TOWARDS A THEORY OF SALESPERSON PERFORMANCE: AN EMPIRICAL INVESTIGATION OF ITS DIMENSIONALITY AND MEASUREMENT

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PREFACE

The primary purpose of the study was to investigate empirically the dimensionality of a salesperson's performance. Past researchers in this area have hypothesized and employed a wide range of salesperson performance measures, often without any support offered for their measure's quality. Consequently, questions as to what is being investigated and discovered arise. This study sought to provide needed insight concerning the relationship between a variety of salesperson performance dimensions, measures, and data sources. Data were provided for this study from a single industrial firm selling a variety of computer forms. Information from 112 salespersons, 24 sales managers, and company records were collected and analyzed. The investigative period ran from August 1, 1983, through April 30, 1984.

Salesperson performance was found to be represented by a series of salesperson performance behavioral, results (sales oriented), and profitability dimensions. These dimensions did not converge toward a common conceptual core of the abstraction. Additionally, single-scaled global ratings of a salesperson's performance did not properly represent a generalized salesperson performance measure. Finally, the findings indicate that salespersons and sales managers may be

focusing on different underlying values when they subjectively evaluate specific salesperson performance items.

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increased the meaningfulness of this dissertation. Similarly, Dr. Gentry's genuine concern for my professional development was always evident. His advice, at times, outlined a more difficult academic course, but the end results were always reflected by a higher quality product. His encouragement and kindness cannot be repaid but they can be recognized.

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CHAPTER I

INTRODUCTION

Selling is one of the most important functional areas of any business organization. Certainly, most business organizations would cease to exist if sales and the cash flow generated from such activities dissipated. When one considers the sales forces' direct effect on revenue generation and the tremendous cost of supporting this behavior (many estimates place the cost of a sales call at or above $140 (Evans and Berman,1982)), the importance of controlling selling activity becomes obvious. Effective control of the sales effort requires an accurate evaluation of salesperson performance in order to properly allocate sales related rewards, identify needed changes in the sales plan, and correct potential deficiencies in the implementation of sales policies. Salesperson performance evaluations which are inaccurate may perpetuate suboptimal behavior both at the individual and organizational level.

In recent years, researchers have taken a keen interest in explaining and understanding sales and salesperson performance. Their primary focus has been on the investigation of relationships among salesperson characteristics, behavior, and performance (Walker, Churchill, and Ford 1979). The

dependent variable of interest in many of these studies has been salesperson performance. For this reason, measures of this variable that are invalid and unreliable will lead to research results that are incomplete or incorrect.

Practitioners and researchers agree with the necessity of developing measures which are complete in the specification of items which relate to the construct of interest. These measures should also exclude items which are not included in that construct's domain (Churchill 1979; James 1973; Peter 1981; Smith 1976). This is the essence of construct validity (Campbell and Fiske 1959). Unfortunately, researchers interested in developing and employing construct valid salesperson performance measures pursue a goal which is most difficult to achieve. The nature of the sales job makes its distillation into component parts capable of measurement very difficult. The sales job places an individual in a boundary spanning position, generally away from direct observation, and requires the performance of complex, non-routine tasks that differ across customers. Salespeople must also engage in activities which have both short-term and long-term implications (such as production of immediate sales versus the development of new accounts) at two distinct levels of "operation" (management of territory and customer interaction levels).

Other problems exist in this area which make research of salesperson performance difficult. Diverse sources of information (such as company sales records, buyer

perceptions, call reports, expense accounts, evaluation sheets) from managers, salespeople, and customers may be difficult to secure. However, without this extensive cooperation, the thoroughness of the research attempt is greatly reduced. Additionally, this type of research must be carried out in an applied (real world) setting. Salesperson performance measurement cannot be actualized in a laboratory setting. The data must come from job activity and evaluation in the work place.

The apparent diversity of action required of salespeople and the potential difficulties of acquiring information needed in refining this measure have led to a chasm between the conceptualization of salesperson performance and attempts at its operationalization. The academic community, in general, has not been successful in bridging this space. If anything, researchers have widened this perceptual void by employing a multitude of different measures and by ignoring important methodological considerations related to the construct validity of their salesperson performance measures.

This chapter will discuss some of these methodological drawbacks, potential problems they may create for both the practitioner and researcher, and a research direction needed to address these very real concerns of the sales field.

Present Inadequacies in the Measurement of Salesperson Performance

The shortcomings apparent in past salesperson performance measurement attempts are manifested in three distinct

areas. Semantic concerns, or what Bagozzi (1980b) terms "theoretical meaningfulness of a concept" deals with the definitional adequacy of a construct. Salesperson perfor-performance is an unobservable variable and has not been well defined. As a consequence of this poor linguistical structure, operational inconsistencies have developed. Second, portions of the domain of salesperson performance routinely are ignored in favor of a more accessible operationalization, such as total sales. Finally, most studies have not attempted to investigate the validity of the salesperson performance construct.

Semantic Deficiencies

Few formal definitions of salesperson performance are available. Those that are offered are usually incomplete or are designed only to justify specific operationalizations of a certain study. Examination of a salesperson performance definition offered by Busch and Bush (1978, p. 440) will illustrate the obvious semantic problems common in the salesperson performance area. These authors suggest that, for their study, "Performance . . . is a self-rating of a salesperson's quantity and quality of performance in relation to others on the salesforce."

Using Lachenmeyer's (1971) standards for evaluating the theoretical meaningfulness of a concept, this specific performance definition is less than ideal. First, the definition is vague. What specifically does "performance" entail? Behaviors? Results, such as sales? Profitability of

efforts? Some combination? The term's connotative meaning is greater than its denotative meaning. Secondly, the definition is ambiguous. Whatever "performance" is, it has multiple, equally legitimate meanings on both a quantitative scale and a quality scale. Thirdly, the term is opaque. A term is used opaquely if it is used as if it designated directly observable objects, properties, or relations when, in fact, it does not and cannot without prior definition. In other words, the authors assume that performance is an objective certainty. It is not. Finally, the term is contradictory. Salesperson performance is not the measuring instrument (i.e., a self-rating form), rather it is the behavior taken and/or outcomes produced by the salesperson. Later references to the term "performance" by these authors confirms this perception.

Another semantic deficiency relates to the non-adherence to the terminological distinction between salesperson performance and sales organization performance, or sales performance in general. If, in fact, it is important to maintain the difference between performance attributable to the individual as distinct from performance influenced by organizational factors or environmental variables, adherence to specific terminology related to this difference is needed. Unfortunately, this distinction is not consistently maintained within studies, much less across different studies.

Behrman and Perreault's (1982) recent attempt to develop more fully a salesperson performance measure referred to

this construct as performance, sales performance, and salesperson performance. Ryans and Weinberg's (1979) recent attempt at developing a model of territory sales response seemed to confuse the differences between the evaluation of the selling effort at the territory level and the measurement of salesperson performance at the individual level. Greenberg and Greenberg (1980) examined salesperson performance, while professing to examine sales performance. Cox and Haven (1977) also examined sales performance, but their focus was on the evaluation of an entire organizational selling effort, not individual performances. This lack of terminological specificity, at the very least, has made comparisons across articles quite difficult.

Operational Inconsistencies

The operational inconsistencies of this measure have been documented elsewhere (Chonko 1982; Walker, Churchill, and Ford 1979), but, because of its continuing pervasiveness, requires additional elaboration. Certainly, studies which have chosen a sales volume measure as the representation of salesperson performance (Bagozzi 1978, 1980a; Berkowitz 1980; Weitz 1978), conceptually, have chosen an incomplete and inaccurate operational unit. For instance, total sales does not necessarily reflect action of a salesperson. Extraneous influences (such as territorial and organizational variables) may affect the sales results and are not controllable by the salesperson. Also, certain

behaviors often required of sales representatives, such as report generation and new account development, may not be gauged by total sales.

In addition, a number of studies have suggested that one can infer a level of salesperson performance by gauging a salesperson's level of income (Morgan 1978, 1980-81). Such surrogate measures are based on sales volume and suffer from the same problems associated with a sales volume measure. Sales researchers must show more sensitivity when weighing the benefits of using a measure which is easily obtainable versus a measure which, although difficult to develop, will represent a construct more accurately.

Empirical Deficiencies

The conceptual dimensions of salesperson performance and the conceptual links between salesperson performance and the related, but different, construct of sales organizational performance have not been empirically investigated to any great extent. Few studies which have investigated salesperson performance, have attempted to provide support for their dependent variable's convergent and discriminant validity. Few have directly investigated that measure's reliability. To the author's knowledge, no study has empirically investigated the relationship between the constructs of salesperson performance and sales organizational performance.

A rigorous attempt to develop a complete measure of salesperson performance was undertaken by Behrman and Perreault (1982). These authors used factor analysis of

self-ratings provided by salespersons to establish five "dimensions" of salesperson performance. Each dimension exhibited an acceptable amount of reliability (coefficient alphas over .75), convergent validity (correlations with management ratings and company information between .Ø6-.58), and discriminant validity between dimensions (via an orthogonal rotation used in the factor analysis). Concurrent validity was also assessed and supported (correlation with "need for achievement" around .25). However, these results have not been replicated nor did the authors investigate the relationship between this construct and sales organizational performance.

Other existing measurement approaches are not as complete as Behrman and Perreault's (1982) attempt at gauging each dimension of salesperson performance with a multi-item scale. For instance, Cravens and his colleagues (1972, 1973, 1983) have suggested that salesperson performance may be gauged by the comparison of that salesperson's sales to a model-generated-quota which takes into account variables which are uncontrollable by that salesperson. Behaviors and profitability of the venture are not specifically included in this type of approach. Profitability, however, could be included by using a profitability dependent variable instead of a sales variable.

Cocanougher and Ivancevich (1978) advocate the use of a BARS (behaviorally anchored rating scale) in performance evaluation. However, behaviors are gauged with this approach, not direct results or profitability directly. Other

studies have measured salesperson performance with a number of single items representing aspects of salesperson performance in addition to some overall measure of salesperson performance (Futrell and Jenkins 1978; Lamont and Lundstrom 1977).

Specific questions relating to the extent to which these measures of the dimensions of salesperson performance are different have not been answered. Nor have these authors examined the extent to which these measures converge on a composite or overall measure of the construct. Recently, Adkins (1979) has argued that elements of salesperson performance are unique and separate constructs. In essence, he suggests that each dimension of salesperson performance does not converge towards some unifying global representation of salesperson performance. If this is so, what dimension is really being tapped by researchers who employ such global measures (Busch and Bush 1978; Futrell 1978; Futrell and Jenkins 1978; Lamont and Lundstrom 1977; Pruden and Reese 1972)?

Finally, questions still remain concerning the appropriateness of the conceptual separation of salesperson performance and sales organizational performance. Empirically, are these constructs different?

Present Problems in the Sales Research Area

The major issues previously discussed relating to the measurement of salesperson performance point to a number of potential problem areas for both practitioners and

researchers. Present approaches and measures are simply inadequate for a meaningful investigation of salesperson performance in most cases. For every answer provided or action taken as a result of investigations using incomplete salesperson performance measures, at least an equal number of questions arise because of the semantic deficiencies, operational inadequacies, and weak or non-existent validation attempts associated with the investigation.

Practitioner-Oriented Problems

The evaluation of individuals is one of the most important functions managers perform. Based on periodic performance evaluations, decisions relating to that worker's career advancement and career path are made. Evaluative criteria should encompass the entire range of job relevant events making up a worker's job. Unfortunately, there is considerable evidence that salespersons are not being evaluated on all, or even most, of the actions they perform daily. Jackson, Ostrom, and Evans (1982) found in their investigation of industrial concerns that almost 90% of the firms used a sales volume measure for control purposes. There is considerable controversy whether this measure is in fact a representation of salesperson performance. To the extent that it does not accurately depict salesperson performance and invalid evaluations are made, harmful consequences are a distinct possibility. Salespeople who perceive the evaluation process as unfair and the distribution of rewards as unjustified, may respond through a decreased desire to

perform, a decreased satisfaction level, and an increased desire to leave their present position (Walker, Churchill and Ford 1979). Regardless of the cause of such an incomplete measure, the practitioner's use of this operational measure of salesperson performance may have negative consequences for the organization.

Measures of salesperson performance (such as sales volume or "overall" single-scaled managerial ratings) which are not well defined may hinder the organization's attempt at developing, training, and selecting "good" salespeople. Managers are able to identify why certain salespeople are not producing acceptable results only through the use of a detailed job analysis. Although a proper specification of the domain of this construct probably includes results (such as sales/quota) and financial efficiencies (such as contribution to profit), the behavioral dimension provides the most information to managers interested in improving that individual's value to the organization (Cocanougher and Ivancevich 1978).

Finally, in the wake of equal employment opportunity legislation of recent years, organizations have begun to recognize the importance of justifying empirically their reward systems and their selection practices for employees and prospective employees (for a good review of legislative development in this field see Bernardin and Beatty (1984) chapter three, or Cascio (1982) chapter two). Employers must support the adequacy of their appraisal systems in terms of the completeness of dimensions examined, the relevancy of

dimensions to organizational objectives, and the validity of the measures employed, in order to legally justify actions based on the performance appraisals. It is extremely doubtful whether most of the measures currently emphasized could pass a legal test. Salesperson performance is usually not well defined, operationalized, or empirically supported.

Researcher-Oriented Problems

Problems associated with the measurement of salesperson performance arise because of the lack of support for the measure's construct validity. Sales researchers are often interested in testing the relationship between this construct and other unobservable entities (like motivation or satisfaction). This kind of scientific research necessarily requires that the researcher do everything in his/her power to demonstrate that the measures created to represent that abstraction approximate reality. Failure to provide this support leads to unanswerable questions about the relationship between the abstraction, the operationalization, and reality (Jacoby 1978). According to Campbell and Fiske (1959, pp. 100), "Before one can test the relationship between a specific trait and other traits, one must have confidence in one's measure of that trait." In most studies in this area a very legitimate question may be asked: "What is being measured?"

This general failure to define properly salesperson performance, to properly operationalize it, and then to support properly the measure's validity and reliability has

led to results and interpretations which are often ambiguous or only partially explanatory. For instance, Bagozzi (1978, p. 530) has suggested that a ". . . strong relationship between specific self-esteem and sales performance [sales volume] suggests that management should hire persons high in self-esteem. . . ." This type of statement, without proper qualifiers, may certainly be misconstrued. What if management's primary objectives had been to increase profitability or perhaps customer service levels? Could results from this study, whose dependent variable at best reflects only one aspect of salesperson performance, be ambiguous? If salesperson performance indeed is comprised of more dimensions than just sales results, may any inferences logically be made concerning those dimensions from Bagozzi's work? Yet Bagozzi's stance as to what type of individual should be hired is stated unequivocally.

Also, studies which have tried to account for the variation in salesperson performance have been consistently weak in their associations, generally accounting for less than 20% of the variation (Walker, Churchill, and Ford 1979). One reason often given for this weak association has been the inappropriate measures of the dependent variable. This has led Walker, Churchill, and Ford (1979) to suggest that, perhaps, past researchers were not measuring salesperson performance, or at least not capturing the full intricacies of the abstraction.

Finally, the field's nonadherence to a strict terminological distinction between salesperson performance and sales organizational performance further confuses the conceptual distinction between the two. If leaders in the field do not think that the difference between these related constructs is important enough to maintain a consistent terminology, is there any wonder that practitioners or many researchers use measures of the two interchangeably?

If sales research in this area is to advance and the problems in the field are to be addressed successfully, consideration must be given to the major issues in the measurement of salesperson performance. The semantic deficiencies manifested by the ill-formed, misconceived, and definitionally vague definitions of the construct must be rethought, articulated, and followed. Operationalizations which connect the properly specified abstractions must be developed so that they represent reality properly. Finally, empirical support, in the form of reliability tests and convergent and discriminant validity investigations, must be offered to conclude that the measures used are indeed representative of the constructs being investigated. Such investigations will require patience on the part of the researcher and cooperation of the sales organization supplying the information.

Dissertation Objectives

This study will address the methodological issues associated with the measurement of salesperson performance. The

major focus of this research is to provide support for a specific theoretical structure of salesperson performance which has been conceptually hypothesized to exist but to date has not been empirically supported. The framework to be investigated will require examination of the relationships between previously hypothesized dimensions of salesperson performance. Additionally, the connection between the salesperson performance construct and the sales organization performance construct will be investigated. The resulting structure will require the use of multiple measures for each unobservable variable and will allow the examination of current measurement approaches of salesperson performance. Information from the study should prove useful in integrating present conceptualizations of the construct in a coherent fashion while providing support for the contention that most of the present measurement approaches tap only a portion of the domain of the construct.

The remaining chapters of this manuscript will first address in more detail the present measurement approaches used in gauging the construct of salesperson performance and the general state of the art in the salesperson performance research area (Chapter II). Following the literature review will be a full explanation and presentation of the theoretical framework proposed for this study (Chapter III), and a discussion of the procedures and research approach which will be used (Chapter IV). The final chapters will present the results of the study and suggest implications it may have for both practitioners and researchers.

CHAPTER II

SALESPERSON PERFORMANCE LITERATURE REVIEW

In the past several decades there has been a tremendous amount of interest in investigating marketing's relationship to the organization, consumer, and society. This interest has manifested itself in the academic community through the proliferation of empirical research studies and journals to accommodate these efforts. However, certain areas within the marketing discipline seem to have received less than their "fair share" of research attention. The sales area is one of these. Walker, Churchill, and Ford (1977) noted the scarcity of sales research concerning the performance of salespeople and the "piecemeal" nature of the material that was available.

This chapter will examine the salesperson performance literature. The examination will include only those articles which have explicitly been concerned with measuring this construct or gauging the effect various independent variables have had on it. The bulk of the review will focus on studies which have been conducted since 1970, but a brief overview of the salesperson performance research before 1970 will be offered. A few isolated studies conducted prior to 1970, but which offer additional insight into more recent

research attempts, will be integrated into the section discussing more recent studies where appropriate. The concentration on recent empirical work in the field is justified given the general conceptual advancement since the mid-1970's. This advancement was due in large part to the formalization of a model of salesperson performance suggested by Walker, Churchill and Ford (1977). Also, a categorization of "old" research and "new" attempts will allow some generalizations to be drawn concerning the progression of knowledge and use of dependent variables in "older" versus "newer" research endeavors.

Overview of Research Prior to 197Ø

Research investigating personal selling prior to 197Ø was dominated by attempts to identify variables useful in the prediction of "good" sales performances. The driving force for most of this research was to identify various psychometric testing devices, personal characteristics, and interactive abilities that would allow for a more systematic selection of a sales force. This emphasis was noted by several authors throughout this investigative period (Cleveland 1948; Cotham 197Ø; Dorcus 194Ø).

The studies were primarily correlational in nature and often were inconclusive in respect to what variables have been "good" predictors of salesperson performance. Cotham (197Ø) suggested that intelligence measures, sales aptitude measures and life history variables (such as age, education, experience) showed very inconsistent and weak ties to the criterion of interest. Because of these generally

inconsistent findings, Cotham urged restraint in generalizing from such results to different situations. The problems of generalization were amplified because of the lack of uniformity of the predictor variables and criterion measures used. On a more positive note, many of the studies conducted in this time period fully explored and often conceptually defined salesperson performance. The specific attention to this dependent variable certainly could have provided future researchers with a sound conceptual base for the construction of measures relating to salesperson performance.

Cunningham (1935) strongly argued that salesperson performance was multidimensional and should include both subjective measures of activities and objective measures of results. Dorcus (1940) stressed the importance that salesperson performance evaluations account for differences in performance of individuals that were due to uncontrollable factors at the representative level. His study of door-to-door salesmen of bakery products suggested an approach for identifying and controlling such variables that was conceptually similar to much later efforts by Beswick and Cravens (1977), Cravens and Woodruff (1973), Cravens, Woodruff, and Stamper (1972), and Ryans and Weinberg (1979).

Rush (1953) offered empirical justification for the existence and use of multiple dimensions of salesperson performance. Through factor analysis he argued for the need of behavioral items and objective measures of results which

could be combined into a composite score for use as a criterion in identifying predictors. Rush's approach for identifying items which should be included in a complete measure of salesperson performance was similar in its approach and in its results to a later methodological study conducted by Behrman and Perreault (1982).

Finally, at least one early study conducted by Ghiselli (1942) suggested and used a composite measure of salesperson performance. Primarily, this measure combined managerial ratings of behaviors and the salesperson's "overall value" to the organization with objective production (sales) records. To date, only two other studies have reported the use of this type of composite measure (Behrman, Bigoness, and Perreault 1981; Williamson and Berl 1983), although its use has been advocated elsewhere (Adkins 1979; Behrman and Perreault 1982; Cotham 1970; Pickett, Grove, and LaForge 1983).

In summary, research prior to 1970 did not attempt to explain salesperson performance; rather, researchers in this period focused extensively on prediction. An accepted set of relevant predictors did not seem to emerge from these efforts. The conceptual nature of the salesperson performance construct, however, was fully developed in this period and approaches suggested for its measurement were often more complete than the majority of later research. Salesperson performance was commonly recognized as different from total sales and was shown to be comprised of several dimensions. Measures of global performance on a single scale were recognized as being unattractive (Rush 1953; Seashore, Indik, and

Georgapoulas 1960) and specification of items measuring behaviors, results, and profitability of efforts was suggested.

Research Since 1970

Research since 1970 in the salesperson performance area has made many advances. In general, investigators in this era were much more concerned with explaining salesperson performance rather than merely identifying variables which correlated with it. Specific determinants of salesperson performance were hypothesized to exist and a formal structure was presented. Perhaps the most widely accepted model of salesperson performance (Walker, Churchill, and Ford 1977, 1979) incorporated five determinants of performance: (1) personal, organizational, and environmental variables, (2) motivation, (3) aptitude, (4) skill level, and (5) role perceptions. They also incorporated two direct consequences of performance: (1) rewards, and (2) satisfaction.

An extensive amount of research investigating and refining these determinants has been produced. Unfortunately, a relatively small amount of research has been conducted which specifically attempted to relate the determinants or consequences of salesperson performance to that construct. What is more disturbing than the scarcity of research that has used salesperson performance as a dependent variable is that the great majority of studies seem to have operationalized this construct incorrectly or measured only a portion of its domain.

