

# **Sales Management Control, Territory Design, Sales Force Performance, and Sales Organizational Effectiveness in the Pharmaceutical Industry**

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Boca Raton

*Sales Management Control, Territory Design, Sales Force Performance, and  
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## ABSTRACT

Limited research exists about the determinants of sales organization effectiveness in pharmaceutical sales organizations. To fill this void sales management control, sales territory design, and sales force performance are conceptualized as antecedents to sales organization effectiveness in pharmaceutical sales organizations. The results of the structural equation model tested suggested that pharmaceutical sales representatives perform better and are more effective when they are satisfied with sales territory design because of its significant relationship with sales force behavioral performance. The present study suggest sales force behavioral performance leads to sales organization effectiveness through its significant relationship to sales force outcome performance. These findings are somewhat different to those from similar studies in other industries, and identify some important implications for sales leaders in the pharmaceutical industry as well as suggesting a number of important research directions.

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## CHAPTER 1: INTRODUCTION

Many firms employ complex selling organizations to interact with consumers. Large companies rely on an internal sales force composed of many hierarchical positions, such as a regional manager, district manager, and territory sales representative; outsource selling to independent selling organizations and their sales forces; or employ a combination of the two to connect products and/or services to customers. According to the Bureau of Labor Statistics (1997), sales and marketing in 1996 accounted for close to 14.5 million jobs in the United States. The number of sales and marketing jobs is predicted to increase by 15.5% to 16.8 million jobs by 2006.

According to Corcoran, Peterson, Baitch, and Barrett (1996), when identifying factors affecting sales organization performance, the sales job warrants rigorous examination. Long-term growth and profitability for sales organizations are dependent on the effectiveness of their salespeople. Therefore, salesperson effectiveness is a key success factor for sales organizations. The salesperson's role is to translate company strategy from goal to actual sales and is expected to add value for customers by creating competitive product differentiation and contributing to a company's profitability.

A survey of 200 corporate executives conducted as part of the 2002/2003 *Accenture High Performance Workforce Study* illustrated how critical the sales force is to corporate success (Accenture, 2003a). The 200 corporate executives surveyed identified sales as the most important corporate function. In addition, most executives who viewed sales as an important function also thought their sales force could achieve higher performance. Results from the 2003 *Selling in Turbulent Times Survey* conducted by Accenture (2003b) and the Economist Intelligence Unit suggested global executives

believe their sales forces are ineffective. In a poll of 178 global executives, 56% believed their sales forces' performance was mediocre, 26% thought their sale force performance was below average, and 2% described their sales forces' performance as disappointing.

According to Corcoran et al. (1996), generating sales leads is an important function of the sales job. Only 38% of the executives in the *Selling in Turbulent Times Survey* (Accenture, 2003b) thought salespeople were not generating enough leads. The ability to manage sales opportunities appeared to be a greater problem than not having enough leads, which suggested that the root cause of mediocre sales performance is not the economic environment but shortcomings in the behaviors and capabilities of the salespeople themselves. Due to increasing competition, sales have become difficult to obtain. The increasing competition has exposed weaknesses in corporate selling, namely, critical performance issues, previously concealed or minimized by a growth market, that threaten to limit sales force effectiveness.

The results of the *Accenture High Performance Workforce Study* (Accenture, 2003a) and *Selling in Turbulent Times Survey* (Accenture, 2003b) indicated that many corporate executives' belief is that the performance of most economic companies is heavily dependent on the sales force. As a result, companies closely monitor the performance and profitability of their sales forces. According to Zoltners and Lorimer (2000), sales forces cost American companies over \$500 billion a year. Heide (1999) reported the cost of a sales call in many industries is over \$200. Sales forces are a major investment for many companies, with the largest sales forces costing billions of dollars a year to deploy and support.

The high cost of a sales force requires sales organizations to maximize sales performance. According to Zoltners and Lorimer (2000), sales managers feel the pressure to improve sales force performance with fewer resources. Numerous books and articles discuss how trends like benchmarking (Smith, Ritter, & Tuggle, 1995), reengineering (Blessington & O'Connell, 1995), total quality management (Cortada, 1993), and downsizing (Lucus, 1996) can be applied to the sales force. Companies have hired and continue to hire consultants, establish taskforces, and set up departments to deal with sales force performance issues (Zoltners & Lorimer, 2000).

