in the context of pharmaceutical marketing. Thus, detailer’s productivity measures the percentage of prescriptions that a physician may account to the brand that the distinguished detailer represents, annually. We should notice that, in estimating the physician’s prescription share, we asked the respondents to consider the annual basis, which period is long enough to absorb seasonal variability in physician’s prescribing behavior, which may be due to either random peak of diseases, or to pharmaceutical companies’ special marketing campaigns.

## RELIABILITY AND VALIDITY OF THE SCALES

Since the scales used in this study were new, their reliability and unidimensionality were tested in order to verify the quality of the measures.

To test the reliability, a combination of item-to-total correlations and coefficient alphas was used. As it can be seen from Table 1, all constructs have coefficient alphas that range between 0.71 and 0.90, indicating acceptable levels of reliability (Nunally, 1978).

Tests for the unidimensionality of scales were performed using a series of confirmatory factor analyses involving a single factor representation of each set of co-generic items (Bentler and Bonnet, 1980). The confirmatory construct reliabilities are reported in Table 2.

**Table 2**

Confirmatory Factor Analysis of the Research Constructs											
Construct		Chi-square	DF	p	NFI	RFI	CFI	CMIN /DF	RMSEA	PCLOSE	No of items
Relationship Building Antecedents											
	Listening efficacy	20,1	9	0,017	0,92	0,919	0,958	2,2	0,098	0,08	5
	Responsiveness	11,4	9	0,3	0,96	0,96	0,99	1,3	0,05	0,48	5
	Reliability	16,9	9	0,05	0,93	0,92	0,97	1,9	0,08	0,17	5
Relationship Building Outcomes											
	Satisfaction	43,5	27	0,02	0,92	0,92	0,97	1,6	0,07	0,19	8
	Trust	11,9	5	0,04	0,91	0,89	0,94	2,4	0,1	0,1	4
	Commitment	16,3	9	0,06	0,9	0,89	0,95	1,8	0,08	0,19	5

Several fit statistics were utilized to evaluate the acceptability of each of the factor models. As recommended by Bentler and Bonnet (1980), the normed fit index (NFI) was utilized, and deemed acceptable if above the recommended value of 0.90. Additionally, the comparative fit index (CFI) was also utilized and acceptable model fit is demonstrated with CFIs above 0.90 as well. Further statistics and root mean square residual (RMSEA) were also provided. The results indicated that the scales were unidimensional.

## FINDINGS AND DISCUSSION

In order to test the hypotheses H1-H2, a series of linear regression analyses was performed, regressing each one dependent variable, i.e., *trust and satisfaction*, against all three detailer’s relationship building constructs, as shown on Table 3.

**Table 3**

Standardized regression coefficients of Relational Building Antecedents			
	Trust	Satisfaction	
Listening efficacy	1,07 n.s.	2,63***	
Responsiveness	2,45**	4,17***	
Reliability	1,95*	2,05**	
Overall R <sup>2</sup> =	0.28	0.50	
df =	3	3	
F =	12,8	31,9	
Sig. =	.000	.000	
** p < 0.05			
*** p < 0.01			

For testing hypotheses H3-H4, we regressed each one depended variable, i.e., productivity and commitment, regarded as subsequent effects, against both the direct relationship building outcomes variables, i.e. trust and satisfaction, as shown on Table 4.