Tables I, III, IV, V, and VI provide a condensation of empirical studies since 1970 which have specifically examined salesperson performance. These tables represent six different operationalizations of salesperson performance which have been employed in past research. Table I contains information related to studies that have used either total sales or a global rating to measure salesperson performance. Tables III, IV, V, and VI will contain information related to studies that have operationalized salesperson performance with measures other than total sales or global evaluations. Reasons for this dyadic categorization will be offered later. Each study has been summarized in terms of its research focus and findings to provide a brief overview of the article's thrust. Additionally, three other important methodological considerations relating to the development of the salesperson performance construct have been delineated. Specifically, the article's salesperson performance definition, operationalization, and construct validity investigation are reviewed. Some studies are listed in more than one table, suggesting that the study operationalized salesperson performance in more than one way.

In addition to these general categorizations offered in Tables I, III, IV, V, and VI, the operationalization's general strengths and weaknesses due to its methodological foundation will be summarized. This summarization may be found in Tables II and VII.

TABLE I

EVALUATION OF STUDIES WHICH HAVE USED TOTAL SALES OR A SINGLE SCALED MEASURE OF SALESPERSON PERFORMANCE

	Pruden and Reese (1972)	Scheibelhut and Albaum (1973)
I. Research Focus	Identification of high/low performers and how these groups differ in respect to role considerations, power, and authority for a group of wood products salespeople.	Examined the relationship between non-salesmen and two groups of salespeople in terms of "self-other" relations (such as major identification, complexity, self-centrality, self-esteem). "Self-other" relations also was correlated to job performance of salesperson groups.
II. Salesperson Performance Definition	Degree to which organizational and personal goals are reached.	None given.
III. Salesperson Performance Operationalized	Single item measure asking salesperson to compare self to others in global terms of "quantity and quality of performance."	Real estate salesperson job performance - commission income. Private utility salespersons'job performance - Pruden and Reese (1972) global measure.
IV. Empirical Construct Validity Investigations	Some support for the measure's convergent validity. Suggested the measure was correlated with managerial appraisals. Self-reports were administered right after managers reviewed the salesperson's performance with him/her.	None.
V. Findings	Found successful salesperson was one with some control over organizational policy and some congruity with the customer. Discriminant function classified 67% right where 49% correct was expected (Cpro formula).	No significant difference between the two groups of salespeople and non-salespeople on independent measures. There was a difference between correlations of "good" and "poor" salespeople at the .05 level on three dimensions: complexity, self-esteem, majority identification.

TABLE I. (Continued)

		Oliver (1974)	Matthesis et al. (1975)
I.	Research Focus	Examined the expectancy value motivational model as it relates to sales performance for a group of life insurance salespeople.	Investigated relationship between a personality measure and sales performance. Attempted to "predict" successful performance of wholesale sales force.
II.	Salesperson Performance Definition	None given.	None given.
III.	Salesperson Performance Operationalized	Two measures were used: 1) unadjusted sales volume 2) sales to a self established sales quota.	Unclear. Managers were asked to group salespeople into low and high performers. The use of a global measure is assumed.
IV.	Empirical Construct Validity Investigations	Slight support for the measure's concurrent validity in that the performance measures did correlate slightly with the criteria.	None.
V.	Findings	Generally, weak supportive relationship between motivational components and performance (r's < .3)	Discriminant analysis classified over 75% correctly compared to an expected 51.25% (C_{pro}). Sample size was very small however, n = 18.

TABLE I. (Continued)

		Futrell, Swan & Todd (1976) Futrell, Swan & Lamb (1977) Futrell and Jenkins (1978) Futrell and Schul (1978)	Small & Rosenberg (1977)
I.	Research Focus	These studies using pharmaceutical and hospital supply salespersons looked at performance differences due to pay disclosure and control alternatives of management.	Examined the relationship between performance and personality and life history traits for an industrial "Fortune 500" firm.
II.	Salesperson Performance Definition	None given.	None given.
III.	Salesperson Performance Operationalized	Looked at a number of behaviors independently and "overall" performance independently. Used managerial ratings.	Sales volume in dollars generated over a three-year period.
IV.	Empirical Construct Validity Investigations	None.	None.
V.	Findings	In general, these authors found support for their investigations, with significant but low correlations.	Found that multiple R for life history was greater than for personality variables. Individual correlations ranged from .25 downward.

TABLE I. (Continued)

		Lamont and Lundstrom (1977)	Morgan (1978, 1980-81)
I.	Research Focus	Examined the degree to which personality and personal characteristics are able to predict salesperson performance for industrial building salespeople.	Studies examined the degree to which job climate or the work environment affects performance for office and data processing equipment salespeople.
II.	Salesperson Performance Definition	Authors seem to stress the behavioral aspects of the salesperson's job. However, they also suggest that results of the selling function are included in this construct.	None given.
III.	Salesperson Performance Operationalized	Specifically measures ten aspects of performance, one of which was "overall management rating" of performance. Global measure was managerially produced.	Income.
IV.	Empirical Construct Validity Investigations	Concurrent validity supported. Regression of personality and personal characteristics was significant.	Concurrent validity was slightly supported. Regressed factor scores of perceptions of job climate against performance.
V.	Findings	Through the use of independent regressions, found a number of variables were useful in predicting performance (R^2 between .02 and .30).	Very weak ability of independent variables to explain performance variables.

TABLE I. (Continued)

		Weitz (1978)	Bagozzi (1978, 1980a)
I.	Research Focus	Examined the dyadic interaction of salesperson and customer to determine if salesperson's ability in the impression and strategy formulation stages was related to performance.	Analysis, principally satisfaction/performance relationship as mediated by the salesperson's role perceptions and certain other personal characteristics for steel and plastic salespeople.
II.	Salesperson Performance Definition	None specifically given, yet Weitz intimates that performance is concerned with execution of certain tasks (i.e., behaviorally oriented).	None given.
III.	Salesperson Performance Operationalized	Several unadjusted sales volume measures and one sales to "quota" which is questionable.	Sales volume in dollars.
IV.	Empirical Construct Validity Investigations	Concurrent validity was supported since performance and independent variables behaved as expected.	Concurrent validity was supported based on hypothesized relationship between the constructs of interest.
V.	Findings	Independent variables were weakly related to performance (R^2 between .1 and .2).	Found significant but weak relationship between independent measures and performance (R^2 between .1 and .2).

TABLE I. (Continued)

	Busch and Bush (1978)	Swan & Futrell (1978)	Berkowitz (1980)
I. Research Focus	Examined the differences between men and women in industrial selling with respect to a number of variables for a pharmaceutical sales force.	Examined differences between male and female salespeople for pharmaceutical sales force.	Looked at role differences and organizational differences as they relate to conflict and performance for a chemical sales force.
II. Salesperson Performance Definition	Quantity and quality of performance in relation to others on the sales force.	None given.	None given.
III. Salesperson Performance Operationalized	Used Pruden and Reese (1972) single scaled global measure.	Looked at a number of behaviors independently and "overall" performance. Used managerial ratings.	Yearly sales volume.
IV. Empirical Construct Validity Investigations	None.	None.	None.
V. Findings	Found significant difference in the correlation between groups and role clarity.	Found a significant difference between gender-based performance.	Very weak correlations between performance and independent variables.

TABLE I. (Continued)

		Greenberg and Greenberg (1980)	Bush and Busch (1981-82)	Saxe and Weitz (1982)
I.	Research Focus	Discussed the importance of "matching" salesperson with job as related to job performance for a huge (36,000) sample of industrial sales forces from 14 industries.	Examined relationship of tenure, age, and role clarity to performance for pharmaceutical sales representatives.	Developed a scale to assess the degree to which salespersons use "customer oriented" selling. Scale then was evaluated against performance for four different industrial sales forces.
II.	Salesperson Performance Definition	None given.	None given.	None explicitly given but suggest in text that salespeople must perform a number of "activities."
III.	Salesperson Performance Operationalized	Managerial comparison of individual to group on some global measure.	Used Pruden and Reese (1972) (1972) single scaled global measure.	Used for three of the sales forces, an unadjusted sales volume figure and sales/quota for the fourth.
IV.	Empirical Construct Validity Investigations	None.	None.	Nomological validity assessed indirectly based on how Soco scale varied with different levels of performance.
V.	Findings	Found no significant relationship between performance and age, sex, race, experience, or education. Suggests, instead, to "match" salesperson with job according to very subjective criteria (ego, empathy, sociability).	Significant correlations between performance and independent variables (r's less than .2).	Found performance to be correlated slightly r = .16 with "ability to help."

TABLE I. (Continued)

		Cravens, Finn and Moncreif (1983)	Mowen, Brown and Jackson (1980-81)
I.	Research Focus	Examined relationship between uncontrollable, personal, organizational, and environmental variables and performance for industrial sales force.	Examined in experimental setting how respondents, playing the part of sales managers, would evaluate different salespeople. Hypothesis stemmed from Heider's work.
II.	Salesperson Performance Definition	Expressed that performance of a salesperson is either behaviors or results attributable to individual (i.e. sales/quota).	None given.
III.	Salesperson Performance Operationalized	Three measures were used: (1) "overall" unidimensional rating of performance by sales management, (2) unadjusted sales, and (3) sales to model derived quota.	Had respondents (sales managers in role play situation) evaluate salespeople in terms of a global dimension.
IV.	Empirical Construct Validity Investigations	None.	None.
V.	Findings	Found, overall, uncontrollables have little or no influence on performance rating, while market share and company strength was correlated with sales and sales/quota.	Found low effort individuals were rated with more ability than high effort groups with same performance level. Also, high effort salespeople were found to be "higher" performers than low effort. Finally, high effort salespeople who performed "poorly" were perceived as "unlucky." Overall found task difficulty was underutilized.

TABLE II

WEAKNESSES AND STRENGTHS OF STUDIES WHICH HAVE OPERATIONALIZED SALESPERSON PERFORMANCE BY TOTAL SALES OR A SINGLE SCALED GLOBAL RATING

Operationalization Dependent Variable	Study	Weaknesses	Strengths
A. Total sales volume (unadjusted)	1) Scheibelhut and Albaum (1973) 2) Oliver (1974) 3) Small and Rosenberg (1977) 4) Morgan (1978, 1980-81) 5) Weitz (1978) 6) Bagozzi (1978, 1980a) 7) Berkowitz (1980) 8) Saxe and Weitz (1982) 9) Cravens, Finn, and Moncreif (1983)	1) Single item measure precludes construct validity investigation. 2) Measure may be more a measure of organizational performance rather than performance of an individual. 3) Directly taps only one dimension of salesperson performance. 4) Provides little information that may be used to "develop" the salesperson.	1) Ease of operationalization 2) A "results" criterion is often the single most important criterion for a sales organization.
B. Single Scaled global rating of salesperson performance	1) Pruden and Reese (1972) 2) Scheibelhut and Albaum (1973) 3) Matthesis et. al. (1975) 4) Futrell, Swan, and Todd (1976) Futrell, Swan, and Lamb (1977) Futrell and Jenkins (1978) Futrell and Schul (1978) 5) Lamont and Lundstrom (1977) 6) Busch and Bush (1978) 7) Swam and Futrell (1978) 8) Greenberg and Greenberg (1980) 9) Mowen, Brown, and Jackson (1980-81) 10) Bush and Busch (1981-82) 11) Saxe and Weitz (1982) 12) Cravens, Finn, and Moncreif (1983)	1) Single item measure precludes construct validity investigation. 2) Unspecified and probably unstable point of reference for assignment of rating. 3) Provides little information that may be used to "develop" the salesperson.	1) Ease of operationalization 2) May provide as accurate a measure as a poorly specified rating format.

TABLE III

EVALUATION OF STUDIES WHICH HAVE USED BEHAVIORS AS A MEASURE OF SALESPERSON PERFORMANCE

	Futrell, Swan, and Todd (1977) Futrell and Jenkins (1978) Futrell and Swan (1978)	Swan and Futrell (1978)
I. Research Focus	These studies using pharmaceutical and hospital supply salespersons looked at performance differences due to pay disclosure and control alternatives of management.	Examined difference between male and female salespersons for pharmaceutical sales force.
II. Salesperson Performance Definition	None given.	None given.
III. Salesperson Performance Operationalized	Supervisor ratings of salesperson behaviors measured by: (1) works hard (2) attitude (3) sales ability (4) planning ability (5) activity reporting (6) territory coverage (7) performance improvement (8) human relations ability, and (9) product knowledge *Also an "overall performance" rating	Same as other Futrell Studies
IV. Empirical Construct Validity Investigations	None.	None.
V. Findings	In general, these authors found support for their investigation with significant but low correlations.	Very weak correlations between performance and independent variables.

TABLE IV

EVALUATION OF STUDIES WHICH HAVE USED SALES-TO-QUOTA AS A MEASURE OF SALESPERSON PERFORMANCE

		Cravens, Woodruff, and Stamper (1972) Cravens and Woodruff (1973) Beswick and Cravens (1977)	Oliver (1974)
I.	Research Focus	These studies primarily concerned the development of a deployment model at the territory level. However, the procedure of accounting for variables affecting sales allows a model predicted sales quota to be developed and used in evaluating salesperson performance.	Examined the expectancy motivation model as it relates lates to salesperson performance for a group of life insurance salespeople.
II.	Salesperson Performance Definition	The Cravens and Woodruff (1973) study suggests that performance includes behavior, profits, and results.	None given.
III.	Salesperson Performance Operationalized	Sales to model generated quota	Two measures were used: (1) unadjusted sales volume, and (2) sales to a self-established sales quota
IV.	Empirical Validity Investigations	Looked at convergent validity (correlation with management ranking .61) and reliability (split sample, R^2 = .96).	Slight support for the measures' concurrent validity in that the performance measures correlated slightly with the criteria.
V.	Findings	Studies suggest that quots determined in this manner are better than judgmentally established quotas. However, the Cravens and Woodruff (1973) study did find that the sales/quota performance measure did not correspond closely with managerial rankings of the salesperson on other behavioral and profit dimensions. This suggests that sales/quota should not be the only measure of salesperson performance.	Generally, weak supportive relationship between motivational components and performance (r's between .1 and .3).

TABLE IV. (Continued)

		Cravens, Finn, and Moncrief (1983)	Ryans and Weinberg (1979)
I.	Research Focus	Examined relationships between uncontrollable personal, organizational, and environmental variables and salesperson performance for an industrial sales force.	Same purpose as the earlier Cravens' studies. Tried to explain territory salesperson performance through a structured modeling approach for three industrial firms.
II.	Salesperson Performance Definition	Suggested performance of a salesperson is either behavior or results attributable to individual (i.e., sales/quota).	Suggested that salesperson performance included many items but because they were difficult to gauge, suggested only sales be examined.
III.	Salesperson Performance Operationalized	Three measures were used: (1) "overall" unidimensional rating of performance by sales management. (2) unadjusted sales, and (3) sales to model derived quota.	Sales-to-quota.
IV.	Empirical Construct Validity Investigations	None.	None given for dependent variable.
V.	Findings	Found, overall, uncontrollables have little or no influence on performance rating, while market share and company strength was correlated with sales and sales/quota.	Found several relationships between sales and independent variables.

TABLE V

EVALUATION OF STUDIES WHICH HAVE USED SALESPERSON'S CONTRIBUTION TO PROFIT AS A MEASURE OF SALESPERSON PERFORMANCE

	Stephenson, Cron, and Frazier (1979)	Darmon (1982)
I. Research Focus	Examined the desirability of allowing salesperson to set prices in terms of sales and profitability for a surgical supply sales force. Although main focus was on firm and marketing performance, salespersons were evaluated.	Largely a conceptual/methodological study which argues for the use of "long-run" profits as a measure of salesperson performance. Empirically applied model to a pharmaceutical firm.
II. Salesperson Performance Definition	None given.	Recognizes salesperson performance involves sales, behaviors and profits but argues that ultimately other measures will lead to the long-run profits dimension.
III. Salesperson Performance Operationalized	Contribution of salesperson to profit of firm.	Average yearly net profit flow that the salesperson can expect to generate.
IV. Empirical Construct Validity Investigations	None.	None.
V. Findings	Found general support that the sales force would perform "better" (greater profit impact) if pricing authority was kept at a moderate level.	Empirical application examined the relationship between dependent variable and salesperson's past experience and education. Found salesperson with no sales experience and a liberal arts degree performed better.

TABLE VI

EVALUATION OF STUDIES WHICH HAVE USED A COMBINATION OR COMPOSITE MEASURE OF SALESPERSON PERFORMANCE

		Lamont and Lundstrom (1977)	Behrman, Bigoness, and Perreault (1981)
I.	Research Focus	Examined the degreee to which personality and personal characteristics are able to predict salesperson performance for an industrial sales force.	Examined the relationship between performance and ambiguity, focus of control and need for clarity for several industrial sales forces.
II.	Salesperson Performance Definition	Suggested performance consisted of evaluations relating to behaviors.	Suggested performance is multidimensional and encompasses behaviors, results and profitability.
III.	Salesperson Performance Operationalized	Measures included: Behaviors (managerial rating) (1) technical competence (2) call frequency (3) territory management (4) salesmanship skills (5) supportive strengths Results (6) compensation ratios (7) sales-to-quota (8) new call conversion "overall" performance (managerial ratio)	Measures included salespersons' and sales managers' ratings of: Behaviors (1) sales presentation, (2) information dissemination, and (3) technical knowledge Results (4) meeting sales objectives Profits (5) controlling expenses
IV.	Empirical Construct Validity Investigations	Concurrent validity supported (regression with personal and personality characteristics R^2 between .02 and .30).	Assessed reliability (coefficient alpha = .81) and concurrent validity (R^2 = .25).
V.	Findings	Through a series of independent regressions found several independent variables were predictors of performance. No attempt was made to combine the performance measures.	Used a composite score of the performance dimensions for salesperson's ratings and found performance was correlated slightly with variables (r's between .04 and .17) and R^2 = .25.

TABLE VI. (Continued)

	Behrman and Perreault (1982)	Franke, Behrman, and Perreault (1981)
I. Research Focus	Methodological study which empirically developed a scale for measuring salesperson performance using factor analysis and Churchill (1979) procedure for scale development for a number of industrial firms.	Examined the relationship between performance and satisfaction and certain individual and work related factors for a manufacturing sales force.
II. Salesperson Performance Definition	Suggests performance is multidimensional and encompasses behaviors, results, and profitability.	Same as Behrman and Perreault (1982).
III. Salesperson Performance Operationalized	A self-appraisal 31 item scale which measures: Behavior (1) sales presentations, (2) information disbursement, and (3) technical knowledge Results (4) meeting sales objectives Profits (5) controlling expenses	Used Behrman and Perreault (1982) measures.
IV. Empirical Construct Validity Investigations	Assessed reliability (coefficient alpha over .75), convergent validity (correlations with management ratings and company information with r's between .06 and .58), discriminant validity between dimensions (orthoganal factor rotation), and concurrent validity (correlation with need for achievement r = .25).	None for this example but scale used had been previously investigated.
V. Findings	Used only salesperson ratings for measures and did not directly examine relationship between organizational performance and salesperson performance.	Found through path analysis and resulting regression equations that the independent variables could explain an acceptable amount of variation (R^2 = .34). Suggest model has limitation because only perceptions were measured, not "objective" measures.

TABLE VI. (Continued)

	Williamson and Berl (1983)
I. Research Focus	Examined Herzberg's motivational model and its relation to performance for three separate industrial sales forces in apparel, transportation, and container industries.
II. Salesperson Performance Definition	None given.
III. Salesperson Performance Operationalized	Specific measures were not given, but authors used a "thermometer-like" scale and measured a "variety" of job related dimensions. Only managerial perceptions were recorded.
IV. Empirical Construct Validity Investigations	Suggested model's psychometric properties were examined previously (Williamson 1982).
V. Findings	Although a list of results was not provided, suggest salesperson's perception that rewards were reliably meted out was more important to performance than satisfaction with the rewards.

TABLE VII

WEAKNESSES AND STRENGTHS OF STUDIES WHICH HAVE OPERATIONALIZED SALESPERSON PERFORMANCE BY BEHAVIORS, SALES-TO-QUOTA, PROFITABILITY OR COMBINATION/COMPOSITE MEASURES

Operationalization of Dependent Variable	Study	Weaknesses	Strengths
A. Behavior	1) Futrell, Swan & Todd (1976) Futrell, Swan & Lamb (1977) Futrell and Jenkins (1978) Futrell and Schul (1978) 2) Swan and Futrell (1978)	1) Measures only one dimension of salesperson person performance. 2) Halo effect may occur. 3) Studies may not define "behavior" and measure characteristics correctly 4) Inconsistency across studies is likely.	1) Partial measure of salesperson performance. 2) Specific behavior directly specified may be correlated with desired organizational performance. 3) Development of salespersons is facilitated based on behavioral components.
B. Sales-to-quota	1) Cravens, Woodruff, and Stamper (1972) Cravens & Woodruff (1973) 2) Oliver (1974) 3) Beswick and Cravens (1977) 4) Ryans and Weinberg (1979) 5) Cravens, Finn, and Moncreif (1983)	1) Measures only one dimension of salesperson performance. 2) Quota development may be inadequate. 3) Developmnt of salesperson is hindered by examining only results.	1) Partial measure of salesperson performance. 2) May account for factors affecting sales outside the control of the salesperson. 3) Often most important dimension to management.
C. Profitability	1) Stephenson, Cron, and Frazier (1979) 2) Darmon (1982)	1) Measures only one dimension of salesperson performance. 2) Allocation of expenses is difficult. 3) Often accurate expense records are not kept. 4) Development of salesperson is hindered by examining only results.	1) Partial measure of salesperson performance. 2) Most direct measure of long run survival needed by organization.

TABLE VII. (Continued)

Operationalization of Dependent Variable	Study	Weaknesses	Strengths
D. Combination/ Composite Measures	1) Lamont and Lundstrom (1977) 2) Behrman, Bigoness, and Perreault (1981) 3) Behrman and Perreault (1982) 4) Franke, Behrman, and Perreault (1982) 5) Williamson and Berl (1983)	1) Measures often do not use diverse data sources. 2) Combination of dimensions into single composite score is subjective.	1) Measures all relevant dimensions of salesperson performance. 2) Facilitates the salesperson developmental process. 3) Allows detailed analysis of 4) Allows methodological examination of the salesperson performance construct.