Past research (Churchill, Ford, Hartley, & Walker, 1985; Mount & Barrick, 1995; Vinchur, Schippmann, Switzer, & Roth, 1998) attempted to understand and/or improve sales force performance by examining the characteristics of individual salesperson performance. These studies have not adequately explained the variation in sales force performance. A small but growing body of research has focused on the importance of situational contingencies such as systems of sales management control and territory design choices (Grant & Cravens, 1996). These emerging studies suggested that situational contingencies such as control systems for sales management may act as moderators and/or predictors of sales force performance in economic organizations (Babakus, Cravens, Grant, Ingram, & LaForge, 1996; Cravens, Ingram, LaForge, & Young, 1993; Darmon, 1993; Ganesan, Weitz, & John, 1993; Grant & Cravens, 1996; Oliver & Anderson, 1994; Piercy, Cravens, & Morgan, 1999; Weitz, Sujana, & Sujana, 1986). The emerging body of research is focused on sales management and sales organization practices, rather than the characteristics of individual salespeople. The present study contributes to this emerging body of research by examining how certain

dimensions of sales management and sales organization practices influence sales force performance in sales organizations within the pharmaceutical industry.

### Background of the Problem

Trends in pharmaceutical sales generation show the influence of competition, pricing, and cost pressures on company revenue growth (Seget, 2004). Four main resistors to pharmaceutical sales growth have resulted in pressure on the sales force to deliver improved performance:

1. Cost containment in major healthcare markets
2. Competition from generic companies and parallel importers
3. High research and development costs and falling productivity
4. Merger and acquisition investments.

Rising cost containment measures have resulted from the increased demands on national healthcare payers and providers brought about by an aging population and the subsequent increase in those suffering from acute and chronic conditions (Seget, 2004). A range of cost containment policies is used across different national markets, including pricing regulations, strict reimbursement formularies, and a growth in both generic substitution and parallel importing. These measures lead to increased pressure on pharmaceutical companies to reduce their prices and, consequently, either increase unit sales or reduce costs to maintain profit margins. Maximizing return on investment from sales and promotional activities is a key factor for both increasing unit sales and limiting the cost base.

Generic substitution and parallel imports have become central policies in the drive for healthcare cost containment (Seget, 2004). National reimbursement and insurance



bodies have increasingly provided physicians and pharmacists with incentives for prescribing cheaper generic drugs. Products with an estimated \$100 billion worth of revenues will have lost patent protection between 2001 and 2005. As a result, pharmaceutical companies face growing competition from generic companies, which negatively influences revenues before and after product patent expiry. Seget suggested pharmaceutical companies would need to maximize sales force effectiveness and allocate promotional budgets appropriately to maintain market share.

Research and development expenditures have increased over the last 20 years of the 20<sup>th</sup> century, both in absolute terms and relative to sales growth. According to Seget (2004), absolute research and development expenditures increased from approximately \$2 million to \$30 million between 1980 and 2003, representing a compound annual growth rate of 13.1%. Research and development, as a proportion of total sales, has also shown an upward trend since 1980, increasing from 9% to 16% in 2003.

According to Sahoo (2005), legal and regulatory responses to drug safety issues will increase drug research and development costs. Since the withdrawal of Vioxx in September 2004, legal and regulatory responses to drug safety issues have accelerated. Lawmakers and regulators seek to evaluate and change the drug research and development process to minimize drug safety risks. As a result, the Food and Drug Administration (FDA) is more closely scrutinizing the drug approval process, which can delay drug approval. For drugs with revenues of \$1 billion or more each year, for every day drug approval is delayed in the FDA approval process, it costs its developer an estimated \$1.3 million.

In addition, the FDA requires additional post-marketing studies, also called phase IV studies (Sahoo, 2005). Phase IV studies are clinical trials required by the FDA to be completed by a pharmaceutical company. Such studies are initiated after the FDA has approved a product for sale. Phase IV studies provide additional information about a product's safety, efficacy, and optimal use. Although Phase IV investigations were relatively rare in the 1980s and early 1990s, their use has been growing as safety issues become more common. To reduce safety risks, FDA regulations have been updated to address and formalize the use of post-marketing studies. The results of these regulatory actions are increased research and development costs and declining margin growth. Therefore, current drugs in development are subject to pressure to achieve high sales in order for profitability to be maintained.

As research and development costs increase, research and development productivity levels diminish. The number of drugs approved by the FDA has fluctuated, resulting in a decline in overall productivity levels over the period 1994-2003 (Seget, 2004). The research and development costs for new drug approval increased from \$611 million in 1994 to \$949 million in 2003, equivalent to a compound annual growth rate of 5.0%. Because research and development productivity levels fall and costs increase, additional pressure is put on the sales and marketing function of companies to generate improved sales from each approved product in order to make up for the shortfall in drug approvals.