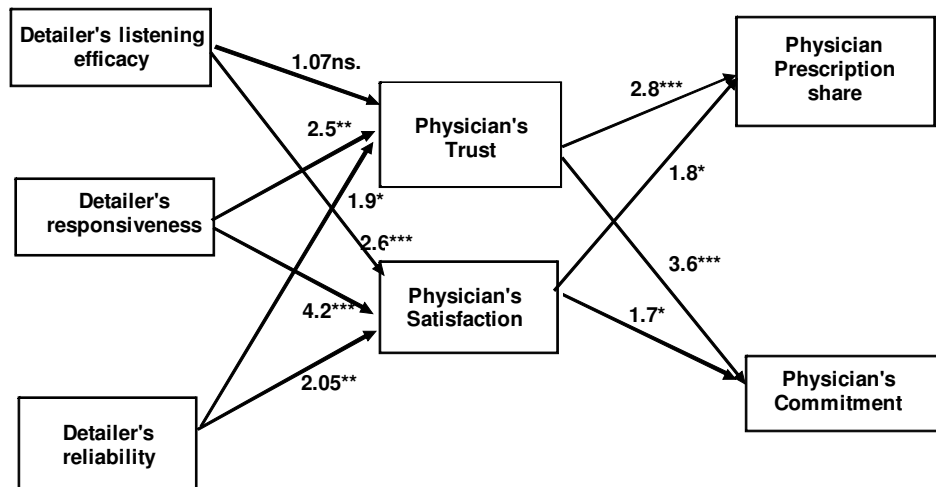
**Table 4**

Standardized regression coefficients of Relational Building Outcomes			
	Commitment	Productivity	
Trust	3,594***	2,784***	
Satisfaction	1,727*	1,772*	
Overall R <sup>2</sup> =	0.22	0.16	
df =	2	2	
F =	13,8	9,8	
Sig. =	.000	.000	
* p < 0.10			
** p < 0.05			
*** p < 0.01			

All regression models were significant and the Variance Inflation Factors (VIF) statistics which were produced were lower than 1.8, indicating that multicollinearity should not be regarded a problem for all the participating variables.

As shown on Tables 3 and 4, and on Figure 2, all, but the relationship of detailer's listening efficacy with trust, were significant.

**Figure 2**



**Regression Analyses scores,**

\* p < 0.10 \*\* p < 0.05 \*\*\* p < 0.01

On the whole, the detailers' communication traits, which were characterized as relationship building variables, appear to constitute a fundamental stone of marketing efforts, in the context of pharmaceutical's industry.

First, we found that both detailer's responsiveness and reliability are related to physician's trust upon the detailer, as hypothesized. The insignificant relationship of listening efficacy with trust, suggests that trust is a deeply rooted relational norm that needs more tangible effects in order to be inspired. On the contrary, if a detailer has been characterized to be responsive and reliable, he/she would have also gained the physician's confidence that he/she not only would be an active listener, but also he/she would actually correspond in a certain situation as needed. It appears that we may apply the concept of marketing orientation to the examined physician-detailer dyad relationship, with listening aptitude mirroring the design phase and both responsiveness and reliability reflecting the implementation phase of a detailer's orientation towards the physician. In conjunction to the marketing orientation concept, the design phase alone seems to be not enough to trigger the desirable results.

At the same time, all three detailer's relational communication traits, i.e. listening aptitude, responsiveness and reliability, were found to be related to physician's satisfaction, as anticipated. The implication is that the three independent variables under discussion may be enablers of a much desired effect in marketing, i.e. customer satisfaction, with all its subsequent effects.

Furthermore, we found both physicians' direct relationship building outcomes, i.e. trust and satisfaction, to be related to detailer's productivity and physician's commitment, respectively, the later examined as subsequent effects of a detailers' relationship building approach. It appears that both trust and satisfaction may affect both the first line of a pharmaceutical company's financial results statement, as examined in terms of enhanced prescription rates, as well as the bottom line, as examined in terms of enhanced commitment. Indeed, the later reflects higher physician retention, which implies improved efficiency, i.e., less cost for achieving planned sales.

## LIMITATIONS AND FUTURE RESEARCH

In this paper we present the results of an exploratory study. Thus, a word of caution might be in order, since we should not generalize to far from a single study. First, we should expand our research sample, in order to improve generalisability of our findings. Indeed, a higher research sample would enable us to use structural equation modeling, in order to test robustness of the propositions developed in the conceptual framework.