To facilitate the review's readability, the discussions to follow will organize categories of salesperson performance operationalizations into two basic groups: (1) Studies which have used total sales and global representations, and (2) studies which have employed behavioral, sales-to-quota, profitability, or some combination composite measure of behaviors, results, and profitability. The rationale for this grouping relates primarily to the two groups' homogeneity of strengths and weaknesses and the general consensus in the literature that measures of salesperson performance that consist of global ratings and total sales were flawed.

The importance of any measure's construct validity to the accurate interpretation and ultimate generalization of the research attempt cannot be over emphasized. Before a general overview stressing the methodological strengths and weaknesses apparent in much of the salesperson performance research is attempted, a stronger foundation of what construct validation entails is needed. Toward this end, the next section briefly presents the basic tenets of the construct validation process.

Major Issues in the Construct Validation Process

Meaningful interpretation of any research attempt which investigates "unobservable" variables requires that the researchers address certain questions or issues regarding the measures of those unobservable variables. These issues are

largely methodological in nature and stress the very close relationship of the construct validity process to the development of measures (Bagozzi 1980b). Bagozzi (1980b) has identified six components of the construct validation process which must be satisfied to achieve construct validity: (1) theoretical meaningfulness of concepts, (2) observational meaningfulness of concepts, (3) internal consistency of operationalizations, (4) convergent validity, (5) discriminant validity, and (6) nomological validity.

A full and complete discussion of each of these components which fully discusses all of the important considerations Bagozzi (1980b) raises is beyond the scope of this dissertation. For a more complete treatment of those components the reader is referred to the original source. Offered here will be a brief discussion of each element followed by a specific discussion relating the importance of these major issues to the salesperson performance measurement area.

Theoretical Meaningfulness of Concepts. In essence, the theoretical meaningfulness of concepts deals with the definitional adequacy of a "unit of thought" or concept. An unobservable concept is given, or through the use of words constructed, in such a manner that interpretation and meaning may be associated with that term through specification of that term's "sense" and objective references. The linguistic structure associated with the concept should be complete in dimensional reference, unambiguous as possible, use words or

concepts which have been previously defined, and use only terms which do not have elements which would be contradictory to the present effort (Lachenmeyer 1971). In short, the theoretical meaningfulness of a concept refers to the nature and internal consistency of the language used to represent the concept.

Observational Meaningfulness of Concepts. This component is also a semantic criterion. It relates the defined theoretical variables to their operationalization through the use of correspondence rules (Hunt 1976). Basically, correspondence rules are the semantic ties between unobserved "theories" or variables and the observable empirical events measured to support or falsify theories.

Internal Consistency, Convergent Validity, Discriminant Validity. The two previous components focused on the semantic criteria of construct validity; internal consistency, convergent validity, and discriminant validity deal more with the investigation of the empirical relationships between the operationalizations. Internal consistency is concerned with the homogeneity or single factoredness observations. A measure is thought to be internally consistent or reliable if correlations between different parts of a multi-item scale for one dimension are high (Peter 1979). Convergent validity is the degree to which two or more attempts to measure the same concept through maximally different methods are in agreement. Discriminant validity is the degree to which a

concept differs from other concepts. Measures which are reliable and exhibit convergent and discriminant validity are thought to be trait valid (Peter 1981). The assessment of each of these components provides support that the unobservable construct under investigation has been tapped and represented well by the operationalizations. Specific procedures for assessment of each of these components may be found in work by Bagozzi (1980b), Campbell and Fiske (1959), Churchill (1979), and Peter (1979, 1981).

Nomological Validity. Nomological validity is the degree to which predictions from a formal theoretical network containing the concept under scrutiny are confirmed (Bagozzi 1980b). Nomological validity extends the investigation of one observable concept to the investigation of how that construct interacts with other variables in an overall context of a theoretical structure. According to Peter (1981), if two concepts are conceptually related, evidence that purported measures of each are related is usually accepted as empirically support for the conceptual relationship. Nomological validity assesses the extent to which movement in the unobservable construct of interest produces hypothesized movement in the conceptually related construct.

Conclusions. Most scholars recognize the importance of investigating the construct validity of measures used to gauge unobservable variables of interest (Bagozzi 1980b; Campbell and Fiske 1959; Churchill 1979; Jacoby 1978; Peter

1979, 1981). In fact, Peter (1981) suggests that marketing scholars who seek to provide theoretical explanations for behavior must show a high degree of correspondence between abstract constructs and the procedures used to operationalize them. Failure to provide this support retards the advancement of theory development, testing, and scientific explanation. Yet, several researchers have noted the scant attention given to construct validation in marketing literature in the past (Churchill 1979; Heeler and Ray 1972; Jacoby 1978; Peter 1981). The sales research area in general, and the research investigation salesperson performance in specific, certainly is no exception to the proceedings observation. Many of the problems and inconsistencies identified in 1935 by Cunningham were still being discussed as major problems in the area by Walker, Churchill, and Ford (1979) in the late 1970's. Sales researchers to present have not devoted adequate attention to definitional, operational, and empirical issues for their measures in many of the salesperson performance measures employed today.

Salesperson Performance Measures: Total Sales and Global Representations

A quick glance at Table I suggests the pervasiveness of studies which have operationalized salesperson performance in terms of unadjusted sales volume or by a single-scaled measure of overall performance. Of the 33 studies included

in this review, almost 70 percent of the investigations have used these measures.

Overview of the Studies. The studies included in this review which have used total sales or a global measure of salesperson performance exhibited a number of commonalities. All of these studies fall short of the criteria suggested by Bagozzi (1980b) as necessary to support a measure's construct validity. In general, this group of studies does not adequately address the theoretical meaningfulness of the concept, salesperson performance, electing in most cases to ignore any definitional attempt. These authors treat salesperson performance as an objective reality and not as an unobservable construct. Consequently, the studies move directly to operationalization of the construct without first trying to explore and develop the meaning of the abstraction.

As Zaltman, Ponson, and Angelman (1973) suggested, the interpretation (meaning) of an abstraction involves more than mere reference to the objects logically contained within the domain of the construct. Interpretations must involve specification of the "sense" of a term or concept, presumably supplied through the definition of the unobservable.

Empirical issues associated with the construct validation process were largely nonexistent. This was due to the author's use of a single item measure in most cases. Several authors did offer weak support for their measure's concurrent validity, which is similar to nomological validity.

The bulk of the studies investigated either the effect of role perceptions or aptitude/personal variables on salesperson performance. The exact items included as independent variables have been as diverse and as abstract as salesperson self-esteem, self-centrality, complexity, sales ability and role clarity (Bush and Busch 1978; Mowen, Brown, and Jackson 1980-81; Scheibelhut and Albaum 1973) to as concrete as age, education, height, years of experience, and sex (Lamont and Lundstrom 1977; Swan and Futrell 1978). A single study was found investigating the relationship between rewards and salesperson performance (Futrell and Jenkins 1978) while two investigated motivation and performance (Bagozzi 1980a; Oliver 1974). Finally, studies by Cravens, Finn, and Moncrief (1983) and Mowen, Brown, and Jackson (1980-81) looked at the effect of some organizational and environmental variables on salesperson performance.

An examination of the results from these studies suggests that no group of independent measures consistently showed a relationship to salesperson performance. Correlations which did emerge as significant were usually in the .1 to .2 range. For instance, role clarity and role conflict were found to be related to salesperson's performance (positive and negative relationship, respectively) in studies by Bagozzi (1978), Busch and Bush (1978) and Bush and Busch (1981-82) but no relationships were found between these variables by Berkowitz (1980). Both Bagozzi (1978) and Berkowitz (1980) used sales volume measures while Busch

and Bush (1978) and Bush and Busch (1981-82) used a self-rating of performance.

Studies which investigated aptitude, personal, and personality variables were likewise ambiguous. Mowen, Brown, and Jackson (1980-81) found perceived ability related to performance, while Oliver (1974) did not. Both used different operationalization of salesperson performance. Lamont and Lundstrom (1977) and Small and Rosenberg (1977) found several personal variables (such as age, height, education, etc.) related to salesperson performance, but Greenberg and Greenberg (1980) did not. All three used different operationalizations of salesperson performance. Bagozzi (1978, 1980a) and Scheibelhut and Albaum (1973) found certain personality variables (specific self-esteem, majority identification, complexity) to be related to salesperson performance, while Mattheiss et al. (1975) found inconsistent relationships between similar independent variables across three different sales forces. All three used slightly different independent measures and very different dependent measures.

However, similar findings across studies did emerge, with respect to motivation (Bagozzi 1980a; Oliver 1974) and organizational and environmental variables (Cravens, Finn, and Moncreif 1983; Mowen, Brown, and Jackson 1980-81). Certainly the most consistent findings in this group of studies related to the importance of addressing the situational factors involved in the customer-salesperson dyad. Research by

Saxe and Weitz (1982) and Weitz (1978) suggested that salesperson performance was affected by the ability of the salesperson to relate to the customer's needs and problems on an individual basis. Basically, the greater the salesperson's ability to perceive the needs and problems of the customer, the higher was their performance. Bagozzi (1978), Greenberg and Greenberg (1980), Pruden and Reese (1972), and Scheibelhut and Albaum (1973) offer support for these observations.

Weaknesses/Strengths of the Operationalizations. The weaknesses inherent in these measures seem to outweigh the benefits they may possess. Table II offers a summarization of these weaknesses and strengths. The major problem with the sales volume measure has been suggested by several authors (Cravens, Woodruff, and Stamper 1972; Ryans and Weinberg 1979; Walker, Churchill and Ford 1979). Total sales volume generated by a salesperson is really an evaluation of how well the entire sales organization has performed and is not an accurate indication of the performance of an individual salesperson. The salesperson typically contributes to the level of sales generated, but environmental factors (such as market potential or competitive intensity) and organizational factors (such as advertising or pricing) are major determinants of sales volume (LaForge and Cravens 1981-82). Since salespersons have only limited control over sales volume, their performance evaluation should not be based on total sales achieved.

Research using this type of measure is addressing the selling function, but probably not at the individual level. Because of its obvious relationship to the results dimension of salesperson performance, it may provide information comparable to that gained by using a sales-to-quota measure. However, interpretation of the relationship is unnecessarily confounded by external forces. This close relationship is apparent in a number of studies (Cravens, Finn, and Moncreif 1983; Kirchner 1960) and the objectivity and ease with which this measure is developed and used are its primary strengths.

A global measure of salesperson performance also has a number of problems associated with its use. The problems arise primarily because of the measure's subjectivity. The rater, usually either the salesperson or a sales manager, is assumed to observe the range of relevant dimensions on which a salesperson is to be rated and in some fashion logically condenses these various observations into a numerical value on some single scale. However, the consistency of multiple raters or even ratings assigned to several individuals by the same rater has to be questioned.

It is entirely possible that a single rater may be swayed into assigning comparable ratings to salespersons for different reasons. For instance, three different salespersons may perform at a superior level on three different dimensions of salesperson performance and all receive an overall "good" performance rating. The tendency for the rater

to focus on one dimension and to generalize that specific performance evaluation to overall performance, is similar to the halo effect first identified by Thorndike (1920) and is the most troublesome constant error in performance appraisals (Cascio 1982).

There is significant support available in the literature to suggest that global measures of overall salesperson performance do not measure the range of dimensions comprising that construct. For instance, several studies which have employed a global measure of salesperson performance along with a range of other measures have found either no relationship between the overall measure and sales volume measures (Cravens, Finn and Moncreif) or only a moderate correlation (Baehr and Williams 1968).

There is some evidence to suggest that global ratings produced by sales managers focus on the effort of sales representatives and tend to ignore background or situational factors which may affect results of those efforts. Kirchner (1960) in his study of the relationship between "objective" performance activities and performance appraisal items found that the salesman who was the most active in seeking new business was rated higher in overall performance. This supported the contention that effort is an important influencer. Also, Baehr and Williams (1968) found that overall performance ratings were negatively related to territory difficulty, suggesting that situational factors are largely ignored in this type of rating.

These findings correspond to a large body of literature based on attribution theory, which is concerned with how individuals utilize environmental variables and individual variables in attempts to determine the causality of a person's action (Heider 1958). An experimental study conducted by Mowen, Brown, and Jackson (1980-81) specifically investigated the relationships inferred from the Baehr and Williams (1968) and Kirchner (1960) studies. They too found that salesperson effort had a significant influence on overall performance ratings and that task difficulty was under utilized. These authors further suggested, based on studies by Jones and Nisbett (1971), Jones et al. 1968, McArthur (1972), and Regan and Totten (1975), that sales managers' ratings may differ from salespersons' ratings.

Although not tested in this study, the authors suggested that when confronted with failure, sales managers are likely to attribute the failure to the salesperson's effort or ability while salespersons are likely to feel that their failure was due to external variables (like luck or a poor territory). If this is true, then performance ratings for some "true" level of performance will differ depending upon who is doing the rating, observers (sales managers) or actors (salespersons). This would also suggest that studies which have used self appraisal global measures (Busch and Bush 1978; Bush and Busch 1981-82; Pruden and Reese 1972) or managerial global ratings (the remainder of the studies in this category in Table I) are not directly comparable.

These measures' subjectivity and the resulting difficulties of their interpretation are their primary weaknesses. However, some have argued it is precisely this subjectivity that makes these global measures attractive. Pym and Auld (1965) have argued that in ambiguous situations, where a complete specification of performance is not possible, a subjective measure may be most appropriate. Pruden and Reese (1972) argued that a self-rating scale is preferable to other instruments because of disagreement as to what constitutes a valid measure of personal selling performance and the difficulty in isolating salesperson's performance in the light of his/her interdependence with other organizational members. Busch and Bush (1978) agree with the use of self-ratings and suggest that others have found self-rating to have less constant errors (Heneman 1974) and to correlate highly with "objective" measures of performance (Pym and Auld 1965). These observations have not been supported in a selling context.

General Conclusions/Implications. Unadjusted sales and single scaled global performance measures are, in general, inappropriate measures for researchers interested in investigating salesperson performance. Their singular rating format misrepresents the multi-dimensional nature of this construct. The range of factors which may influence or interact with these measures makes precise interpretations impossible. Also, since most studies employ single item measures

of this kind, validity and reliability investigations are hindered.

The problems with these measures become apparent in a review of the articles which have used them. Such articles usually show weak correlations with independent variables which vary across studies. Often the inconsistencies accompany different operationalizations of the dependent variables. The nature of these inconsistencies becomes clouded; are they due to the "true" nature of the constructs being investigated or are they a result of different dependent variables? Since little information about the relationships between these dependent variables is available, these questions cannot be addressed.

Salesperson Performance Measurement Approaches: A Closer Representation of the Construct

A more appropriate way to operationalize the construct of salesperson performance would be to examine explicitly identified behaviors of the sales force, the results which have been adjusted to reflect factors outside the control of the individual, and the profitability with which those behaviors and results have been carried out. These dimensions of salesperson performance should directly contribute to profitability of the organization. Tables III, IV, V, and VI provide a summarization of studies which have used behaviors, sales-to-quota, contribution to profit, or some combination

of these as measures of salesperson performance. Although each of these approaches is certainly more conceptually precise in its operationalization of this construct than total sales or a global scale measure of salesperson performance, each still has some weaknesses.

Overview of the Studies. The articles summarized in Tables III, IV, V, and VI show promise in the attention many of these studies have given to the development of better salesperson performance measures. The Cravens studies (Beswick and Cravens 1977; Cravens, Finn, and Moncrief 1983; Cravens and Woodruff 1973; Cravens, Woodruff, and Stamper 1972) and the Ryans and Weinberg (1979) study are basically attempts to identify environmental and organizational variables that affect territory sales through the development of a response function that explains these specific relationships. This function is then used to set a benchmark sales level (sales quota) for each sales territory for the future period. Although no studies were found in this area which have employed this systematic procedure, the approach is a promising one for the setting of more objective quotas and evaluation of salesperson performance.

The Behrman and Perreault study (1982) also represents a methodological attempt at the development of a complete measure of salesperson performance. These authors used the Churchill (1979) paradigm to develop a multi-item scale of salesperson performance from evaluations provided by sales

representatives. Care was taken in this approach to provide information about the measure's reliability and construct validity. Hence, the measure that resulted has some support that it is measuring the construct of interest.

Although not included in Table III because of the conceptual nature of the article, Cocanougher and Ivancevich (1978) have also addressed the measurement problem in gauging the salesperson performance construct. These authors advocate the use of behaviorally anchored rating scales (BARS), which are designed to evaluate salesperson behaviors which have been "determined" to be related to desired results. This approach, like the Beswick and Cravens (1977) systematic quota setting procedure, has seldom been used in specific research investigations.

Because of the general scarcity of salesperson performance research and, in particular, a scarcity of articles which have used a combination or composite measure of salesperson performance, statements suggesting that certain measures are better than others are tentative at best. In general, those studies which have used a measure which focuses only on one dimension of salesperson performance, do not seem to produce results which are better than those studies which have inappropriately operationalized the dependent variable. For instance, the relationship between pay disclosure and role perceptions and salesperson performance in the Futrell studies (Futrell and Jenkins 1978; Futrell and Swan 1978; Futrell, Swan, and Lamb 1977; Futrell, Swan, and

Todd 1976; Swan and Futrell 1978) are generally significant but weak with correlations in the .1 to .2 range. Oliver's (1974) motivational study shows similar weak correlations as does the Lamont and Lundstrom (1977) study.

In the three studies which have used a composite measure of salesperson performance (Behrman, Bigoness, and Perreault 1981; Franke, Behrman, and Perreault 1982; and Williamson and Berl (1983)) to investigate a specific group of independent variables, the R^2's appear to be higher than most studies in this area. The Franke, Behrman, and Perreault (1982) investigation of individual and work-related factors of individual salespersons found that the independent variables could explain about 34 percent of the variation in performance. Although not astounding, this is certainly better than most other reported R^2's in this field.

Weaknesses/Strengths of the Operationalizations. The primary weaknesses of studies which have operationalized the salesperson performance construct by measuring only one of its multiple dimension (e.g., behavior, results, and profitability) is that all the items on which a salesperson should be evaluated are not being addressed. Such attempts make comparison across studies tentative at best. Table VII summarizes the weaknesses and strengths of this group of studies. Studies by Kirchner (1960) and Lamont and Lundstrom (1977) suggest that subjective measures of behaviors relate differently to other sets of variables than do more objective measures of results. Therefore, the problems of inter-

pretability across studies found in the studies which used total sales or a global measure of performance are still a problem. Also, the use of a sales-to-quota measure, particularly when the "quota" is intuitively set by management, may not adjust sales consistently or across territories. The problems with quotas have been noted by several authors (Churchill, Ford, and Walker 1981; Cravens and Woodruff 1973; Walker, Churchill, and Ford 1979). Profitability measures, although seldom used, suffer from similar problems related to the accuracy of assigning expenses at the individual level. As Smackey (1977) points out, this type of information is not kept by many firms, which accounts for the scarcity of research which has used this measure.

Behavioral measures, because of the subjectivity involved in identifying a complete range of activities that should be included in the final instrument, are argued by some to be a practice in futility. As Pym and Auld (1965) point out, even empirical investigations that focus on grouping relevant items into their underlying factors (Behrman and Perreault 1982; Rush 1953) can necessarily only produce a final instrument which may be partially complete. In ambiguous situations, such as personal selling, investigators may have only limited knowledge as to what kinds of activities are performed and their importance to the organization. However, this limitation certainly may be reduced through a thorough review of the conceptual literature in a field and through discussions with the employees themselves and their managers.

Perhaps a more potent limitation of behavioral measures and, in general, the present composite approaches for measuring salesperson performance is the use of different raters in the evaluation process. As pointed out previously, salespersons may be expected to include different considerations in their evaluations than sales managers. This gives rise to different ratings and different relationships between independent variables. With the exception of the Lamont and Lundstrom (1977) study, each of the combination/composite approaches have used subjective evaluations exclusively for each dimension provided by either the salesperson (Behrman, Bigoness, and Perreault 1981; Franke, Behrman, and Perreault 1982) or the sales manager (Williamson and Berl 1983). The relationship between these subjective appraisals may differ and their relationship to dimensions which may be gauged with more objective measures supplied through company records is unknown. It is possible that these measures, although addressing conceptually all the dimensions of the construct, may in fact be focusing on only one element of salesperson performance which influences the rater's perception of the individuals along the other dimensions.

Even the Lamont and Lundstrom (1977) study, which includes both objective measures supplied through company records (such as sales-to-quota, compensation ratios, and new call conversion) and subjective managerial evaluations, fails to examine this problem. Additionally, the authors elected not to use a composite score comprised of each of

the elements they investigated separately but rather investigated the relationship between their independent variables and each of the dependent measures.

Each of these operationalizations, however, does have notable strengths. By specifying exact behaviors, researchers and practitioners are better able to identify activities which contribute most to "good" performance. Such measures are more conducive to interpretation and should provide managers with more guidance with respect to planning their training programs and refining their selection devices.

Sales-to-quota measures and profitability measures provide managers with information crucial to the survival of the organization. For researchers, these measures may provide some objectivity to supplement necessarily subjective measures of behavior. These measures used in combination to form composite evaluation scores may provide a complete measure of the domain of salesperson performance.

General Conclusions/Implications. Measures of specific behaviors, adjusted results (sales-to-quota), and contribution to profit represent conceptual improvements from studies which have measured salesperson performance via total sales or by means of a global measure. However, the results produced in conjunction with these measures do not appear to be better empirically than the results produced from the conceptually inappropriate dependent variable studies. The explanatory power of the models was not greatly improved. One reason for this lack of improvement is the fact that both

sets of operationalizations are probably tapping, directly or indirectly, only one dimension of salesperson performance.

A conceptually appealing measurement approach would be a combination of Lamont and Lundstrom's (1977) use of both objective and subjective performance information which could be justified empirically using an approach comparable to that used by Behrman and Perreault (1982). Such measures could then be combined into a composite evaluation score if desired. Current combination/composite measurement approaches suffer from the exclusive use of subjective ratings by either the salesperson or sales manager.

Overall, this second group of studies also suffers from a lack of uniformity of dependent variables. Although some methodological advancements have been made, the relationship between different operationalizations of dependent variables has never been investigated. This adds unneeded confusion to a field which is full of complexity and interrelationships.