In the pharmaceutical industry, mergers and acquisitions are used for delivering critical mass in sales and research and development because these deals promise to deliver improved productivity and return on investment (Seget, 2004). While profit

growth because of mergers and acquisition deals is limited, the industry's pursuit of mergers and acquisitions remains a priority. Deals between Pfizer and Pharmacia and Sanofi-Synthelabo and Aventis are examples of this trend. According to Seget, the merger of two pharmaceutical companies can provide several benefits. These benefits include increased market share, an improved product portfolio, and a broader geographic coverage. While these benefits are important, a primary critical success factor when two pharmaceutical companies merge is the successful integration of both companies' sales forces. According to Seget, merging two sales forces can be a complex and costly process. Another merger complication for pharmaceutical companies is the need to divest competing products. Divesting these products can result in lower market share and increased market and product competition.

While sales revenue growth has been under pressure from cost-containment measures, generic competition, rising research and development costs, and merger and acquisition investments, a pharmaceutical company's commercial expenses have also increased, both in absolute terms and as a proportion of total sales (Seget, 2004). Between 2000 and 2003, expenses for direct-to-consumer advertising, samples, sales force physician detailing, and journal advertising have increased. For example, the total promotional expenses of U.S. pharmaceutical companies increased to \$25.3 billion in 2003, equivalent to a compound annual growth rate of 17.2% during the period 2000-2003. As a proportion of sales revenues, promotional expenses increased from 9.7% in 2000 to 11.9% in 2003.

Seget (2004) suggested that sales force physician detailing, including sampling, represents approximately 75% of total pharmaceutical sales and marketing expenditure

and continues to be a key activity used to increase sales growth. However, the return on investment from sales force physician detailing is decreasing because of three key trends. First, across the industry, the number of pharmaceutical sales representatives has increased, thus increasing the level of competition between sales representatives to gain physician-detailing appointments. Second, sales representatives are increasingly targeting the same high prescribing physicians, further increasing competition for physicians' time. Third, physicians are increasingly unable to participate in salesperson detailing visits because of pressure to improve healthcare service efficiency, leaving less time available for salesperson detailing visits.

Achieving economies of scale, committing resources to new product launches, and providing technological support to increase efficiency contribute to sales force costs (Pushkala, Wittman, & Rauseo, 2006). According to Pushkala et al., technology costs will increase as more companies invest in sales force automation systems to increase sales force efficiency and effectiveness. In an environment characterized by rising costs and decreasing productivity, pharmaceutical companies must monitor the return on investment made from increases in sales force costs.

Because of the changing dynamics of the pharmaceutical industry and the changing needs of physicians, increasing sales force performance could become a key driver of success in the pharmaceutical industry. However, limited empirical research is available for improving sales force performance within the pharmaceutical industry. The present study is an attempt to fill this void by examining the influence of sales management and sales organization practices on sales force performance in sales organizations within the pharmaceutical industry.

## Statement of the Problem

Pharmaceutical sales organizations' return on investment has decreased due to increased promotional expenses and lower revenue growth. As a proportion of sales revenues, promotional expenses increased from 9.7% in 2000 to 11.9% in 2003 (Seget, 2004). According to Seget, a primary factor of sales organization performance, namely, sales force physician detailing, represents 75% of total pharmaceutical sales organization promotional expenditure. Sales force physician detailing entails salespersons selling and providing samples of products to physicians.

According to Seget (2004), increased competition among salespeople and decreased detailing time with physicians has reduced sales force performance in pharmaceutical sales organizations. Limited research exists about what factors influence sales force performance in pharmaceutical sales organizations. Consequently, sales managers within pharmaceutical sales organizations lack information to improve sales force performance. Past research from other industries (Churchill et al., 1985; Mount & Barrick, 1995; Vinchur et al., 1998) attempted to help identify reliable and valid predictors of sales force performance. However, the hypothesized predictors explained little of the variation in sales force performance.

In the present quantitative study, an explanatory correlation research design is focused on the relationships between sales management control, sales territory design, sales force performance, and sales organization effectiveness and is used to provide pharmaceutical sales managers with information to improve sales force performance. The study population included first-line sales managers in the pharmaceutical industry.

According to Curry and Frost (2001), first-line sales managers are responsible for improving sales force performance in pharmaceutical sales organizations.

#### Purpose of the Study

The purpose of the present quantitative study is to use an explanatory correlation research design to examine the relationships between sales management control, sales territory design, sales force performance, and sales organization effectiveness in sales organizations within the pharmaceutical industry. The objective is to explain the magnitude of the relationships between the independent and dependent variables.