Further research should be conducted, in order to test the interrelationships among the outcome variables, i.e., the trust-satisfaction relationship and the commitment-physician prescription share relationship, which would place additional evidence on the presented model. For example, Bigne & Blesa (2003) have found that trust should be regarded as an antecedent of satisfaction, though in the context of manufacturing organizations, which is somewhat different than the context of the presented study. However this result allowed them to identify the position of both variables at the start of the relationship.

Furthermore, the role of a number of potential moderate variables, i.e. the pharmaceutical company name, or pharmaceutical company size might also be examined. For example, one may assume that a salesperson presenting a drug developed by a well-known pharmaceutical company may have an easier time than a salesperson presenting a drug from an unknown company. This might be because a big well-known pharmaceutical company may lean the balance of power (i.e., which acts in the background of business-to-business interactions) towards itself, thus moderating the hypothesized relationships. From another point of view, a detailer's personal characteristics, i.e., appearance and likability, or length of his acquaintance with the physician might also moderate the relationships under study.



## REFERENCES

1. Alhassan G. Abdul-Muhmin (2005), "Instrumental and Interpersonal Determinants of Relationship Satisfaction and Commitment in Industrial Markets", *Journal of Business Research*, 58, 619– 628.
2. Anderson, E., Weitz, B. (1989), "Determinants of Continuity in Conventional Industrial Channel Dyads", *Marketing Science*, Vol. 8 No.4, pp.310-23.
3. Anderson, J.C., Narus, J.A. (1990), "A Model of distributor Firm and Manufacturer Firm Working Partnerships", *Journal of Marketing*, Vol. 54 No.1, pp.42-58.
4. Annette Ryerson (2008), "Pharmaceutical Sales Performance", *International Journal of Pharmaceutical and Healthcare Marketing*, Vol. 2 No. 3, pp. 181-194.
5. Artis, A. and Harris, E. (2007), "Self-Directed Learning and Sales Force Performance: an Integrated Framework", *Journal of Personal Selling & Sales Management*, Vol. 27, No. 1, pp. 9-24.
6. Bentler P. and Bonnet D.G. (1980), "Significance Tests and Goodness of Fit in the Analysis of Covariance Structures", *Psychological Bulletin*, 88, 588-606.
7. Bigne E., and Blesa A., (2003), "Market orientation, trust and satisfaction in dyadic relationships: a manufacturer-retailer analysis", *International Journal of Retail & Distribution Management*, Vol. 31, No. 11, pp. 574-590.
8. Castleberry, Stephen B. and C. David Shepherd (1993), "Effective Interpersonal Listening and Personal Selling." *Journal of Personal Selling & Sales Management*, 13, Winter, 35-49.
9. Churchill Gilbert (1979), "A Paradigm for Developing Better Measures of Marketing Constructs", *Journal of Marketing Research*, V. 16, Feb. 64-73.
10. Comer, Lucette B. and Tanya Drollinger (1999), "Active Emphatic Listening and Selling Success: A Conceptual Framework," *Journal of Personal Selling & Sales Management*, 19 (1), 15-29.
11. Crosby, Lawrence A., Kenneth R. Evans, and Deborah Cowles (1990), "Relationship Quality in Services Selling: An Interpersonal Influence Perspective." *Journal of Marketing*, 54, July, 68-81.
12. Daft R. L. and Macintosh N.B. (1981), "A Tentative Exploration into the Amount and Equivocality of Information Processing in Organizational Work Units", *Admin. Sci. Quart.*, 26, 207-224.
13. Doney, P.M., Cannon, J.P. (1997), "An Examination of the Nature of Trust in Buyer-Seller Relationships", *Journal of Marketing*, Vol. 61, April, pp. 35-51.
14. EFPIA. The Pharmaceutical Industry in Figures. *Key Data 2009 Update*.
15. French J. R. and Raven B. (1959), "The Bases of Social Power", in *Studies In Social Power*, Dorwin Cartwright, ed. Ann Arbor: University of Michigan, 150-167.
16. Ganesan, Shankar (1994), "Determinants of Long-Term Orientation in Buyer-Seller Relationships," *Journal of Marketing*, 58, April, 1-19.
17. Giddens, Anthony. (1994). *The Transformation of Intimacy*. Cambridge: Polity Press.
18. Gremler, D.D., Brown, S.W. (1996), "Service Loyalty: its Nature, Importance, and Implications", in Edvardsson, B., Brown, S.W., Johnston, R., Scheuing, E. (Eds), *QUIS V: Advancing Service Quality: A Global Perspective*, International Service Quality Association, New York, NY, pp.171-80.
19. Gummerus, J., Liljander, V., Pura, M., van Riel, A. (2004), "Customer Loyalty to Content-Based Web sites: the Case of an Online Health-Care Service", *Journal of Services Marketing*, Vol. 18 No.2/3, pp.175-84.
20. Hallen, L., Johanson, J., & Seyed-Mohamed, N. (1991), "Interfirm Adaptation in Business Relationships", *Journal of Marketing*, 5, April, 29–37.