Needed Methodological Refinements in the Measurement of Salesperson Performance

This review supports Walker, Churchill, and Ford's (1977) observation that little emphasis has been given to the explanation of salesperson performance. The articles which have investigated this construct are often contradictory, difficult to compare, and "piecemeal" in nature. The results of these studies have been uniformly weak, and the dependent variables largely incomplete and inappropriate.

Given the extreme diversity of operationalizations used to measure salesperson performance, a methodological attempt to investigate the relationship between these dependent measures is needed. The approach should build upon the most conceptually sound methodological attempts presently used while attempting to correct any methodological shortcomings apparent in the procedures. The resulting framework would be multidimensional in nature, employ diverse data sources, and exhibit a degree of construct validity often neglected in the present literature.

This type of theoretical framework will be presented in Chapter III. The conceptual model of salesperson performance will be comprised of a behavioral dimension, a results dimension and a contribution to profit dimension. Each dimension will be measured by multiple items and the relationship between these measures and dimensions will be investigated. Furthermore, the relationship between each of these dimensions and the complete measure of salesperson performance will be investigated as will the link between salesperson performance and organizational performance. These methodological refinements and investigations should provide information that could help explain some of the inconsistent findings in past research while providing a measurement approach which is the most conceptually advanced in the area.

CHAPTER III

A CONCEPTUAL FRAMEWORK FOR THE MEASUREMENT OF SALESPERSON PERFORMANCE

Chapter I presented a general discussion of the importance of accurately measuring salesperson performance, the present inadequacies of many of the empirical attempts, and potential problems which may accrue to practitioners and researchers alike who use poor measurement approaches for this construct. Chapter II elaborated upon these general concepts through a literature review which delineated past definitional, operational, and empirical investigations focusing on salesperson performance. This chapter will incorporate and expand upon these past attempts in order to produce a framework which is as complete and parsimonious as possible.

Proper understanding of the intricacies of any model requires that key terminology used to describe its components be understood. Chapters III, IV, and V will use several terms extensively that require some elaboration. First, the terms conceptual framework, conceptualization, and model will be used interchangeably. They refer to the specification of a series of relationships between constructs. The term "construct" is used here to represent any

mental abstraction which has been specified through a linguistic structure. The construct of salesperson performance may be represented by a variety of job dimensions. A job dimension may be defined as a conceptually specified area of work (Bernardin and Beatty 1984). It may be comprised of several "sub-dimensions" which fully specify its character. A job dimension is not, as defined above, the same as a dimension in statistical terms. A statistical dimension, or factor, represents the statistical similarity between several specific items which represent the conceptual core of an abstraction. Finally, the term "variable" is used to refer to data that are obtained in the form of measures that attempt to represent constructs in theory. The terminology presented above will be followed throughout the remainder of the dissertation.

The general conceptual framework offered in this chapter closely parallels two specific models developed by Walker, Churchill, and Ford (1979). Their models were chosen for elaboration due to these authors' emphasis on determinants of salesperson performance rather than on the complete specification of salesperson performance and because of the impact their work has had on many in the field. By refining their model with respect to the salesperson performance construct, a more accurate and complete overall framework of salesperson performance may be achieved.

Due to the close relationship between the development of a conceptual model and the mode of investigation used to corroborate the theoretical structure, the final portion of

this chapter will be devoted to a brief explanation and presentation of an empirical approach and model. Before the conceptual or empirical model of salesperson performance is offered, however, a brief discussion of the criteria that constitute a general definition of job performance is needed. Proper semantic specification should guide the construction of the conceptual framework.

Job Performance Defined

Although researchers in the salesperson performance area have been largely negligent in terms of definitional criteria of salesperson performance, an indication of what a salesperson performance definition should entail may be found through an examination of material in the personnel management area. Cascio (1982) views criteria (such as performance measures of salespersons) as evaluative standards which can be used as "yardsticks for measuring employees success or failure" (p. 102). The criteria should be a representation of organizational goals and objectives at some specified time.

Cascio (1982) argues further that job performance is multi-dimensional in nature. Rush (1953), in his examination of the selling job, found that various selling skills were relatively independent and that at any point in time a salesperson may be high on one performance characteristic and simultaneously low on another. Thus, as Cascio (1982) relates:

> The salesperson's learning aptitude (as measured by sales school grades and technical knowledge) is unrelated to objective measures of his or her achievement (such as average monthly volume of sales or percentage of quota achieved), which in turn is independent of the salesperson's general reputation (e.g., planning work, rated potential value to the firm) which in turn is independent of his or her sales techniques (sales approaches, interest and enthusiasm, etc.) (p. 105).

Whether all these job dimensions are "unrelated" is an empirical question of great importance. However, Cascio's main point is that performance is multidimensional and conceptualizations of it should provide a framework from which operational criteria can be derived. The significance of this multidimensionality cannot be understated. Ronan and Prien (1966) concluded: "To attempt to evaluate job performance with a single measure is worse than useless, it is misleading; and for ratings (alone), to keep in perspective all dimensions of performance while rating would appear impossible" (p. 56).

Bernardin and Beatty (1984) succinctly summarize many of the sentiments expressed above in their definition of performance and performance measurement:

> Performance: Those outcomes that are produced or behaviors that are exhibited in order to perform certain job activities over a specific period of time. Performance measurement: The process of assigning a numerical value to performance in terms of a criterion of effectiveness such as quantity, quality, timeliness, and so on (p. 12).

Both Bernardin and Beatty (1984) and Cascio (1982) offer similar guidelines for what constitutes a "good" criterion. Criteria must be:

1. Relevant--The specific item included as a measure of job performance must be tied to stated organizational goals or objectives which are affected by the performance/nonperformance of the criteria.
2. Sensitive--The criterion should be capable of discriminating between poor, average, and excellent performers.
3. Measurable--The criterion must lend itself to "accurate" quantification.
4. Practical--The conceptual criterion must not be so difficult to gauge that effective operationaliza- is precluded. In essence, information about the criterion must be available in a usable form.

A salesperson's job performance refers to some level of accomplishment of the salesperson's job objectives (Futrell 1981). These objectives should logically include specific activities and outcomes of those activities which may be measured in respect to quantity, quality, or timeliness. The sales job performance criteria should be developed in conjunction with organizational objectives but should include only factors within the control of the salesperson (Cravens, Woodruff, and Stamper 1972; Walker, Churchill, and Ford 1979). The resulting measure should probably be multi-dimensional in nature with each dimension related to the success of the organization.

A Model of Salesperson Performance

Walker, Churchill, and Ford (1979) have produced a conceptual framework generally referred to as "the model of

salesperson performance." A full specification of the elements included in these authors' framework which are direct antecedents or consequences of salesperson performance requires a combination of Figures 1 and 5 from Walker, Churchill, and Ford's (1979) original work. Figure 1 presents this combination of relationships proposed by these authors. Elements outside the broken lines (i.e., personal, organizational, and environmental variables--POE variables; motivation; skill level; aptitude; role perception; rewards; and satisfaction) have received the bulk of sales researchers' attention in recent years. However, more attention needs to be given to elements within the broken lines in this figure.

Walker, Churchill, and Ford's (1979) model has contributed greatly to the sales research field through their discussion of the determinants of salesperson performance. Still, their treatment of salesperson performance in relation to its definition, its dimensionality, and its relationship to organizational performance and effectiveness could be improved. The authors have defined salesperson performance as "behavior that has been evaluated in terms of its contribution to the goals of the organization. Performance, in other words, has a normative element affecting whether a worker's behavior is 'good' or 'bad' in light of the organization's goals and objectives" (p. 22). These authors further suggest that "effectiveness refers to some summary index of organizational outcomes for which an individual is

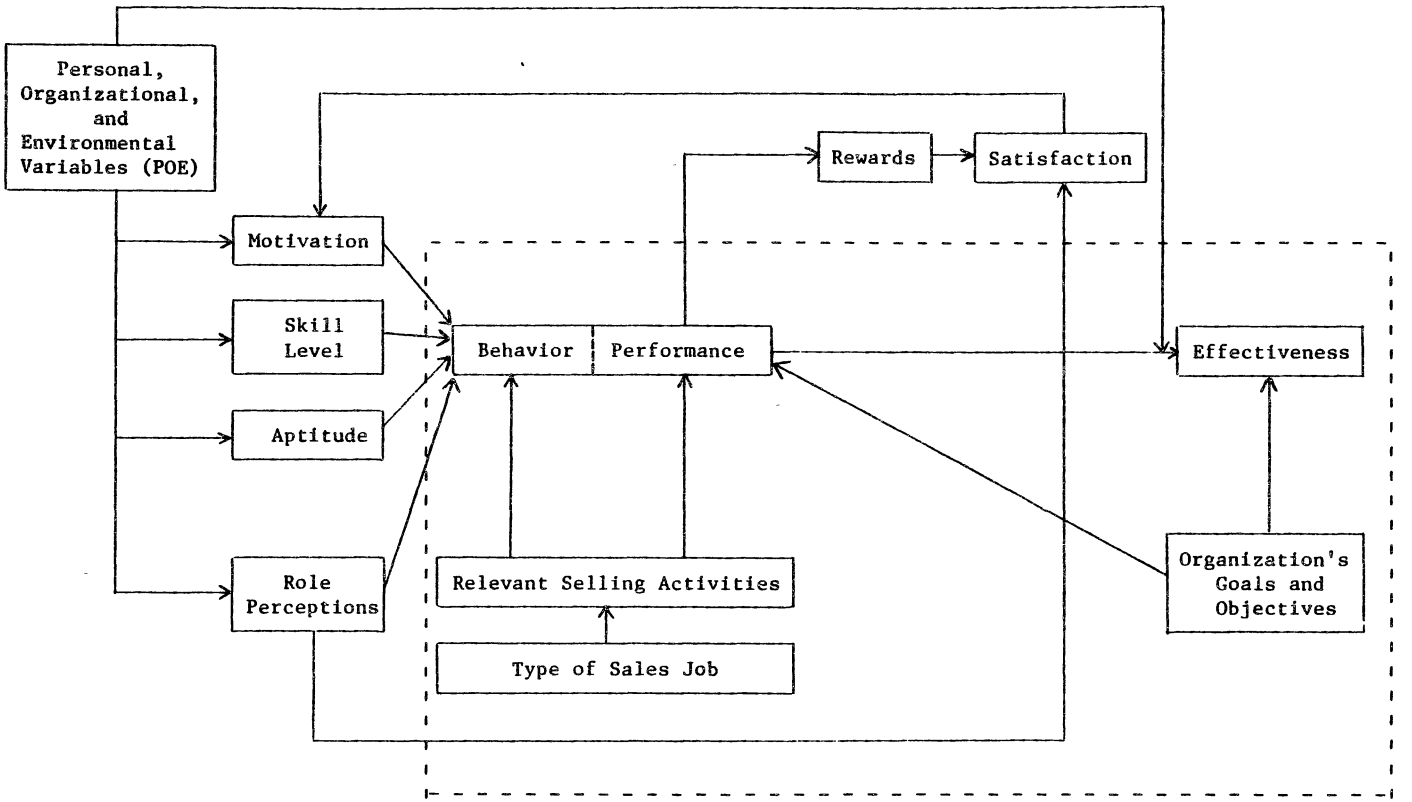


Figure 1. Walker, Churchill, and Ford's Framework: "The Model--Determinants of Salesperson's Performance" and the Relationship Between "Sales Behavior, Performance, and Effectiveness"

at least partly responsible, such as sales volume, market share, or profit" (p. 22). The authors then suggest that performance is multidimensional and may include some measure of adjusted sales.

There are a number of inconsistencies in these definitions and conceptualizations. First, and most notable, is the authors' confusion as to what elements comprise salesperson performance. Is it behavior, the results of that behavior, or evaluation of the behavior? Their definition describes a unidimensional construct but their discussion suggests its multidimensional nature. According to most of the conceptual literature in this area, salesperson performance is multidimensional and includes more than the individual's behavior. Based on the Bernardin and Beatty (1984) and Cascio (1982) definitions, these authors have confused what constitutes performance, its measurement, and the appraisal or evaluation of the performance. Each are related but unique elements.

As Bernardin and Beatty (1984) suggest, performance measurement is the process of assigning a numerical value to performance in terms of a criterion of effectiveness such as quantity, quality, timeliness, and so on. Performance and its measurement do not include an evaluation of the performance level. There is no normative component in the gauging of performance levels attained. Bernardin and Beatty (1984) separate the notion of whether performance is "good" or "bad" from performance itself. Interpretation of

performance should occur only after standards, or levels of performance identified as corresponding to predesignated levels of effectiveness, are set. They define this interpretation process in terms of relative or absolute levels of effectiveness and/or the standards of performance met, as performance appraisal.

This would suggest that Walker, Churchill, and Ford (1979) have misrepresented salesperson performance not only in terms of what dimensions comprise its domain, but also in respect to its positivism. Performance and its measurement are separate from its normative evaluation. Also, as Bernardin and Beatty (1984) point out, performance at whatever level is measured (i.e., salesperson or organization) may be discussed in terms of its effectiveness. This would suggest that Walker, Churchill, and Ford (1979) have defined effectiveness inappropriately when they suggest "effectiveness" only refers to the summary index of organizational outcomes. These authors seem to be referring to some performance level measured in respect to the organization.

These problems and inconsistencies evident in the Walker, Churchill and Ford (1979) model of salesperson performance need refinement and reformulization. At least three areas of their model should be rethought. The three primary changes involve the conceptual components of this paper's theoretical framework of salesperson performance: 1) dimensions of salesperson performance; 2) salesperson performance; and 3) organizational performance.

A Refined Model of Salesperson Performance

Figure 2 presents the refinements and structural changes of the Walker, Churchill, and Ford (1979) model suggested by the preceding discussion. The broken lines encompassing the dimensions of salesperson performance, salesperson performance, and organizational performance represent the primary focus of this investigation. These components and their influencing factors will be discussed in turn below.

Dimensions of Salesperson Performance

A dimension of salesperson performance may be defined as a conceptually specified area of work (Bernardin and Beatty 1984) which obtains its meaning from empirical concepts. Empirical concepts achieve their meaning through operational definitions that specify procedures for measuring observations in the world of experience (Bagozzi 1980b). In essence, job performance dimensions are formed through appropriate specification of the domain of that job and their subsequent operationalizations. The salesperson performance construct has three distinct dimensions: behaviors, results, and profitabilities. Each requires unique operationalizations which suggests that each has distinctive qualities.

Support for this triadic conceptualization may be found in earlier non-empirical works by Cleveland (1948), Cunningham (1935), and Ghiselli (1942), and in later works by Chonko (1982), Dauner (1973), and Walker, Churchill, and

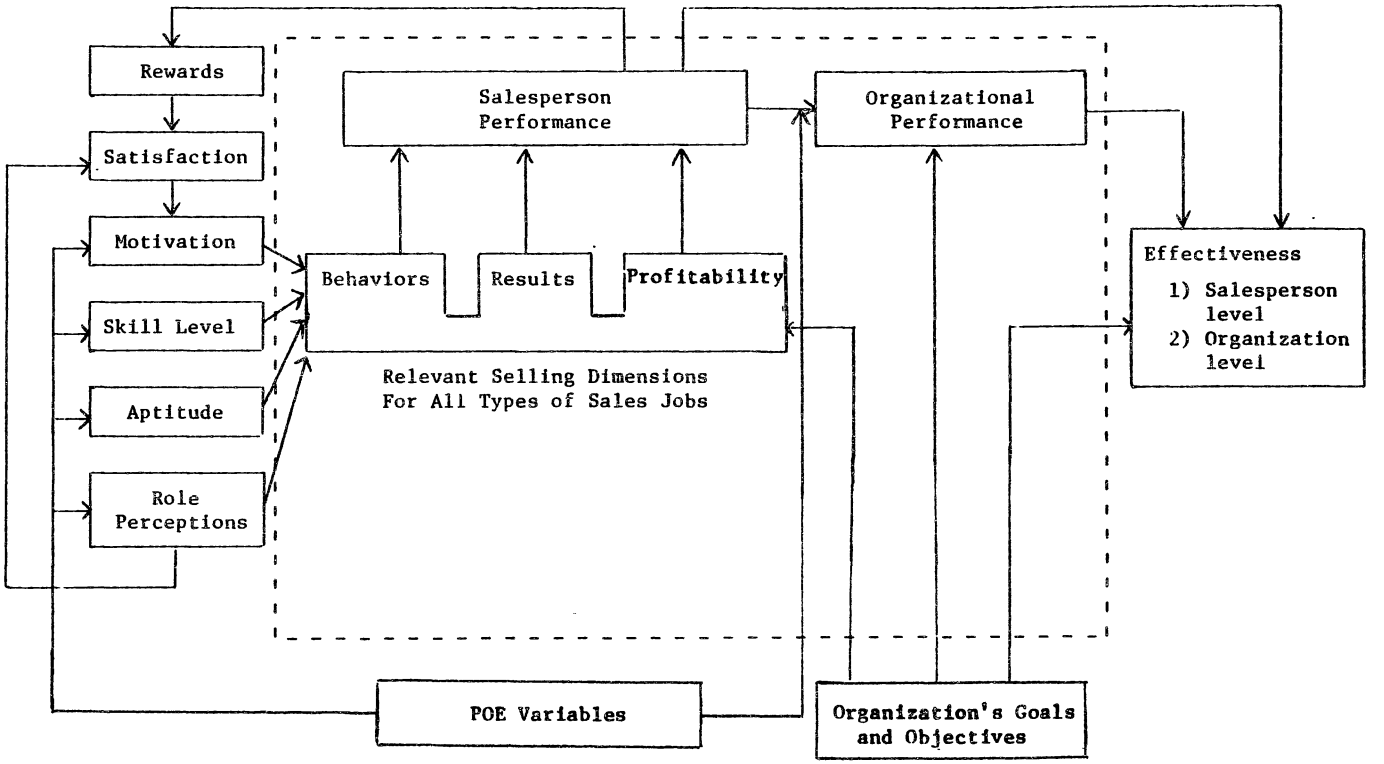


Figure 2. A Refined Model of the Determinants of Salesperson's Performance and the Relationship Between Sales Behavior, Performance, and Effectiveness

Ford (1977; 1979). A few empirical studies also support this construct's multidimensionality. Table VIII provides a list of four authors' initial operationalizations of salesperson performance along with how their conceptualizations might fit into this broader triadic relationship.

Several commonalities emerge from an examination of Table VIII. First, the behavioral dimension appears to be consistently comprised of several categories or subdimensions: 1) technical support, 2) customer interaction, 3) territory management, and 4) internal [company] support. However, all four categories should logically maintain a common core in that they all represent an aspect of salesperson behavior.

An argument might be made that technical support (or knowledge) might be more representative of a salesperson's aptitude rather than the other, more behavioral subdimensions. This is true only to the extent that the operationalization of this element does not reflect the salesperson's use or acquisition of that knowledge. Similarly, several other original measurement categories used by these authors clearly represent determinants of performance and not performance itself. For example, the "learning ability" and "interest" categories used by Rush (1953) and the "attitude" category employed in the Futrell studies are more closely aligned with Walker, Churchill, and Ford's conceptualization of determinants of performance. Consequently,

TABLE VIII

POTENTIAL MEASUREMENT CATEGORIES AND DIMENSIONS OF SALESPERSON PERFORMANCE FROM PAST EMPIRICAL WORK

Authors(s)	Original Measurement Categories	Present Dimensional Reference
Rush (1953)	1. technical knowledge	behavioral (technical support)
	2. learning ability	?
	3. interest	?
	4. sales approach	behavioral (customer interaction)
	5. planning work	behavioral (territory management)
	6. sales demonstrations	behavioral (customer interaction)
	7. closing ability	behavioral (customer interaction)
	8. present value to firm	results/profitability
	9. potential value to firm	results/profitability
	(nine categories ultimately factored into four groups which were largely uninterpretable)	
Futrell Studies (1976-1978)	1. works hard	?
	2. attitude	?
	3. planning ability	behavioral (customer interactions)
	4. planning ability	behavioral (territory management)
	5. activity reporting	behavioral (internal [company] support)
	6. overall performance	?
	7. territory coverage	behavioral (territory management)
	8. performance improvement	?
	9. human relations ability	behavioral (customer interaction)
	10. product knowledge	behavioral (technical support)

TABLE VIII. (Continued)

Authors(s)	Original Measurement Categories	Present Dimensional Reference
Lamont and Lundstrom (1977)	1. technical knowledge	behavioral (technical support)
	2. call frequency	behavioral (territory management)
	3. territory management	behavioral (territory management)
	4. salesmanship skill	behavioral (customer interaction)
	5. supportive strength	behavioral (internal [company] support)
	6. compensation ratio	results/profitability
	7. sales-to-quota	results
	8. new call performance	results
	9. overall performance	?
Behrman and Perreault (1982)	1. sales presentation	behavioral (customer interaction)
	2. information	behavioral (internal [company] support)
	3. technical knowledge	behavioral (technical support)
	4. meeting sales objectives	results
	5. controlling expenses	profitability
	6. developing and maintaining customers	?
	7. working well with employees	behavioral (internal [company] support)
	(The first five measurement categories emerged as separate factors while the last two were not supported in a factor analysis)	

these are probably not good measures of salesperson performance.

Several of these authors' categories appear to be broad generalizations of performance and as a result, may be placed in any specific dimension of salesperson performance. Finally, three of the four authors include some measure(s) that seem to reflect a results or profitability dimension.

As Figure 2 indicates, there is a commonality between the behaviors a salesperson exhibits, the results that may be largely attributable to those actions, and the profitability with which those results are obtained and behaviors enacted. This commonality is shown graphically in Figure 2 by drawing the base portion of each dimension in a "connected" fashion. The dimensions were represented in this way because of the lack of conceptual evidence to suggest a direct relationship between each dimension.

For instance, Churchill, Walker, and Ford (1981, p. 163) suggest a large portion of the salesperson's time is not directly related to the generation of sales. A salesperson must fill out call reports, attend meetings, make service calls, and so on. However important these activities are to management, they are not directly related to results (such as quota attainment, new accounts sold) or to the profitability associated with the production of those results. For this reason there are no connecting lines between the dimensions suggesting a direct, consistent relationship. Still, the measurement of only one of these

three dimensions cannot fully represent the domain of salesperson performance.