In a quantitative research methodology, problems in which trends need to be described or explanations developed for relationships between variables are studied (Creswell, 2002). In correlation research designs, a correlation technique is used to describe and measure the degree of association or relationship between two or more variables or sets of scores. Based on Creswell's description of a quantitative research methodology and correlation research design employing a quantitative research methodology, an explanatory correlation research design is appropriate. The target population is first-line sales managers within sales organizations in the pharmaceutical industry. The sample of sales managers was obtained from sales organizations within a pharmaceutical company located in the northeastern part of the United States.

The independent variables are sales management control, sales territory design, and sales force performance. The dependent variable is sales organization effectiveness. To maintain confidentiality, the pharmaceutical company providing the target population and sample was given the fictitious name of Octagon Pharmaceutical.

## Significance of the Study

The results may offer insights about the predictors of improved sales force performance to sales management in sales organizations within the pharmaceutical industry. Determining what leads to superior sales force performance is an important aspect of every sales manager's job and may be critical to the survival and success of a firm (Muczyk & Gable, 1987). Considering that in 1996 sales and marketing accounted for close to 14.5 million jobs in the United States and sales and marketing jobs are predicted to increase by 15.5% to 16.8 million jobs by the year 2006 (Bureau of Labor Statistics, 1997), examining variables to improve sales force performance may benefit sales organizations within the pharmaceutical industry.

Pharmaceutical companies' sales revenue growth has declined due to increased competition, healthcare cost containment measures, and increased promotional expenses (Seget, 2004). Consequently, pharmaceutical companies must improve sales force performance to maximize return on investment. Limited empirical research exists about the factors that improve sales force performance in pharmaceutical sales organizations. According to Skelton (2004), the lack of empirical research about predictors for the performance of sales forces in the pharmaceutical industry is unexpected because the pharmaceutical industry has traditionally relied on its salespeople to establish and maintain profitable relationships with physicians and other healthcare customers. The lack of empirical research underscores the importance of understanding the predictors for sales force performance within sales organizations in the pharmaceutical industry.

## Significance of the Study to Leadership

Leaders of pharmaceutical sales organizations may benefit from the present study in so much as the result may lead to an understanding of the relationships among certain dimensions of sales management and sales organization and the effect that those relationships have on sales performance. As a result, leaders of pharmaceutical sales organizations can proactively develop appropriate systems of sales management control to improve sales force performance. According to Grant and Cravens (1996), despite operating in a changing and competitive business environment, organizations are under pressure to increase shareholder value and returns. Consequently, the need to increase shareholder value and returns requires sales leaders to recognize the factors that improve sales performance within their organizations. In the pharmaceutical industry, where the selling environment has become increasingly competitive and regulatory pressures have had a negative influence on sales revenues, employing the appropriate systems of sales management control to improve sales force performance is essential (Seget, 2004).

The decline in sales revenue growth within the pharmaceutical industry originates from cost-containment measures, generic competition, rising research and development costs, and merger and acquisition investments (Seget, 2004). In addition, pharmaceutical companies' commercial expenses have increased, both in absolute terms and as a proportion of total sales. Due to the current competitive environment in the pharmaceutical industry, improving sales organization effectiveness is critical for current and future success (Skelton, 2004). However, because of limited empirical research about the predictors of sales organization effectiveness in the pharmaceutical industry, sales



leaders in the industry have to depend on experience and unproven practices when determining resource allocation decisions.

According to Dubinsky, Yammarino, Jolson, and Spangler (1995), sales managers can have a dramatic influence on salespeople. Depending upon the leadership approach sales managers adopt, as well as other dimensions of the relationship between the manager and salesperson, sales managers can have positive, neutral, or negative effects on the salesperson's job satisfaction, motivation, and performance (Walker, Churchill, & Ford, 1979). A key to effective sales leadership and organizational effectiveness could be the establishment of an effective structure of sales personnel governance (Oliver & Anderson, 1994). Oliver and Anderson defined such a control system as an organization's set of procedures for manager supervision, guidance, assessment, and compensation of employees.

Oliver and Anderson (1994) proposed that two extreme points along a continuum characterize control systems. The two points provide two alternative management strategies labeled outcome-based and behavior-based control. An *outcome-based control system* involves relatively minimal management involvement with salespeople, reliance on objective sales results, and an increased compensation risk for the salesperson. An extensive level of supervisor monitoring, directing, and intervening in salespersons' activities typifies behavior-based control systems.

Methods used to evaluate behavior-based performance are subjective and more complex and typically centered on the salesperson's job inputs, like personal qualities, activities, and sales strategies (Oliver & Anderson, 1994). According to Oliver and Anderson, job inputs are not themselves indicators of results. Job inputs are salesperson