21. Hershey, Lewis (2005), "The Role of Sales Presentations in Developing Customer Relationships", *Services Marketing Quarterly*, 26, 3, 41- 53.
22. Holweg, M. (2005), "The Three Dimensions of Responsiveness", *International Journal of Operations & Production Management*, Vol. 25, No.7, pp.603-22.
23. Inge Geyskens Jan-Benedict E.M. Steenkamp, Nirmalya Kumar (1998), "Generalizations about Trust in Marketing Channel Relationships Using Meta-Analysis" *Intern. J. of Research in Marketing* 15, pp. 223–248.
24. Jae-Nam Lee, Minh Q. Huynh, and Rudy Hirschheim (2009), "Exploring the Role of Initial Trust, Initial Distrust, and Trust through Knowledge Sharing in IT Outsourcing: From a Service Receiver's Perspective", *Information Systems Outsourcing*, 55- © Springer-Verlag Berlin Heidelberg.
25. Jason J. Teven and Julie L. Winters (2007), "Pharmaceutical Representatives' Social Influence Behaviors and Communication Orientations: Relationships with Adaptive Selling and Sales Performance" *Human Communication. A Publication of the Pacific and Asian Communication Association*. Vol. 10, No. 4, pp. 465 – 486.
26. John H. Bantham, Kevin G. Celuch and Chickery J. Kasouf (2003), "A Perspective of Partnerships Based on Interdependence and Dialectical Theory", *Journal of Business Research* ,56, 265– 274.
27. Kotler P. (1994), *Marketing Management*. Trans. NJ: Prentice Hall.
28. Lovelock C. (2001). *Services Marketing: People, Technology, Strategy*. Englewood Cliffs (NJ): Prentice-Hall.
29. Mohr Jakki and Nevin John R. (1990), "Communication Strategies in Marketing Channels: a Theoretical Perspective", *Journal of Marketing*, 54, Oct., 36-51.
30. Moorman, Christine, Gerald Zaltman, and Rohit Deshpandé (1992), "Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations," *Journal of Marketing Research*, 29 (August), 314–29.
31. Morgan, R.M., Hunt, S.D. (1994), "The Commitment-Trust Theory of Relationship Marketing", *Journal of Marketing*, Vol. 58, No.3, pp.20-34.
32. Murali Chandrashekar, Kristin Rotte, Stephen S. Tax, and Rajdeep Grewal (2007), "Satisfaction Strength and Customer Loyalty", *Journal of Marketing Research*, Vol. XLIV, February, 153–163.
33. Naceur Jabnoun (2001), "Values Underlying Continuous Improvement", *The TQM Magazine* Vol. 13, 6, pp: 381-388.
34. Nunally Jum (1978), *Psychometric Theory*. Second Ed. New York: McGraw Hills.
35. Oliver, Richard L (1997). *Satisfaction: A Behavioral Perspective on the Customer*. Boston: McGraw-Hill.
36. Oliver, Richard L (1999), "Whence Consumer Loyalty?" *Journal of Marketing*, 63, (Special Issue): 33-44.
37. Papassapa Rauyruen, Kenneth E. Miller (2007), "Relationship Quality as a Predictor of B2B Customer Loyalty", *Journal of Business Research*, 60, 21–31.
38. Patricia M. Doney, James M. Barry, Russell Abratt (2007), "Trust Determinants and Outcomes in Global B2B Services". *European Journal of Marketing*, Vol. 41, No. 9/10, pp. 1096-1116.
39. Peterson, Robert A., Michael P. Cannito and Stephen P. Brown (1995), "An Exploratory Investigation of Voice Characteristics and Selling Effectiveness," *Journal of Personal Selling & Sales Management*, 15 (1), 1-15.
40. Reichhart, A., Holweg, M. (2007), "Creating the Customer-Responsive Supply Chain: a Reconciliation of Concepts", *International Journal of Operations & Production Management*, Vol. 27, No.11, pp.1144-72.