Organizational goals and objectives will directly affect what items comprise each dimension while a salesperson's motivation, skill level, aptitude, and role perceptions will affect their corresponding level of achievement on those items. Organizational goals and objectives will determine the general nature and emphasis given to the operationalization of each dimension. Organizational goals and objectives first provide the decision criteria used in the measurement of each dimension and later serve as the reference point for the evaluation of an individual salesperson's performance effectiveness. The separation and measurement of the three salesperson performance dimensions allows the organization to establish multiple goals, with differential importance weightings. For instance, an organizational strategy may emphasize the attainment of market share (increased sales) while simultaneously expecting salespersons to "maintain" specified profitability and customer service levels.

As mentioned above, the elements which directly affect the performance level of a salesperson are motivation, skill level, aptitude, and role perceptions. Although POE variables affect the determinants of salesperson performance indirectly (as do rewards and satisfaction) through the four elements just mentioned, their direct effect on the results and profitability dimensions of salesperson performance are "partialled out." By removing the effects these variables

have on the results and profitability measures of salesperson performance, the resulting variations in performance levels are attributable to individual differences, not to factors outside the control of salespeople.

The focus of this research is not be investigate the relationship of motivation, skill level, aptitude, or role perception to salesperson performance. Both empirical research (much of which is summarized in Tables I, III, IV, V and VI) and conceptual articles (Walker, Churchill, and Ford 1977, 1979) are available elsewhere to provide a specific discussion of these variables and their relationship to salesperson performance. However, the refined model of salesperson performance presented in Figure 2 does suggest some potentially important contributions that this reformulization may offer to studies specifically interested in examining these relationships.

For instance, both the motivational element and the skill level element of Walker, Churchill, and Ford's (1979) original model are defined specifically to be related to behaviors of the salesperson. Motivation, basically, is the amount of effort a salesperson desires to spend on each activity or task associated with the job. Skill level refers to an individual's learned proficiency at performing necessary tasks. This would suggest that a dependent variable not specifically defined to include measures of behaviors is excluding the performance dimension which conceptually should relate closest to the independent variables. Studies

which have used, for instance, sales or sales-to-quota to examine motivation (Oliver 1974) are largely measuring only that portion of the behavioral dimension which is common to the results dimension.

Aptitude and role perceptions, on the other hand, are defined in much broader terms and may have substantial relationships to each salesperson performance dimension. Aptitude refers to some groups of innate characteristics that serve largely as a constraint on a person's ability to perform the sales job. Role perceptions are the perceptions held by the salesperson of the expectations and demands role partners (such as sales managers, customers, family) hold in respect to the sales job. Both of these elements must measure the full range of salesperson performance dimensions to capture the complete relationship these constructs have to the sales job. For instance, sales managers have expectations of the kind and amount of work a salesperson should do, the expected results from those activities, and the "proper" use of expenses associated with the performance of that job. Studies, such as Berkowitz's (1980), that define the independent role perception variable in this way, but measure only the results dimension of performance, should not expect a strong relationship between a composite measure of role perceptions and an incomplete measure of salesperson performance. Similarly, studies which have examined different variables comprising a salesperson's aptitude (such as physical traits, mental abilities, and personality character-

istics) but have used incomplete and often different operationalizations of the dependent variable should not expect any consistency in their results (Churchill, Ford, and Walker 1981).

Although this discussion of these determinants does not depict the full range of their interrelatedness, it does point to the importance of conceptualizing properly salesperson performance. Next, a discussion of the entire construct of salesperson performance is offered.

Salesperson Performance

Salesperson performance is defined as a salesperson's behavior, results, and associated profitability levels that are exhibited in the execution of the sales job for a specific period of time. The measurement of this performance involves the assignment of a numerical value to specific performance items contained within each performance dimension in terms of a criterion of effectiveness such as quantity, quality, and timeleness. Only the individual consequences of a salesperson's action should be gauged in this construct. For this reason, measures taken of salesperson performance should exclude the personal, organizational and territorial factors which differentially affect the consequences of a salesperson's action (LaForge and Cravens 1981-82).

Several studies have identified a number of these POE influencing variables (Beswick and Cravens 1977; Cravens and Woodruff 1973; Cravens, Woodruff and Stamper 1972; LaForge

and Cravens 1980-81; Ryans and Weinberg 1979). These authors have found significant relationships between personal variables (such as a salesperson's experience), territory characteristics (such as territory market potential, territory workload, territory account dispersion, and territorial competitor strengths) and organizational factors (such as organizational territory advertising, closeness of supervision, sales manager's experience, territory market share to sales volume). Generally, the response function produced with these kinds of variables and salesperson characteristics have done an excellent job of accounting for the variance in sales volume.

The evaluation of a salesperson should examine the complete range of factors comprising the employee's job. The normative evaluation of the effectiveness of a salesperson's performance is determined by comparing performance levels against a priori specified organizational goals, objectives, and standards.

Likewise, the rewards a salesperson receives should be based on the composite performance level that the individual attains. Allocation of rewards based on a system which focuses on a single dimension of salesperson performance is susceptible to criticism. If the salesperson is, in fact, required to perform activities not directly related to sales, along with maintaining specified sales and profitability levels, evaluations which are not complete may be rightfully argued as unfair. This perceived "unfairness"

can lead to decreased satisfaction and motivation and increased employee turnover (Churchill, Walker, and Ford 1981). Similarly, researchers should use complete measures of salesperson performance when gauging the relationship between the satisfaction a salesperson receives from rewards (extrinsic) and innate characteristics from the performance of the job (intrinsic). The use of incomplete dependent measures (such as those used by Futrell and his colleagues) systematically excludes important potential influencing factors.

Organizational Performance

Organizational performance is a summary index of organizational outcomes for which the salesperson is partially responsible. Like the measurement of salesperson performance, its measurement involves the assignment of a numerical value to specific organizational criteria of effectiveness. As Walker, Churchill, and Ford (1979) suggest, appropriate measures of this construct will be determined by an organization's goals and objectives and could include such measures as sales (unadjusted), profit, or market share. The evaluation of this performance in terms of its effectiveness involves the normative comparison of levels of organizational performance against organizational goals, objectives, and specific standards.

The structural components suggested in this conceptual framework of the dimensions of salesperson performance, the

construct of salesperson performance, and the construct of organizational performance are thought to be a more conceptually correct theoretical structure than has been offered elsewhere. However, theory development entails more than the definition of constructs and their conceptual relationships. Theory development also entails the empirical investigation of the hypothesized structure. A discussion of the research tool to be used to provide this empirical support will be presented next.

A Causal Model of Salesperson Performance

Empirical justification of the relationship between constructs and their measures in a theoretical structure is necessary to support any unobservable variable's construct validity. Construct validity is a necessary prerequisite for theory development and testing (Bagozzi 198Øb). As discussed in Chapter II, construct validity involves six components: (1) theoretical meaningfulness of concepts, (2) observational meaningfulness of concepts, (3) internal consistency of operationalizations, (4) convergent validity, (5) discriminant validity, and (6) nomological validity. This, and previous chapters, have provided support for the conceptual base for a model of salesperson performance (Figure 2). The model's constructs were defined and their general operationalizations were suggested (specific measures will be discussed in Chapter IV).

This section deals with a procedure, causal modeling, which allows the empirical testing of the internal consis-

tency of this theory and its measurement as well as the degree of correspondence between the theory and observation. In short, a causal modeling approach allows the researchers to assess the structure's convergent, discriminant, and in this case, its nomological validity.

As Bagozzi (1980b) relates through the description provided by Goldberger (1973, p. 1), causal models

> have been referred to as simultaneous equation systems, linear causal schemes, path analysis, structural equation models, dependence analysis, text score theory, multitrait-multimethod matrices, and the cross-lagged panel correlation technique. Behind all this diversity of subject matter and terminology, several common features can be identified. One relates to the analysis of nonexperimental data; the absence of laboratory conditions demands that statistical procedures substitute for conventional experimental controls. A second one concerns hypothetical constructs; many of the models contain latent variables which, while not directly observed, have operational implications for relationships among observable variables. A third common element relates to systems: the models are typically built up of several or many equations which interact together.

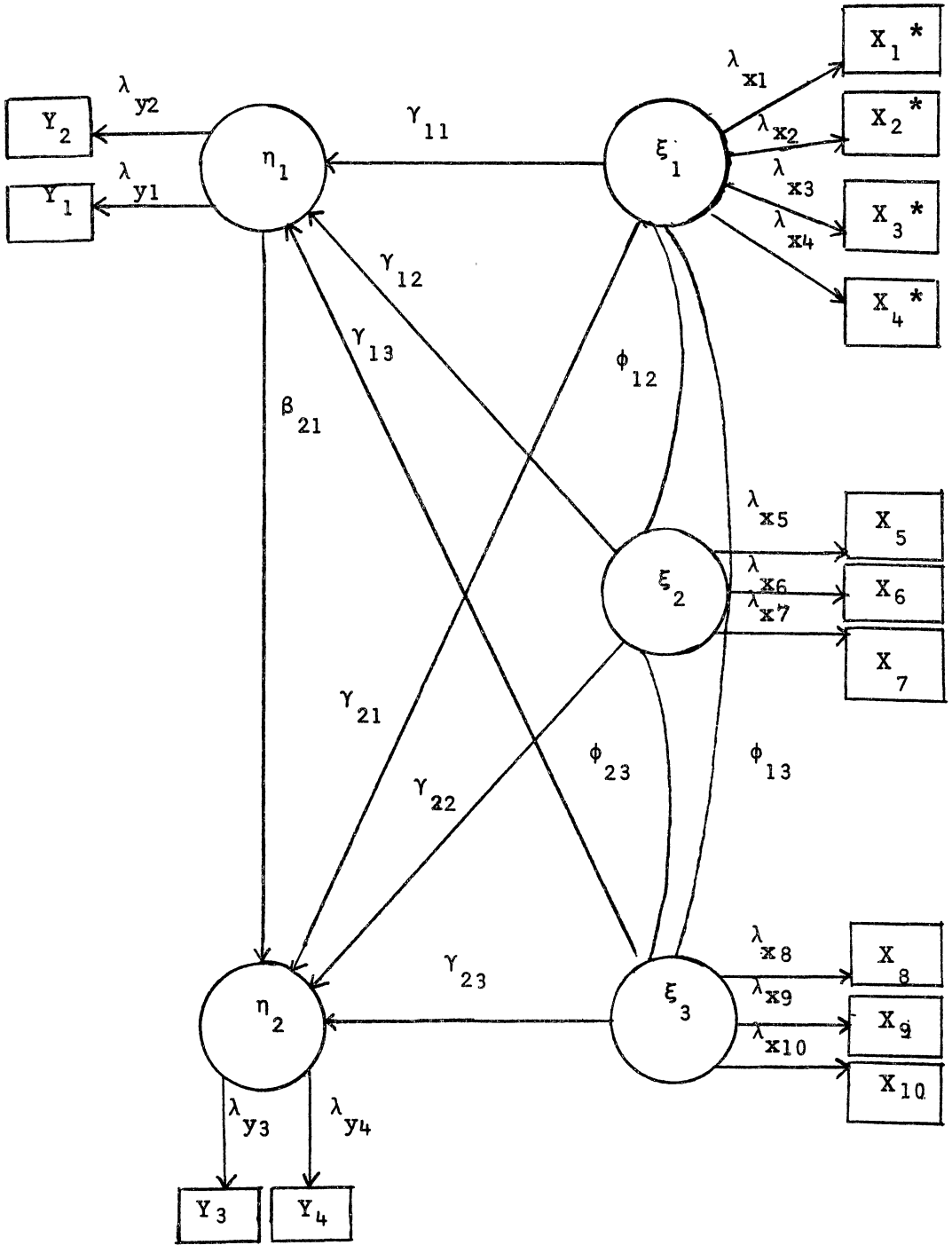
By employing a procedure suggested by Jöreskog (1971, 1974), the validity of such a system of equations referred to by Bagozzi (1980b), depicted in a causal model, can be analyzed in terms of the amount of variance each measure has due to trait, method, and error. The analysis requires the examination of the system's covariance structures.

While convergent validity (the extent to which multiple attempts to measure the same concept by different methods are in agreement) and discriminant validity (the extent to which a specific concept differs from other concepts when

measured by different methods) may be assessed via a Multitrait-Multimethod (MTMM) analysis (Campbell and Fiske 1959), the aproach has several limitations. Bagozzi (1980b) has argued that the procedure is inadequate because of its subjective interpretation of the required correlational comparisons. Other authors have also noted this limitation (Phillips 1981; Schmitt, Coyle, and Saari 1977). Furthermore, these authors have indicated that the Campbell and Fiske (1959) procedures do not provide criteria for determining the degree to which operationalizations measure concepts, the amount of variance due to trait versus method, or the adequacy of an entire MTMM matrix. For these reasons, a causal modeling procedure is adopted here.

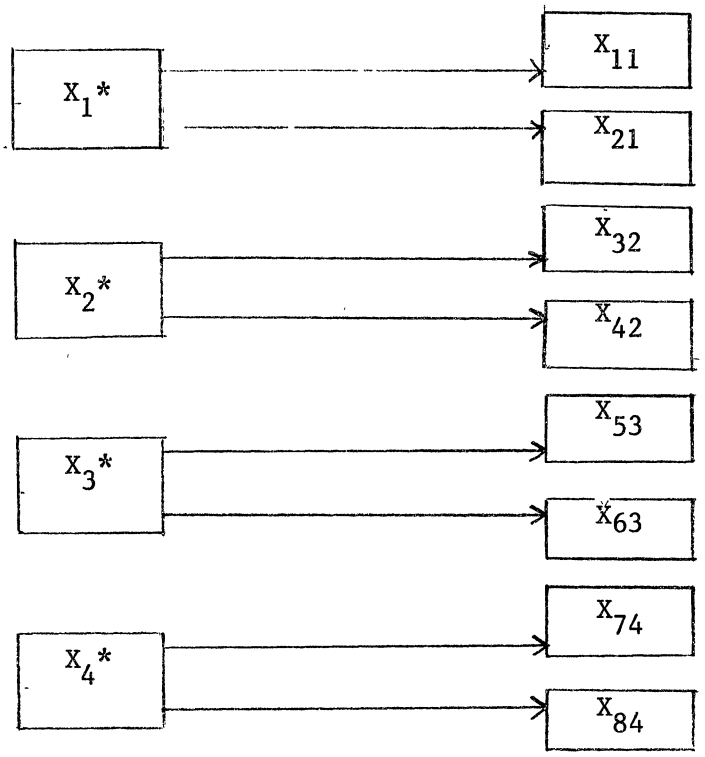
Causal Modeling Notation

Figure 3 presents the specific causal model to be examined in this exercise. The notation used to represent the various elements in Figure 3 were suggested by Bagozzi (1980b) and Jöreskog and Sörbom (1981). Theoretical constructs are represented as circles while squares indicate operationalizations. This model represents the full model (minus the error terms) with all measures shown that ultimately will be investigated. However, the actual analysis of this model will be accomplished in a series of stages approximating a hierarchical confirmatory factor analysis. These stages will be delineated after each construct and measure is identified.



(a) Causal Model

Figure 3. Causal and Behavioral Index Models of Salesperson Performance



(b) Behavioral Index Model

Figure 3. (Continued)

Figure 3 hypothesizes that salesperson performance (η_1) is comprised of a salesperson's behavior (ξ_1), results (ξ_2), and profitability (ξ_3). These effects are represented by γ_{11}, γ_{12}, and γ_{13}, respectively. Similarly, organizational performance (η_2) is shown to be affected directly by the global unidimensional representation of salesperson performance through (β_{21}) and/or by individual contributions (depicted by γ_{21}, γ_{22}, γ_{23}) of each dimension of that construct, ξ_1, ξ_2, and ξ_3. The behavioral dimension, ξ_1, is comprised of four sub-dimensions X_1^*, X_2^*, X_3^*, and X_4^*(the "*" indicates that the sub-dimensions are indexed values), which represent a salesperson's behavioral performance in the territory management, customer interaction, internal support, and technical support areas. A salesperson's performance in each of these behavioral performance areas will be gauged through the measurement of managerial and salesperson self-evaluations. Consequently, the behavioral sub-dimension measures (X*'s) represent an indexed value which will be developed from performance ratings supplied by managers and salespersons. These behavioral sub-dimension measures are represented by X_{11}, X_{21}, X_{32}, X_{42}, X_{53}, X_{63}, X_{74}, X_{84} in the Behavioral Index Model included with Figure 3.

The dimensions of salesperson performance are expected to be related and this relationship may be examined through the correlations ϕ_{12}, ϕ_{13}, and ϕ_{23}. Finally, each construct's measures (x's, and y's) effects may be scrutinized by examining the Λ (lambda) matrices. Notice that the

exogenous variables (those variables not specifically explained in the context of the model) are represented by ξ's while endogenous variables (those variables explained by other constructs in the model's context) are represented by η's.

There are several groups of measures which will be employed in this model. At various stages in this investigation, a salesperson single scaled measure (y_1) and a sales manager single scaled measure (y_2) will be examined. As mentioned previously, each individual behavioral dimension will be measured by both a group of salesperson self-evaluations and by group of sales manager evaluations. Both the results and profitability dimensions will be measured by salesperson self-evaluations, managerial evaluations, and an "objective" company record measure. Finally, two measures of organizational performance (y_3 , y_4) will be used.

Stages of Investigation

Three distinct stages of investigation will be attempted to provide support for the conceptualizations outlined in previous chapters. The overall model as depicted in Figure 3 cannot be empirically tested. No actual measures of the behavioral construct exist. A hierarchical analysis must be performed to develop indices for its use. Stage one will examine the extent to which the behavioral dimension may be represented, in a unidimensional nature by four separate contributing factors (territory management, customer inter-

action, internal support, and technical support). Stage two of this investigation will attempt to provide information concerning a single-scaled global rating of salesperson performance and its relationship to the individual dimensions of salesperson performance, and to the organizational performance construct. Stage three will examine the extent to which an unmeasured, or a generalized, salesperson performance construct comprised of the common portion of each of its dimensions is capable of explaining organizational performance. This will be compared to a direct representation of the organizational performance construct via each of the salesperson performance dimensions.

At each stage of this investigation, the fit of the models to the data as hypothesized will be examined. This will be assessed by checking the extent to which the actual correlation matrices of each dimension's measures may be represented by the model's estimated correlation matrices. The computer program LISREL provides an estimate for each parameter which will be used in the production of each estimated matrix. A corresponding χ^2 goodness of fit test will be supplied for each hypothesized model. The probability level associated with a given statistic gives the likelihood of attaining a larger value, given that the hypothesized model holds. The higher the probability, the better the fit. To support the convergent validity of any measurement relationship, the measurement coefficients should be statistically greater than zero. To support the discriminant

validity between constructs, the structural coefficients between constructs should be statistically less than one. Finally, the internal consistency (reliability) of all multi-item measures will be supplied. LISREL provides an estimate of the model's reliability in the form of a generalized reliability index.

The causal modeling approach suggested for use in this study will provide the rigorous empirical support for the conceptualization offered by several authors. The suggested implementation of this research approach and the specification of the measures used will be presented in Chapter IV.

CHAPTER IV

RESEARCH APPROACH

Chapter III provided a detailed discussion of a hypothesized model of salesperson performance. The conceptual framework had been suggested by a number of authors. Salesperson performance was thought to be a multi-dimensional construct comprised of a salesperson's behavioral, results, and profitability performance contributions. Furthermore, the importance of maintaining the distinction between the performance attributable to a salesperson from performance of the organization was suggested. Unfortunately, empirical support for most of these hypothesized relationships is either very weak or nonexistent.

The thrust of this investigation is to provide empirical information concerning the relationships between the salesperson performance construct, its dimensions and the measures used in its representation. The research technique selected for this analysis is causal modeling. Reasons for the selection of this approach, the specific causal models to be investigated, and the general procedure which will be followed in this causal analysis were offered in Chapter III and will not be reiterated here.

However, a complete description of the research approach requires elaboration concerning the research site, sampling approach, and measures employed. Chapter IV will present these research related details.

Research Site and Sampling Approach

The research site selected for this study is an industrial concern which markets a variety of computer related forms with operations covering the eastern half of the United States. The organization's four southern regions agreed to participate in this investigation. The investigative period ran from the start of the firm's fiscal year (August 1, 1983) through its third quarter (April 30, 1984). The four southern regions were broken into 24 sales districts (with 24 district sales managers) and approximately 112 sales territories (with one salesperson per territory).

The individual sales territories exhibited marked differences in sales, environmental, and organizational variables. For instance, the firm's territory market shares ranged from over 70 percent to less than one percent. Correspondingly, territory sales ranged from over one and a half million dollars to approximately 1,000 dollars. District sales managers had as few as two and as many as eight salespersons working under them. Throughout the territories, competitive intensity was perceived as high. In general, the research site provided an excellent opportunity for the investigation of a salesperson's performance.

Salespersons were compensated by salary plus commission. However, after the salesperson's third year with the organization, compensation increases could only be achieved through higher commissions. This method of reward allocation heavily emphasized sales production by the sales representative. On the average, 75 percent of a salesperson's compensation after his or her third year was commission related.

Due to the small number of potential participants in the study, all district sales managers and salespersons in the organization's four southern regions were sampled. Two separate mailings were required to complete the investigation. The first mailing requested that each salesperson and sales manager provide a single scaled global evaluation of his or her (or his or her salesperson's) overall performance. This first general performance appraisal request was made separately from the more specific salesperson performance evaluations in order to reduce potential bias which could have resulted if the specific evaluations were conducted first. The first mailing also asked each sales manager to provide sales related information produced by the organization's central office as well as a number of managerial estimates related to each salesperson's territory.

After all collectible information from the first mailing was secured, the second mailing was sent. The second information request asked each salesperson and sales manager to provide specific performance item evaluations concerning

various aspects of his or her (or his or her salesperson's) performance. Accompanying each instrument provided to the respondents in both mailings was a letter requesting the respondent's cooperation, a promise of anonymity, and a stamped envelope addressed to the researcher.

Measure Development

In order to provide a thorough investigation of the salesperson performance model presented in Figure 2, a variety of measures was developed. Information from company records, managers, and salespersons was collected. Appendix A provides a list of the measures that were collected and their originating source. Many of the original measures listed in Appendix A were used to produce the final set of measures which was examined in the causal analysis. More detailed information concerning these original measures and how they were used in this study is discussed below.

Subjective Salesperson Performance Measure Development

Subjective salesperson performance measures represent either a salesperson's or sales manager's perception of how that salesperson has performed over a stated time period. Two types of subjective evaluations were gathered. First, each salesperson and sales manager were asked to provide performance evaluations of that salesperson's overall performance. This general single scaled global rating was developed by Pym and Auld (1965) and has been used in the salesperson performance area by Pruden and Reese (1972), Busch and

Bush (1978), and Bush and Busch (1981-82). It simply asks the respondent to rate his or her (or his or her salesperson's) overall performance from outstanding to needs improvement. These instruments may be viewed in Appendix B.

The second type of subjective salesperson performance evaluation is much more specific in nature. This more specific performance instrument contains 58 salesperson performance items designed to gauge the four behavioral subdimensions (territory management behaviors, customer interaction behaviors, company support behaviors, and technical support behaviors), the results dimension, and the profitability dimension of salesperson performance. The design of this instrument was similar to that used by Behrman and Perreault (1982). A seven-point response scale ranging from "outstanding" to "needs improvement" accompanies each item.

The content of this instrument was established through an examination of previous work in the field, consultation with the participating organization, and through a series of pretests by knowledgeable others. The final instrument is thought to be a fair representation of a salesperson's performance for an individual at the research site under investigation. It is not intended to represent a generalizable salesperson performance scale. Development of such a scale would require participation by a number of different concerns. Instead, the primary purpose of this 58-item performance instrument is to provide a series of measures which represent a specific selling situation fairly and which would

provide a measurement base whereby a theoretical structure could be tested. The salesperson's and sales manager's specific salesperson performance evaluation instruments may be viewed in Appendix C. The dimensional breakdown of the items contained on the original 58-item instrument may be found on the last page in Appendix C.

A series of factor analyses was conducted for each set of dimensional measures for both salespersons and sales managers. The purpose of the factor analysis was to purify the set of measures so as to have only sets of measures that were highly related to a single factor or dimension.

The proposed theoretical structure suggested in Chapter III, and supported by a variety of other authors, will guide the general procedure employed at this stage. Again, it is important to remember that a specific conceptualization of salesperson performance is being tested.

This conceptualization assumes salesperson performance is represented by four unidimensional behavioral sub-dimensions, a unidimensional results dimension and a unidimensional profitability dimension. Given this framework, the factor analysis required that any dimensional measure to be retained for future analysis be highly related to the respective dimension. Consequently, any measure not loading highly (above .5) on the first or primary factor of each sub-dimension or dimension was removed from further analysis. In the event that a factor analysis of any sub-dimension or dimension produced more than one factor, the

rotated factor pattern was examined and those items which seemed to be the primary influencers for the multiple factors were deleted.

This procedure forced internal consistency of the final measures, since only those items loading high on one, and only one, factor were retained. This iterative procedure ultimately produced one factor for each group of sub-dimensional or dimensional measures which were highly related to the conceptual core of the abstraction. A Cronbach's alpha was not computed since the procedure employed to purify the measures by examining the alphas is very similar to the factor analysis procedure used here. The reliability of the dimensional measures to represent a specific series of relationships is provided, however. The causal analysis produces a reliability statistic for all the measures in a model. This statistic is represented by the coefficient of determination for the measurement model.

Since two distinct groups of raters were involved, the final group of evaluation items included for future analysis were required to load highly on single factors for both salespersons and sales managers. This requirement of inter-rater reliability provides further support for the measure's quality.

After the sub-dimensional and dimensional measures were purified, a single "performance score" was produced for each salesperson being evaluated. The causal analysis requires that each salesperson evaluation by either the salesperson

or sales manager, be reflected by a single score for each rater. Two basic options were available for the production of this single score. First, factor scores for the prime factor for each set of raters could be used. However, since the final factor analysis produced a single factor for each sub-dimension and dimension, the use of factor scores seemed overly complicated. Instead, a single index was formed by summing the responses made on the original items by each salesperson or sales manager retained from the previous analysis. This "performance score" represented the salesperson's perception or sales manager's perception of that salesperson's performance on that performance sub-dimension or dimension.

Ultimately, the 58-item performance instrument produced a set of six salesperson performance self-evaluations and six salesperson performance evaluations supplied by sales managers. These 12 sets of measures coupled with the sets of overall global salesperson performance ratings comprised the subjective measures used in the causal analysis.

Objective Performance Measure Development

Objective performance measures represent performance measures established primarily through the use of company records and managerial estimates. The managerial estimates, however, are not subjective evaluations of a salesperson's performance. Rather, the estimates related to the organizational and territorial variables that potentially influence expected salesperson territory sales. Both organizational

performance and a portion of the salesperson performance results and profitabilities dimensions are represented by objective measures. Organizational performance was measured by total sales in each salesperson's territory and by the firm's territory market share.

The development of the objective measures to represent the salesperson's performance results dimension and profitabilities dimension was more complex. Before a salesperson's sales level achieved may be fairly evaluated (an important results dimension measure), what can reasonably be expected of that salesperson must first be ascertained. This expected sales level, or quota, must take into account important personal, organizational, and environmental (POE) variables which may differ across territories. The POE variables which were examined in this study may be viewed in Appendix D. These variables have been found to be significantly related to territory sales by a number of researchers (see Ryans and Weinberg (1979) for a summary of the articles in this area).

The general procedure used to relate these POE variables to territory sales was suggested by Beswick and Cravens (1977), Cravens and Woodruff (1973), and Cravens, Woodruff and Stamper (1972). These authors developed a model-generated-quota through the use of a regression analysis which regressed a group of POE variables on territory sales. Due to the relationship of diminishing returns to scale which the POE variables exhibited in respect to the

dependent variable, the procedure employed linear regression with logarithmically transformed variables to estimate parameters. When the transformed model was converted to its original form (i.e., the antilogs taken of the logarithmic variables) the resulting function was non-linear.

However, Ryans and Weinberg (1979) suggested that the explanatory power of the Beswick and Craven's (1977) model may have been overstated because of the arithmetic relationship of two of their independent variables. Ryans and Weinberg (1979) argue that when last period's sales divided by last period's potential is multiplied by potential in the present time period, the resulting value appears to be sales lagged one period. Lagged sales as an independent variable used to predict present sales will inflate the R^2 produced. For this reason, the present study used an indexed value for all independent variables used in the regression analysis. This indexing was achieved by dividing all POE variables by the firm's average value for that variable. Indexing should effectively remove this troublesome arithmetic relationship discussed by Ryans and Weinberg (1979).

To produce a sales-to-quota salesperson performance results dimension measure, each salesperson's territory sales were divided by that territory's model-generated-quota. This ratio indicates whether a salesperson is producing sales better or worse than expected. A sales-to-quota ratio above one suggests the salesperson is producing higher results than expected, while a ratio below one

suggests the salesperson's sales results are not up to par.

At least two kinds of objective salesperson performance profitability measures could be developed. The first type of profitability measure that might be developed would employ the direct expense levels incurred by individual sales representatives. However, a measure which uses expense levels incurred will only be meaningful as a performance measure if expense levels are allowed to vary largely at the discretion of the individual. For instance, entertainment allowances that are set by the organization and generally consumed by all sales representatives potentially remove their usefulness as a performance indicator. The organization participating in this study establishes direct expense levels at the corporate level and there is very little variability of direct expenses across territories.

Consequently, another type of objective salesperson performance profitability measure was developed for use in this study. An important aspect of how profitable a sale is to the organization relates to the extent that a product's list price is discounted to secure a sale. This organization does allow their salespersons flexibility in discounting the price of their products. For this reason, the salesperson's objective performance measure for the profitability dimension in this investigation used total price concessions in its formulation. First, each salesperson's total price concessions were transformed from a dollar figure to a percentage of list price sales. This was done to neutralize

the effect differing sales levels would have on the interpretation of this variable. For instance, a performance measure on a profitability dimension should reflect the relative profitability of that sale, regardless of the magnitude of the sales generated. A percentage price concession measure reflects the relative profitability of a single unit sold.

This price concession percentage was then divided by the firm's average total price concession percentage to produce an indexed value. A salesperson with an indexed value greater than one suggests that the salesperson's total price concessions are above the firm's average price concessions. An indexed value less than one suggests that the salesperson's total price concessions are less than the firm's average.

These objective measures together with the subjective salesperson performance measures previously discussed provided the total group of measures which were evaluated in this study. A brief summary of how the measures were deployed in the examination of the salesperson performance model offered in Chapter III is provided below.

Measurement Summary of a Salesperson Performance Model

A total of 18 measures originating from three data sources (sales managers, salespersons, company records) were developed and analyzed in this performance inquiry. Each of the salesperson's behavioral sub-dimensions was represented

by a salesperson's and sales manager's subjective performance evaluation comprised of multiple items combined to form a composite index. The salesperson's results and profitabilities dimension were also partially represented by composite indices formed through salesperson's and sales manager's subjective performance evaluations. Additionally, both of these dimensions were tapped by objective measures. The salesperson performance results dimension was partially represented by a salesperson's sales-to-quota ratio. The profitability dimension's objective measure was a price concession ratio representing the extent to which a salesperson's price concessions are above or below the firm's average price concessions.

Organizational performance was measured by sales and market share variables. Finally, a single scaled global salesperson performance rating provided by salespersons and sales managers was examined as though they were representative of the salesperson performance construct.

The primary goal in this research was to analyze the relationships among measures and constructs within the model and not to predict raw values of the constructs. For this reason, at each stage of the causal investigation the input data were in the form of a correlation matrix of the variables being tested. The diversity of data sources and range of measures developed for this study should provide a thorough empirical investigation of the salesperson performance phenomenon.

CHAPTER V

RESEARCH RESULTS

The findings obtained from the research approach described in Chapters III and IV are presented in this chapter. Because of the diversity of measures employed and the wide range of vehicles used to provide data concerning a salesperson's performance, a brief discussion of how the sample varied across the various instruments is provided.

Several preliminary steps were necessary in the development of the measures used in the causal analysis. Specifically, the findings from a series of factor analyses performed on the multi-item subjective salesperson performance evaluation measures are reported. Additionally, procedures and associated statistics used and produced through the employment of a technique to establish a model-generated-quota suggested by Beswick and Cravens (1977) are discussed. Finally, the input data matrix of the full causal model is examined and the findings from an initial causal model run are scrutinized in order to identify potentially poor measures of this phenomenon.

Based largely on these initial examinations, a group of measures and representations that seem to adequately depict the various constructs of interest are examined thoroughly

through a series of causal model runs. This multi-stage investigation provided information concerning the relationships hypothesized to exist in Chapter III and key questions raised concerning the relationships between past measures and constructs in Chapters I and II.

The final section of this chapter is devoted to the interpretation and summarization of the findings produced in the causal model analysis. This interpretation process is limited in its ability to generalize to other work locations due to the sample employed. However, a thorough test of the theoretical foundations proposed in this framework is achieved.

Sample Description

Due to the interest in this project expressed by upper management and conveyed to regional and district sales managers, approximately 90 percent of the sales managers and salespersons provided at least part of the information requested of them. Out of 112 salespersons and 24 district sales managers, usable data were received from 92 sales representatives and 22 sales managers. Four distinct information requests were made of the participating organization in two separate mailings. As indicated in Chapter IV, the first mailing requested that each salesperson provide a global self-evaluation of his or her performance. Additionally, each district sales manager was asked to complete a similar global evaluation of each salesperson under his or her control as well as to provide several other pieces of

information about his or her salespersons by filling out a separate Preliminary Information Sheet and by providing three computer printouts. The second mailing requested that each salesperson respond to a 58-item performance evaluation instrument and that each district sales manager complete a similar 58-item evaluation questionnaire for each salesperson under his or her control.

Eighty-two salespersons completed the global performance measure while 90 returned the 58-item evaluation form. Approximately 22 sales managers returned information dealing with approximately 90 sales representatives throughout the four information requests. Ninety-two salespersons were rated by their managers on the global performance measure. Information pertaining to 96 salespersons was received via the Preliminary Information Sheet. Information related to approximately 90 salespersons was received in the Monthly Customer Sales Analysis and District Sales versus Quota computer printouts. Unfortunately, expense information contained on the Detailed Expense Report printout covered only 31 salespersons. Finally, 89 salespersons were evaluated by their sales managers on the 58-item performance evaluation instrument.

Sales manager experience varied from 3 to 18 years with a mean experience level of 7.8 years, while salesperson experience with the company varied from 9 months (the minimum number of months to be included in this research) to 20 years with a mean salesperson experience of 44 months. The span

of control exercised by the district sales managers varied between three and eight salespersons with a mean span of control of approximately five.

Finally, the number of evaluations of salespersons made by management on specific evaluation items ranged from a low of 31 (related to their expense usage) to a high of 92 (global performance measure) with the majority of items having N's ranging from the mid-70's to the mid-80's.

Causal Model Development

Three preliminary steps were taken in the development of the measures ultimately employed in the causal analysis. The first step was to examine the 58-item evaluation instrument through a series of factor analyses in order to provide measures for the individual constructs which were internally consistent and which seemed to represent the conceptual core of the unobservable. The second step focused on producing a model-generated-quota which was intended to account for territorial and organizational differences in each salesperson's territory. This quota was then used in conjunction with each salesperson's total sales to produce a ratio of actual results to expected results.

Finally, the correlation matrix of all measures used as input data for the causal analysis was examined. This examination together with a preliminary causal model run indicated potentially inadequate measures and representations which were deleted or changed before a more meaningful analysis was conducted.

Subjective Performance Measure Development

The 58-item salesperson performance evaluation instrument was developed with items which were thought to represent the salesperson performance four behavioral sub-dimensions, the results dimension, and the profitability dimension. As part of a purification process suggested by Churchill (1979), those subjective measures for each individual dimension were factor analyzed separately for salesperson self-evaluations and for managerial evaluations.

As suggested in Chapter IV, the ultimate purpose of this factor analysis was to produce a set of measures that were highly related to a single factor and which were capable of explaining a large portion of the variation of each salesperson performance dimension. The result was a factor analysis of each salesperson performance dimension which produced a single factor gauged by measures that are highly related to the conceptual core of that salesperson performance dimension. Ultimately, the final measures selected to represent each salesperson performance dimension were required to produce a single factor for both self evaluations and managerial evaluations. This requirement of inter-rater reliability provided further support of the dimensional measures' consistency.

A specific example of how the subjective measures for a specific salesperson performance sub-dimension or dimension were chosen may help clarify the factor analysis procedure employed. The Technical Support (TS) behavioral

sub-dimension was originally represented by nine specific items (item numbers 2, 7, 17, 19, 26, 35, 39, 45, and 56 found in Appendix C). These items were factor analyzed separately for salespersons and sales managers. Again, the aim of this factor analysis procedure was to represent a specific theoretical structure which assumes a unidimensional representation for each salesperson performance behavioral sub-dimension, results dimension and profitability dimension. Consequently, items not loading highly on one, and only one, factor were eliminated.

The findings of this iterative factor analysis procedure for the salesperson's TS sub-dimension may by viewed in Table IX. The first step in this procedure involved examining the salesperson's and sales manager's unrotated item loadings on the prime factor for the specific dimension (two factors were produced from each rater's evaluations). Notice that variables 7, 17, and 45 did not load above .5 on the unrotated factor loadings on the prime factor for both the salespersons' and sales managers' evaluations. Therefore, they were eliminated and the remaining six variables were factor analyzed again. The second factor analysis iteration produced two factors for the salesperson's evaluations and one factor for the sales manager's evaluations. The unrotated prime factor loadings for the salespersons and sales managers were relatively high at this stage. However, since the salesperson's evaluations still produced two factors, the salesperson's rotated factor pattern was examined

TABLE IX

FACTOR ANALYSIS PROCEDURE EXAMPLE: TECHNICAL SUPPORT BEHAVIORAL SUB-DIMENSION

Variable Unrotated Number	1st Iteration Unrotated Prime Factor Loadings SP	1st Iteration Unrotated Prime Factor Loadings SM	2nd Iteration Unrotated Prime Factor Loadings SP	2nd Iteration Unrotated Prime Factor Loadings SM
2	.60	.71	.62	.72
7	.47	.67		
17	.39	.74		
19	.71	.79	.68	.79
26	.52	.84	.53	.84
35	.59	.85	.59	.88
39	.65	.84	.70	.86
45	.56	.44		
56	.71	.83	.75	.88

Variable Number	2nd Iteration (Continued) Rotated Factor Loadings (SP) Factor 1	Factor 2	3rd Iteration Factor Loadings SP	SM
2	.03	.87		
19	.46	.49	.63	.83
26	.30	.46		
35	.02	.83		
39	.91	.05	.90	.91
56	.92	.11	.89	.90

where: SP = Salesperson

SM = Sales Manager

to identify those items that seemed to be accounting for the inclusion of the second factor.

The analysis of the salesperson's rotated factor loadings suggested that item 2 and item 35 seemed to be the primary influencers for the inclusion of the second factor. Additionally, item number 26 exhibited a much stronger relationship to the second factor than to the prime factor. From the examination of the salesperson's rotated factor pattern in this second iteration, items 2, 26, and 35 were deleted. Then the remaining three TS behavioral measures were factor analyzed again for both salespersons and sales managers. The third factor analysis iteration of the TS behavioral sub-dimension produced the final set of measures that would be used to represent this sub-dimension for both salespersons and sales managers. Items 19, 39, and 56 loaded highly on one, and only one, factor for both salespersons and sales managers. Because the items related highly to a single factor and were conceptually consistent, they were thought to properly represent the proposed theoretical structure which assumes each salesperson performance behavioral sub-dimension and dimension to be a single construct.

This general iterative procedure produced a set of measures that were highly related to one factor and were capable of explaining a large portion of that salesperson performance dimension's variation. The findings from the final factor analysis iterations for each salesperson performance dimension may be viewed in Table X. Notice that no single

TABLE X

FACTOR ANALYSIS RESULTS FROM THE SUBJECTIVE PERFORMANCE INSTRUMENT

Dimensional Measures	Factor Loadings
I. BEHAVIOR	
A. Territory Management (Salesperson)	
Item 20. Arranging sales call patterns to cover your sales territory efficiently	.66
23. Using established contacts to identify new customers	.73
36. Varying the frequency of sales calls to different accounts to improve the profitability of your selling effort	.77
53. Planning selling strategies which are effective in reducing competitor's influence	.73
Percent Variation Explained = .53	
Territory Management (Sales Manager)	
Item 20. Arranging sales call patterns to cover his/her sales territory efficiently	.77
23. Using established contacts to identify new customers	.69
36. Varying the frequency of sales calls to different accounts to improve the profitability of his/her selling effort	.79
53. Planning selling strategies which are effective in reducing competitor's influence	.71
Percent Variation Explained = .55	

TABLE X. (Continued)

Dimensional Measures	Factor Loadings
B. Customer Interaction (Salesperson)	
Item 8. Generating customer satisfaction	.84
14. Listening attentively to the real concerns of your customers	.71
16. Working out solutions to customers' questions or objections	.78
25. Communicating your sales presentation clearly and concisely	.71
33. Servicing your customers after the sale	.79
38. Willing to help resolve customers' complaints	.77
43. Establishing goodwill with your customers	.78
Percent Variation Explained = .60	
Customer Interaction (Sales Manager)	
Item 8. Generating customer satisfaction	.79
14. Listening attentively to the real concerns of the customers	.76
16. Working out solutions to customers' questions or objections	.76
25. Communicating his/her sales presentation clearly and concisely	.74
33. Servicing his/her customers after the sale	.72
38. Willing to help resolve customers' complaints	.72
43. Establishing goodwill with his/her customers	.74
Percent Variation Explained = .56	

TABLE X. (Continued)

Dimensional Measures	Factor Loadings
C. Internal (Company) Support (Salesperson)	
Item 5. Providing reports that are accurate	.84
9. Maintaining company specified records which are adequate	.57
29. Devoting proper time and attention to details of order entry	.79
31. Providing reports that are complete	.88
41. Submitting reports on time	.81
Percent Variation Explained = .62	
Internal (Company) Support (Sales Manager)	
Item 5. Providing reports that are accurate	.88
9. Maintaining company specified records which are adequate	.87
29. Devoting proper time and attention to details of order entry	.81
31. Providing reports that are complete	.90
41. Submitting reports on time	.75
Percent Variation Explained = .71	

TABLE X. (Continued)

Dimensional Measures	Factor Loadings
D. Technical Support (Salesperson)	
Item 19. Keeping abreast of your company's production and/or technological advancements	.63
39. Applying knowledge you have of your firm's products to help customers in their use of your products	.90
56. Applying knowledge you have of your firm's manufacturing procedures to help customers in their use of your products	.89
Percent Variation Explained = .67	
Technical Support (Sales Manager)	
Item 19. Keeping abreast of your company's production and/or technological advancements	.83
39. Applying knowledge he/she has of your firm's products to help customers in their use of your products	.91
56. Applying knowledge he/she has of your firm's manufacturing procedures to help customers in their use of your products	.90
Percent Variation Explained = .78	

TABLE X. (Continued)

Dimensional Measures	Factor Loadings
II. RESULTS (SALESPERSON)	
Item 1. Selling to major accounts in your territory	.79
6. Generating sales of "important" products to the firm	.67
21. Exceeding sales quotas for your sales territory	.71
34. Producing a high market share for your company in your sales territory	.80
47. Quickly generating sales of new company products	.68
49. Generating a high level of dollar sales	.86
Percent Variation Explained = .52	
RESULTS (SALES MANAGER)	
Item 1. Selling to major accounts in his/her territory	.79
6. Generating sales of "important" products to the firm	.86
21. Exceeding sales quotas for his/her sales territory	.88
34. Producing a high market share for your company in his/her sales territory	.91
47. Quickly generating sales of new company products	.69
49. Generating a high level of dollar sales	.92
Percent Variation Explained = .52	

TABLE X. (Continued)

Dimensional Measures	Factor Loadings
III. PROFITABILITY (SALESPERSON)	
Item 48. Operation within the budgets set by the company	.71
54. Controlling costs in other areas of the company (telephone expenses, supplies, etc.)	.76
57. Helping to control accounts receivable	.66
58. Using expense accounts with integrity	.75
Percent Variation Explained = .51	
PROFITABILITY (SALES MANAGER)	
Item 48. Operation within the budgets set by the company	.89
54. Controlling costs in other areas of the company (telephone expenses, supplies, etc.)	.76
57. Helping to control accounts receivable	.62
58. Using expense accounts with integrity	.66
Percent Variation Explained = .55	

item in the reduced set of measures has a loading of less than .57 with the majority of item loadings above .7. Addithe variation explained by each factor is above 50 percent. This suggests that the measures included were highly representative of the construct depicted.