41. Robert W. Palmatier, Rajiv P. Dant, & Dhruv Grewal (2007), "A Comparative Longitudinal Analysis of Theoretical Perspectives of Interorganizational Relationship Performance", *Journal of Marketing*, Vol. 71, October, 172–194.
42. Rosemary R Ramsey, Ravipreet S. Sohi (1997), "Listening to Your Customers: The Impact of Perceived Salesperson Listening Behavior on relationship Outcomes", *Journal of the Academy of Marketing Science*, Volume 25, No. 2, pp. 127-137.
43. Rusbult CE, Buunk BP. (1993), "Commitment Processes in Close Relationships: an Interdependence Analysis", *J Soc Pers Relat*, 10, 175– 204.
44. Schuster, Camille P. and Jeffrey E. Danes (1986), "Asking Questions: Some Characteristics of Successful Sales Encounters," *Journal of Personal Selling & Sales Management*, 6 (May) 17-27.
45. Sheth, J. N. and A. Parvatuyar (2000). *Handbook of Relationship Marketing*, California, U.S.A., Sage Publications.
46. Singh, J., Sirdeshmukh, D. (2000), "Agency and Trust Mechanisms in Consumer Satisfaction and Loyalty Judgments", *Journal of the Academy of Marketing Science*, Vol. 28, No.1, pp.150-67.
47. Springer-Verlag. Spitzberg, B. H., & Dillard, J. P. (2002), "Social Skills and Communication". In M. Allen, R. Preiss, K., Dindia, B. Gayle, & N. Burrell (Eds.), *Interpersonal communication: Advances Through Meta-Analysis* (pp. 89-107). Mahwah, NJ: Erlbaum.
48. Stettner, Morey (1988), "Salespeople Who Listen (and What They Find Out)." *Management Review*, (June): 44-45.
49. Sujan Harish (1986), "Smarter versus Harder: An Exploratory Attributional Analysis of Salespeople's Motivation", *Journal of Marketing Research*, 23, Feb. 41-49.
50. Thorelli Hans B. (1986), "Networks: Between Markets and Hierarchies", *Strategic Management Journal*, 7, Jan-Feb. 37-51.
51. Timm L. Kainen, Lowell David P. Boyd, (2007), "Who Succeeds In the Murky Middle?" *The Journal of Applied Business Research* , Fourth Quarter, Volume 23, Number 4.
52. White, Chris J., P. Rajan Varadarajan, and Peter A. Dacin (2003), "Market Situation Interpretation and Response: The Role of Cognitive Style, Organizational Culture, and Information Use," *Journal of Marketing*, 67 (July), 63–79.
53. Williams, Kaylene C., Rosann L. Spiro and Leslie M. Fine (1990), "The Customer-Salesperson Dyad: An Interaction/Communication Model and Review," *Journal of Personal Selling & Sales Management*, 3, Summer, 29-43.
54. Williams, M., Attaway, M.R. (1996), "Exploring Salespersons' Customer Orientation as a Mediator of Organizational Culture's Influence on Buyer-Seller Relationships", *Journal of Personal Selling & Sales Management*, Vol. 16, No.4, pp.33-52.