Finally, a single measure for each dimension was produced by summing across the reduced set of original responses related to the evaluations remaining for each dimension. This produced six single salesperson self-evaluation performance scores and six single manager evaluation scores.

Objective Performance Measure Development

Two objective performance measures were developed for use in describing the results and profitability dimensions. The objective profitability measure, as suggested in Chapter IV, used price concession information for each individual salesperson for its construction. Since sales varied significantly across sales territories, a percent price concession score was developed. This entailed dividing each salesperson's total dollar price concessions by total list price sales. However, the total sales figures received from the organization were net sales totals (i.e., list price/sales price concessions). List price sales were developed by adding total dollar price concessions to the net sales figures. Additionally, the percent price concession value was indexed to produce a measure representing the extent to which a salesperson's price concessions were above or below the firm's averaging percent price concession. This indexing was

necessary to remove the arithmetic relationship that would exist in an examination between the total sales measure used in describing organizational performance and the profitability measure which used a non-indexed percent price concession value.

The objective salesperson performance results measure was developed by employing a series of stepwise regressions of 17 independent variables representing territorial, organizational, and personal influences on total sales achieved by individual salespersons. The general procedure followed that outlined by Beswick and Cravens (1977). The correlation matrix of the predictor variables may be viewed in Table XI. No POE variables which ultimately entered the stepwise regression functions appear to be highly correlated. Consequently, multi-collinearity was not thought to be a problem in the regression runs.

Four separate stepwise regressions were run to produce the ultimate response function used to set individual quotas. The purpose of the four regression runs was to produce a model which best fit the data and which was as parsimonious as possible. Additionally, the variables in the final equation representing territory sales should be represented in such a way as to remove the troublesome arithmetic relationship that previous territory sales predictor equations have exhibited to their dependent variables (see Ryans and Weinberg (1979) or refer back to the discussion of this consideration presented in Chapter IV).

TABLE XI

CORRELATION MATRIX FOR THE INDEPENDENT VARIABLES
USED IN THE RESPONSE FUNCTION

	COMPSTG	SMTIME	SMEXPER	SPDAYSW	SPEXPR	SPCALLS	SPNEWCAL	SIZETERR	INDSALES	ALLACCT	ACTACCT	SMTIMESP	SPANCTL	GTFIRMAV	INDSPM	WMKTSHR	ACCTPM
COMPSTG	1																
SMTIME	-.07	1															
SMEXPER	-.13	-.03	1														
SPDAYSW	.00	-.00	-.05*	1													
SPEXPR	-.13	-.01	.22	.24	1												
SPCALLS	.06	-.02*	-.09	-.11*	-.21*	1											
SPNEWCAL	.07	.28	.00	-.52	-.40	.08	1										
SIZETERR	-.08	-.20*	.12	.12*	-.02	.08	-.13	1									
INDSALES	.02	.22	-.25	-.34	-.16	.01	-.03	-.17	1*								
ALLACCT	-.09	-.05	-.21	.24*	-.15	.00	-.00*	-.06	.35	1							
ACTACCT	-.09	.13	.03	.34	-.15*	.12	-.24	.14	.09	.44	1						
SMTIMESP	.07	.05	-.18	-.24	-.34	.13	.19	-.03	.20	.05	.00	1					
SPANCTL	-.03	.10	.02	.05*	-.04*	.02*	.19*	-.04	-.00	-.02	-.19	-.18*	1				
GTFIRMAV	-.18	-.04*	.24	.39	.44	-.25	-.54	-.02	-.12*	-.05	.20*	-.43	.011	1			
INDSPM	.15	.36*	-.11	.05*	-.11*	.04	.07*	-.11	.38*	.18*	.25	-.09	.04	.08*	1		
WMKTSHR	-.14	-.28*	.14	.28	.62	-.16	-.34	.04	-.28	-.23*	-.21*	-.21	.19	.36	-.12*	1	
ACCTPM	.12	.30	-.08	.09	-.11	-.03	.16	-.11	.12	.25	.26	-.18	.07	.08	.92	-.12	1

*correlations significant at the .05 level.

TABLE XI. (Continued)

where:

COMPSTG	= Salesperson (SP) estimate of competitors strength in territory.	SPCALLS	= Avg. daily # of total calls made in period.	ACTACCT	= # of active accounts for period.
SMTIME	= % of sales manager's (SM) total time spent with ALL SP.	SPNEWCAL	= Avg. daily # of new customer calls in period.	SMTIMESP	= % of SM time spent with SP.
SMEXPER	= # of years SM has worked for company.	SIZETERR	= SM estimate of size of SP territory.	SPANCTL	= # of SP for which the SM is responsible.
SPDAYSW	= # of days SP worked in period.	INDSALES	= SM estimate of industry sales in territory for period.	GTFIRMAV	= # of accounts in territory that have sales above firm avg.
SPEXPR	= # of months SP has worked for company.	ALLACCT	= SM estimate of total # of potential and active accounts in territory.	INDSPM	= Industry sales per sq. mile for territory.
WMKTSHR	= Company market share in territory.	ACCTPM	= # of active accounts per sq. mile.		

Two of the four regressions employed the original POE measures, and then the indexed values of the original POE measures as independent variables separately in the prediction of territory sales. Additionally, two transformed regression runs were examined which transformed all variables into their natural logs. The first transformed regression run used the natural logs of the original POE measures as independent variables. The second transformed regression run used the natural logs of the indexed POE variables as independent measures. The dependent variable (territory sales) in both transformed regression runs was also changed into its natural log.

The procedure involved examining the findings of each regression model and selecting the one that best fulfilled the purpose of this investigation. First, the full model of the original variables listed in Table XI was run in a stepwise regression routine. Seven variables entered the equation at a .15 significance level (SPEXPR, SPNEWCAL, INDSALES, ALLACCT, ACTACCT, GTFIRMAV, WMKTSHR; the definition of these variables may be found in Table XI). This function produced an R^2 of .85, which was significant at the .0001 level. Cases with missing values were deleted from this analysis. This produced an unacceptable N of only 50. To increase the total number of respondents included in this function, a second stepwise procedure was employed on the seven original variables comprising the first function. This increased the N to 64, decreased the number of

variables included in the function to four (INDSALES, ACTACCT, GTFIRMAV, WMKTSHR), and decreased the R^2 to .71. All these variables were significant at the .Ø5 level.

The second series of regressions examined the indexed values of the original variables (i.e., the original variables divided by the firm's average for each of these variables) and produced nearly identical findings in terms of the explanatory variables included and the R^2's produced.

However, considerable evidence exists that suggests the relationships are nonlinear and might be better represented by a concave function (Beswick and Cravens 1977; Ryans and Weinberg 1979). One way to estimate the parameters of this type of function is to use linear regression on the logarithmically transformed variables. The stepwise regression run on the logarithmically transformed original variable full model included six variables (SPEXPR, SPNWCAL, INDSALES, ALLACCT, GTFIRMAV, WMKTSHR), and produced an R^2 of .96. Again, to increase the N to an acceptable level, a second stepwise regression run was made using these six variables and produced a similar function (all six entering at a .15 significance level) and a R^2 of .96.

The log of the indexed POE values produced a slightly different function. The stepwise regression of the full model using the log-linear indexed POE variables included five variables (SPEXPR, INDSALES, ALLACCT, GTFIRMAV, WMKTSHR) and produced a R^2 of .95. The second stepwise regression of these five variables, employed to increase the

N, excluded the ALLACCT variable and produced a similar R^2.

The final function produced by the stepwise regression of the five logarithmic indexed variables was deemed to be the "best" model of this examination. It was the most parsimonious; the most conceptually appealing with a personal variable contribution in the form of the SPEXPR variable, territorial contributions in the INDSALES and GTFIRMAV variables, and an organizational contribution in the form of the WMKTSHR variable; it exhibited significant explanatory power; and its relationship to predicted sales may not be attributable to any arithmetic relationship.

The findings from the final four separate regression runs may be viewed in Table XII. Notice that the R^2's reported include a R^2 associated with a multiplicative power function. The response function selected as the "best" used the log of the predictor variables to predict the log of sales. However, the purpose of producing this function was to establish an equation that predicted total sales (not the log of total sales). Consequently, it was necessary to take the anti-logs of the logarithmic variables. This operation transformed the model into a multiplicative power function which employed the original indexed variables and which exhibited diminishing returns to scale.

The following equation was used to transform the logarithmic variables into their original form:

$$\text{PTOTSAL} = e^{12.72} * \text{ISPEXPR}^{.14} * \text{IINDSALES}^{.64} * \text{IGTFIRMAV}^{.14} * \text{IWMKTSHR}^{.64}$$

TABLE XII

REGRESSION ANALYSIS FINDINGS
(N = 64)

	Parameter Estimates for the Final Regression Models			
Original Variables	Original POE Variable Model	Indexed POE Variable Model	Logarithmic Variable Model	Logarithmic Indexed Variable Model
INTERCEPT	-32506.95	-32506.95	4.61	12.72
SPEXPR			.11	.14
SPNEWCAL			- .07	
INDSALES	.01	107276.89	.54	.64
ALLACCT			.09	
ACTACCT	-2048.37	-67878.06		
GTFIRMAV	19861.35	138060.21	.22	.14
WMKTSHR	1343540.80	102377.80	.63	.64
	R^2 = .71	R^2 = .71	R^2 = .96	R^2 = .96

R^2 Associated with the Multiplicative Power Function = .91

where:
- SPEXPR = # of months salesperson (SP) has worked for company.
- SPNEWCAL = Average daily # of new customer calls in period.
- INDSALES = Sales manager's (SM) estimate of industry sales in territory for period.
- ALLACCT = SM estimate of total # of potential and active accounts in territory.
- GTFIRMAV = # of accounts in territory that have sales above firm average.
- WMKTSHR = Company market share in territory.

where

e = natural log;

PTOTSAL = predicted total sales;

ISPEXPR = indexed value for the salesperson's experience with the company;

IINDSALES = indexed value for the industry sales in the salesperson's territory;

IGTFIRMAV = indexed value for the number of accounts in the territory that have sales above the firm average; and

IWMKTSHR = indexed value for the company's market share in the territory.

The R^2 associated with the multiplicative power function represents the ability of this function to predict sales for the previous period. Its calculation was necessary because the R^2 reported in the logarithmetic function is not necessarily the same as the R^2 associated with the multiplicative power function due to the transformation process. Therefore, the R^2 for the multiplicative model was found by using the multiplicative power function to predict territory sales, correlating predicted with actual territory sales, and then by squaring this correlation. The R^2 for this power function of .91 suggests the function was able to explain a large portion of the variation in total sales.

Finally, total sales were divided by predicted total sales to produce a sales-to-quota ratio which was used in the final analysis. This ratio indicates whether a salesperson is producing sales better or worse than expected. A sales-to-quota ratio above one suggests the salesperson is

producing more than is expected while a ratio below one suggests the salesperson's sales results are not up to par.

Input Matrix Development for the Causal Model

The final preliminary step was to examine the input correlation matrix of the measures developed for use in the full causal model depicted in Figure 3, Chapter III. The analysis of the correlation matrix coupled with an initial causal model run provided information concerning the adequacy of the measures in their representation of the constructs to be examined in this investigation. Based on these analyses, measures and relationships that appeared inadequate were deleted or reformulated. The specific rationale for these changes are provided below.

Table XIII presents the correlation matrix of the measures used in this analysis. Three important findings emerged from this analysis. First, every significant correlation, except one, produced signs in the appropriate direction. The subjective composite measures of each sub-dimension and dimension and the two global evaluations should have been positively related to each other and negatively related to the four objective measures (STOQUOTA, IPCTPRCO, TOTSALES, WMKTSHR; the definition of these variables may be found in Table XIII). They were. The one exception was the correlation between STOQUOTA and CISM. The positive correlation between these variables does not make sense and calls for a closer examination of one or both of these measures.

TABLE XIII

CORRELATION MATRIX PROPOSED AS INPUT
DATA FOR CAUSAL ANALYSIS

	TMSP	TMSM	CISP	CISM	ISSP	ISSM	TSSP	TSSM	RSLTSP	RSLTSM	STOQUOTA	PFTSP	PFTSM	IPCTPRCO	TOTSALES	WMKTSHR	SPCI	SMCI
TMSP	1																	
TMSM	.09*	1																
CISP	.57	-.01*	1															
CISM	.15*	.64	.20*	1														
ISSP	.33	.04*	.49	.19*	1*													
ISSM	.12*	.44	-.08*	.53	.33*	1												
TSSP	.45	-.09*	.49	.09*	.25	.06*	1											
TSSM	.05*	.59*	.21*	.70*	.12*	.28	.12*	1										
RSLTSP	.66	.26*	.59	.28*	.36	.11*	.57	.20*	1*									
RSLTSM	.17	.72	.10	.58*	.05	.36	.04	-.59	.40	1								
STOQUOTA	-.06*	.23	.09*	.28	-.15*	.22	-.07*	.08	-.08*	.03	1							
PFTSP	.41	.00*	.64	.20*	.46*	.16*	.48	.02*	.46	.01*	.13	1						
PFTSM	-.09	.39	.05	.44	.25	.49	.09	.56	.21	.34	.22	.14	1					
IPCTPRCO	-.05	-.02*	.19	.16	-.02	-.03	-.02	.13	-.07*	.04*	.10*	-.19	-.09	1				
TOTSALES	-.18	-.29	-.06	-.16	-.16	-.09	-.04	-.23	-.36*	-.46*	.27	.02	-.07	.06	1*			
WMKTSHR	-.15*	-.22	-.02	-.09	-.08*	-.19	-.08	-.15	-.31*	-.29	.15	-.02	-.15	.01*	.71	1		
SPCI	.32	.12*	.22	.10*	.24	.17	.08	.15*	.40*	.22*	.12	-.02	.20*	-.29	-.19*	-.23*	1*	
SMCI	.13	.40	.04	.26	-.00	.16	.18	.35	.42	.58	-.03	.10	.26	-.04	-.34	-.36	.28	1

*correlations significant at the .05 level.

TABLE XIII. (Continued)

Where:

TMSP = Territory management composite measure for SP.

TMSM = Territory management composite measure for SM.

CISP = Customer interaction composite measure for SP.

CISM = Customer interaction composite measure for SM.

ISSP = Internal support composite measure for SP.

WMKTSHR = Company market share.

ISSM = Internal support composite measure for SM.

TSSP = Technical support composite measure for SP.

TSSM = Technical support composite measure for SM.

RSLTSP = Result composite measure for SP.

RSLTSM = Result composite measure for SM.

SPCI = Global performance measure for SP.

STOQUOTA = Sales to model generated quota.

PFTSP = Profitability composite measure for SP.

PFTSM = Profitability composite measure for SM.

IPCTPRCO = Indexed percent price concession.

TOTSALES = Total sales for SP.

SMCI = Global performance measure for SM.

The second important finding dealt with the pattern of relationships which developed between the individual salespersons' and sales managers' evaluations. With few exceptions, all salesperson measures, regardless of the salesperson performance dimension represented, were correlated with each other and not with the sales managers' evaluations on the same salesperson performance dimension. The same pattern held for sales managers. This suggests that sales managers and salespersons, although offering evaluations on almost identical items, may have been focusing on different aspects of the selling situation in the process of rating. Consequently, the hypothesized model which expected similar evaluations to be made by salespersons and sales managers on each salesperson performance dimension is inappropriate. A more correct representation of the data suggests a splitting of these measures and requires the formulation of two models which subsequently will be investigated separately. The underlying focus of the investigation may still be continued, but the basic model with its dimensions or constructs will be examined based on salesperson subjective evaluations and sales manager evaluations separately.

Finally, the correlation matrix suggests two other measures are inadequate in representing the evaluation process employed by this organization. With the exception of the troublesome correlation between STOQUOTA and CISM, no other significant relationships emerged with respect to the STOQUOTA measure or with the IPCTPRCO variable and any other subjective dimensional measure. This suggests that the STOQUOTA and IPCTPRCO measures, although conceptually correct,

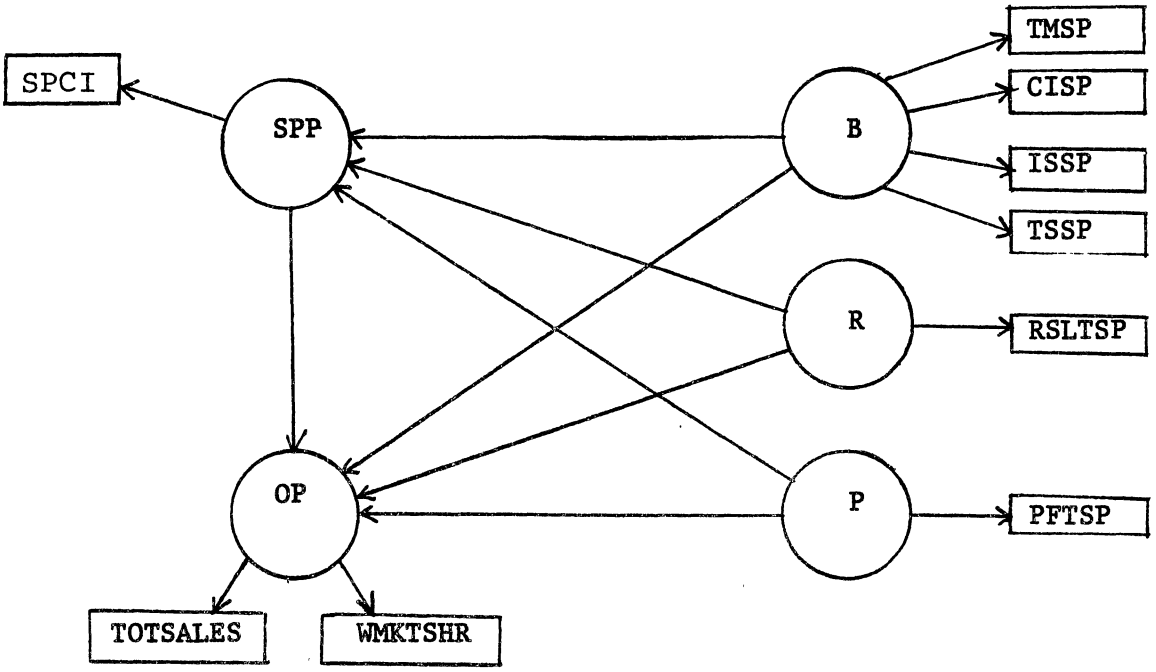
do not represent important considerations for either salespersons or sales managers in their subjective ratings.

Additional support for these measures' inadequacy was produced when a preliminary causal model run was made using LISREL VI for the full models (salespersons' and sales managers' subjective measures separate). The findings suggest a poor fit between the data and the model, and the large χ^2 values (49.79 SP and 73.54 SM) were due in large part to the STOQUOTA and IPCTPRCO measures. A check of the modification indices and the normalized residuals (which indicate where the model may be in error) showed that the greatest error terms were associated with these variables. For this reason, these variables were deleted from further examination.

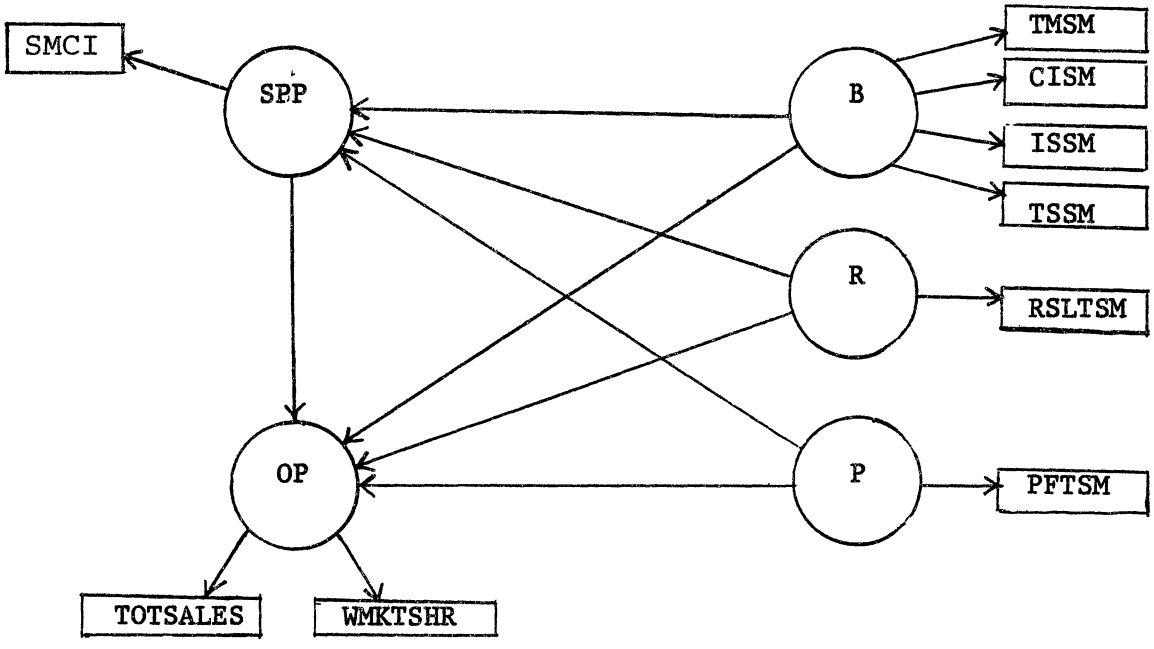
The full causal model now looks considerably different with respect to the measures used to represent its constructs. Potential reasons for the occurrences which led to the reformulization offered above will be explored in the interpretation section of the chapter. Respecification of the original model will be offered below.

Causal Model Analysis

The full model(s) employed in this analysis may be viewed in Figure 4. As suggested previously, the examination will proceed in stages with stage one examining the extent to which the behavioral dimension is unidimensionally measured by the four sub-dimensions or indices of behavior. Stage two will examine the relationship between the global evaluation, salesperson performance dimensions and organizational performance. Stage three will examine the relation-



Salesperson Performance Self-Evaluation Model



Sales Manager Evaluation Model

Figure 4. Full Causal Model(s) to be Investigated

Where:

SPP = Salesperson performance

OP = Organizational performance

B = Salesperson behavioral performance dimension

R = Salesperson results performance dimension

P = Salesperson profitability performance dimension

SPCI, SMCI = Salesperson and sales manager global single scaled measure of salesperson performance

TOTSALES = Salesperson total territory sales

WMKTSHR = Firm territory market share

TMSP, TMSM = Salesperson and sales manager territory management measure of salesperson performance

CISP, CISM = Salesperson and sales manager customer interaction measure of salesperson performance

ISSP, ISSM = Salesperson and sales manager internal support measure of salesperson performance

TSSP, TSSM = Salesperson and sales manager technical support measure of salesperson performance

RSLTSP, RSLTSM = Salesperson and sales manager results measure of salesperson performance

PFTSP, PFTSM = Salesperson and sales manager profitability measure of salesperson performance

Figure 4. (Continued)

ship between an unmeasured salesperson performance construct and its dimensions. Additionally, the relationship between organizational performance, dimensions of salesperson performance, and a central or common portion of the unmeasured salesperson performance construct will be examined.

Several key statistics and parameters produced through the use of the LISREL VI computer program will be reported when appropriate throughout this analysis. The adequacy of each model may be checked through the examination of the measures of goodness of fit. Four statistics are produced with this analysis with each having a slightly different meaning. Jöreskog and Sörbom (1981) define the χ^2 measure to be a likelihood ratio test and it is developed by comparing the actual correlation matrix to the estimated correlation matrix produced by the Maximum Likelihood (ML) fitting function. The ML method employs an algorithm which attempts to produce a set of parameters that may be used in reproducing an estimated correlation matrix that is as close to the original data matrix as possible. The probability level of the χ^2 value is the probability of obtaining a χ^2 value larger than the value actually obtained given that the model is correct.

The use of the χ^2 statistic to infer the fit of a model to the data has at least two problems. First, the χ^2 value is dependent upon the sample size employed, and its value must be interpreted in light of the sample size used. Large N's are more likely to produce large χ^2's which would

infer rejection of the model being tested (Jöreskog and Sörbom 1981). Secondly, high correlation among the measures being examined in a causal analysis will enhance the chance of the model being rejected at a given alpha risk (Fornell and Larker 1981).

For these reasons, the χ^2 statistic, in most cases, should not be interpreted in this context as a valid test statistic capable of testing the composite hypothesis that the model is true in the total population. Rather, the χ^2 value should be regarded as an indicator of the "goodness" or "badness" of fit of the models in the sense that large χ^2 values correspond to a bad fit and small χ^2 values to a good fit. The comparison point for whether a χ^2 value is large or small is based on the degrees of freedom for the particular model. The degrees of freedom may be found by using the following formula:

$$d.f. = 1/2\ k\ (k + 1) - t$$

where k is the number of observed variables, and t is the total number of independent parameters estimated.

Additionally the overall fit of the model may be analyzed by examining the goodness of fit index and the adjusted goodness of fit index. Both of these measures represent the relative amount of variance and covariance jointly accounted for by the model. The adjusted statistic, basically, adjusts the goodness of fit index by taking into account the degrees of freedom for the model. The closer to one these values are, the better the fit.

The final statistic associated with the overall fit of the model is the root mean square residual. This may be used to compare two different models' fit. The smaller the value (in comparison to another model) the better the model.

Information concerning the individual relationships may be assessed by examining the "t" values and the normalized residuals. The normalized residuals allow one to better identify poor relationships specified in the model. Any normalized residual greater than two may suggest a construct which is inappropriately specified or measured (Jöreskog and Sörbom 1981, p. I.42). The "t" values are interpreted in the normal fashion and suggest the significance of any relationship specified.

The strength of the structural relationships may be inferred by examining the standardized solution and the coefficient of determination for variables and structural equations. The standardized parameters are interpreted exactly as beta weights or factor loadings, depending on whether the structural or measurement portion of the model is examined. The coefficients of determination are measures of the strength of the relationships between constructs or constructs and measures. The coefficient of determination of the "measurement model" represents a generalized reliability coefficient which describes the adequacy of the measures to properly represent the constructs they are intended to gauge. The coefficients of determination for the structural model are interpreted as coefficients of determination in

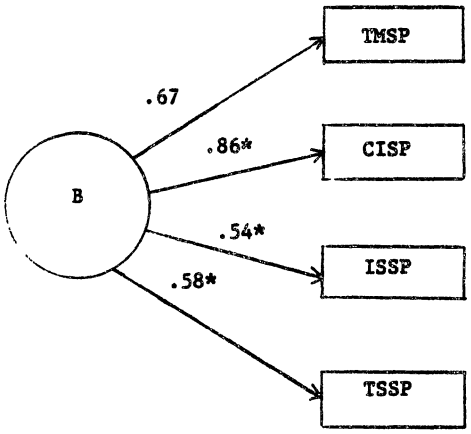
regression analysis. Where appropriate, both kinds of coefficients of determination will be reported.

Stage I: Behavioral Dimension Analysis

The primary focus of this stage of the investigation was to examine the extent to which the four sub-dimensions of behavior could be represented as a single construct. Figure 5 presents the causal models examined and their appropriate statistics. Generally speaking, the findings indicate that the measures do represent a significant portion of a common behavioral construct. The Customer Interaction measure appears to be the most highly related variable to the behavioral factor for both salespersons and sales managers (standardized parameters of .86 and .92, respectively). The Internal Support variable exhibits the weakest relationship (standardized parameters of .54 for both salespersons and sales managers). The t values suggest that each relationship is statistically significant (no t value is available for TMSP and TMSM, respectively, since they were fixed to one to perform the analysis).

Due to the marginally acceptable findings produced by both of these models, future analysis will represent the behavioral construct as a common unidimensional factor and as four separate dimensions, where appropriate. By representing the behavioral construct in both ways, additional information may be gained about that construct and its relationships to other dimensions.

1. Salesperson Self Evaluations



Coefficient of Determination = .822
(generalized reliability estimate)
X^2 = 1.59 (prob. level = .45)
d.f. = 2

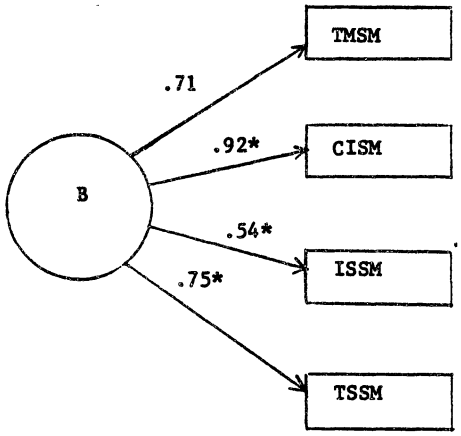
Goodness of
Fit Index = .98

Adjusted Goodness
of Fit Index = .941

Root Mean Square
Residual = .029

*"t" value above 2.0

2. Sales Manager Evaluations



Coefficient of Determination = .89
(generalized reliability estimate)
X^2 = 6.80 (prob. level = .03)
d.f. = 2

Goodness of
Fit Index = .95

Adjusted Goodness
of Fit Index = .75

Root Mean Square
Residual = .048

*"t" value above 2.0

Figure 5. Causal Model Analysis of the Behavioral Dimension

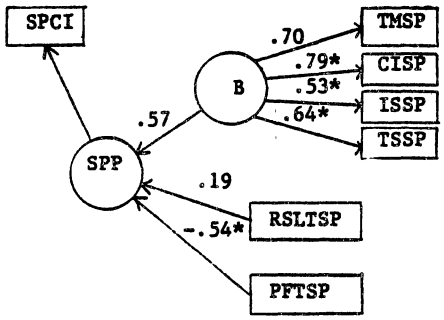
Stage II: Global Performance Measure Analysis

Analyses in stage two examined a series of relationships between a global single scaled measure of a salesperson's performance, the separate dimensions of salesperson performance, and the construct of organizational performance. Figure 6 presents one set of findings from this salesperson performance dimensional analysis which examined the various performance dimensional predictors on the global salesperson performance construct alone.

Several interesting findings emerged from these evaluations. First, and perhaps the most important finding, is that the model as specified does not fit the data very well. That is, the degree to which the model is specified by the three independent dimensions of salesperson performance is not consistent with the data. This is suggested by the relatively large χ^2's produced for both the salesperson self-evaluation and sales manager evaluation models, and the small coefficients of determination for both evaluation sets.

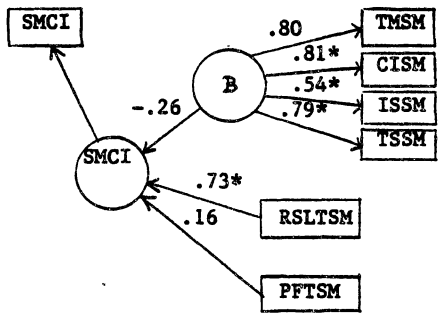
The sales managers appear to be basing their global evaluations of their salespersons almost entirely on the sales representatives' ability to produce sales. This is depicted in both the sales managers' structural model (model 2) as well as the straight regression model (model 4). In both cases the structural parameter or beta weight for the

1. Salesperson Self Evaluations



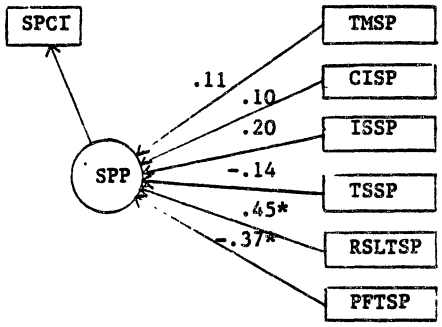
Coefficient of Determination for the structural equations = .27
X^2 = 16.83 (prob. level = .113)
d.f. = 11
Goodness of Fit Index = .93
Adjusted Goodness of Fit Index = .83
Root Mean Square Residual = .05

2. Sales Manager Evaluations



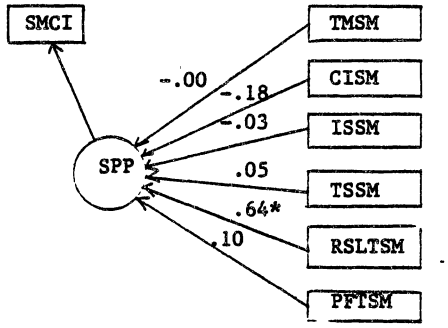
Coefficient of Determination for the structural equations = .37
X^2 = 35.26 (prob. level = .000)
d.f. = 11
Goodness of Fit Index = .90
Adjusted Goodness of Fit Index = .74
Root Mean Square Residual = .06

3.



Coefficient of Determination = .29
for the structural equations = .29
* t - value above 2.0

4.



Coefficient of Determination = .37
for the structural equations = .37
* t - value above 2.0

(Straight regression framework...no goodness of fit statistics computed)

Figure 6. Causal Analysis of the Relationship Between a Global Salesperson Performance Measure and the Salesperson Performance Dimensions

salesperson performance results dimension is the only statistically significant relationship which emerged.

The salesperson self-evaluation model produced a slightly more complex series of findings. The salespersons also appear to be focusing on their ability to generate sales when they rate themselves on a global scale. This is shown in model 3 by the largest significant beta weight belonging to the results measure. However, salespersons also seem to equate their global performance level with the profitability dimension. This is depicted in the structural model (model 1) and the regression model (model 3). The relationship is difficult to explain due to the direction of the sign produced. The analysis suggests that a salesperson views him/herself as having performed better, overall, as his or her performance along the profitability dimension decreases.

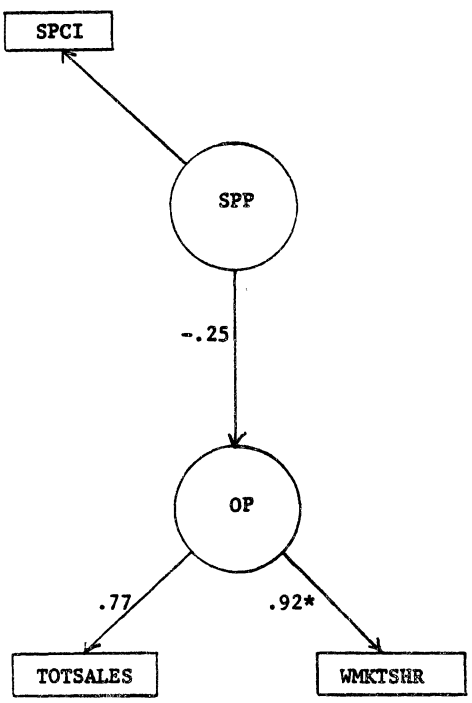
Perhaps this is due to a view held by salespersons that the attainment of sales is directly related to their expenditure levels in achieving acceptable sales results. Consequently, they may be willing to sacrifice their performance level on expense containment (which is the primary focus of the subjective composite measure of profitability) in order to increase their sales. The salesperson's willingness to trade-off expense containment for increased sales is particularly plausible if they perceive their rewards to be directly related to their sales achieved. As discussed in Chapter IV, this organization heavily emphasizes sales results in reward allocation. Consequently, salespersons with this

organization may equate their overall performance with sales results achieved which they feel is achievable only through a decreased performance level on the profitability dimension.

A separate analysis of how the global salesperson performance evaluation measures relate to the organizational performance construct provided little useful information. The results of this analysis may be seen in Figure 7. The salesperson self-evaluation model did not produce a statistically significant relationship between the two constructs, but did produce a structural coefficient which was directionally correct. This adds tentative support for the contention that the salespersons' global self-evaluation does focus on results since organizational performance is measured by total sales and market share (which are both sales related variables).

The sales manager evaluation model of the salesperson's global performance compared to the organizational performance construct was statistically significant (t value above 2.0) and produced a structural coefficient of -.42 (the direction of the sign is correct since all subjective salesperson performance measures are inversely related to objective measures). This moderately strong relationship suggests that the sales managers' global evaluations of the salesperson may be influenced by some factors outside the control of the salesperson since organizational performance is measured by total sales and market share variables. Both of these organ-

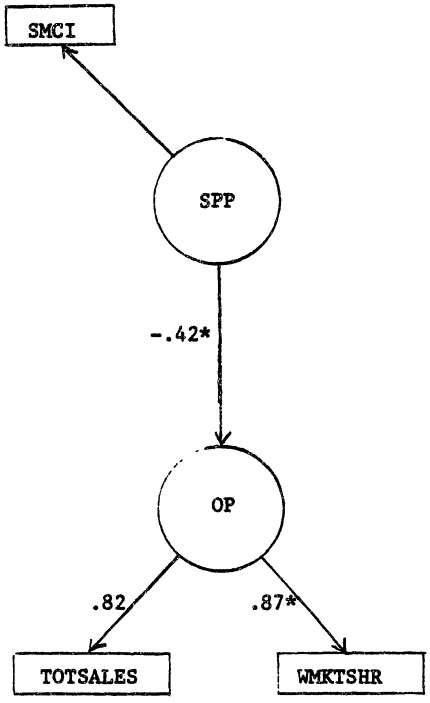
1. Salesperson Self Evaluations



Coefficient of Determination
for the y variables = .88
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .062
* t - value above 2.0

2. Sales Manager Evaluations



Coefficient of Determination
for the y variables = .84
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .18
* t - value above 2.0

(No usefull Goodness of Fit statistics were computed since all the degrees of freedom were used in the estimation of the model.)

Figure 7. Causal Analysis of the Relationship Between a Global Salesperson Performance Measure and Organizational Performance

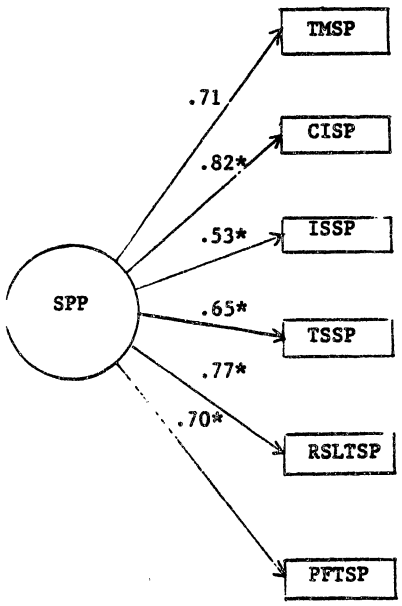
izational performance variables are represented by unadjusted sales, which will contain personal, organizational, and territorial influences.

Stage III: Salesperson Performance Analysis

The final stage in this investigation examined the relationship between the dimensions of salesperson performance as represented by a single unmeasured construct. Additionally, the relationship between this common dimension and organizational performance was investigated which led to a final series of causal models examining the relationship between each individual salesperson performance dimension and organizational performance. The findings from these investigations may be viewed in Figures 8 and 9.

Two explanatory notes are necessary before the findings offered in these models are discussed. First, the territory management variable in models 1 and 2 in Figures 8 and 9 and models 5 and 6 in Figure 9 was set to one initially so initial estimates for these models could be produced. Consequently, no t values were computed for this variable. The total sales parameter in Figure 9 was also set to one. Additionally, the behavioral dimension presented in models 1 and 2 in Figures 8 and 9 is represented by its four individual constructs. This depiction was necessary due to the fact that two unmeasured constructs (salesperson performance and the behavior dimension) may not be causally evaluated

1. Salesperson Self Evaluation



Coefficient of Determination = .83
(generalized reliability estimate)
χ^2 = 16.49 (prob. level = .057)
d.f. = 9

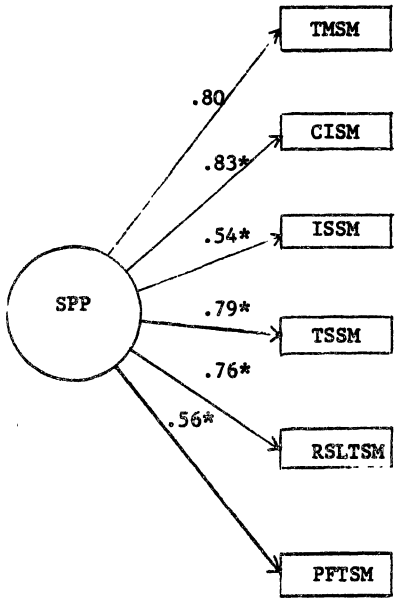
Goodness of
Fit Index = .92

Adjusted Goodness
of Fit Index = .81

Root Mean Square
Residual = .055

*"t" value above 2.0

2. Sales Manager Evaluation



Coefficient of Determination = .81
(generalized reliability estimate)
χ^2 = 37.0 (prob. level = .000)
d.f. = 9

Goodness of
Fit Index = .87

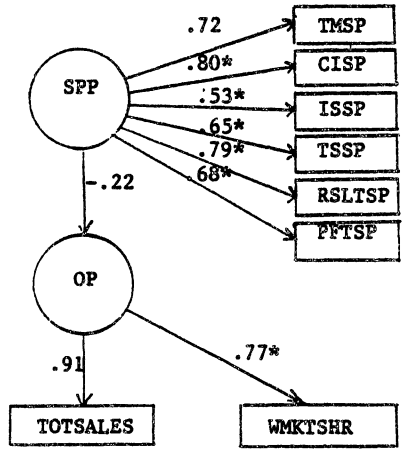
Adjusted Goodness
of Fit Index = .71

Root Mean Square
Residual = .072

*"t" value above 2.0

Figure 8. Salesperson Performance Dimensional Analysis Results

1. Salesperson Self Evaluation



Coefficient of Determination
for the x Variables = .83
(generalized reliability estimate)

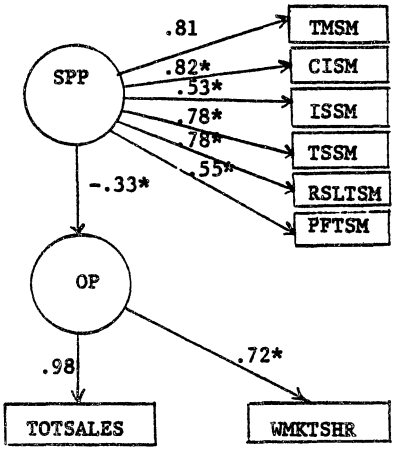
Coefficient of Determination
for the y Variables = .87
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .05

χ^2 = 33.19 (prob. level = .02)
d.f. = 19
Goodness of
Fit Index = .88
Adjusted Goodness
of Fit Index = .78
Root Mean Square
Residual = .07

*t - value above 2.0

2. Sales Manager Evaluation



Coefficient of Determination
for the x Variables = .81
(generalized reliability estimate)

Coefficient of Determination
for the y Variables = .96
(generalized reliability estimate)

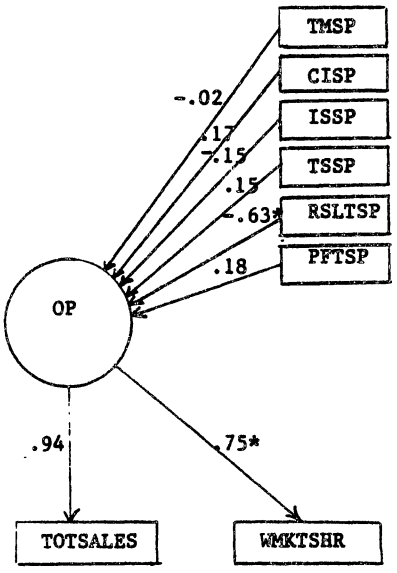
Coefficient of Determination
for the structural equations = .11

χ^2 = 53.74 (prob. level = .00)
d.f. = 19
Goodness of
Fit Index = .85
Adjusted Goodness
of Fit Index = .71
Root Mean Square
Residual = .07

*t - value above 2.0

Figure 9. Causal Analysis of the Relationship Between Salesperson Performance and Organizational Performance

3. Salesperson Self Evaluation



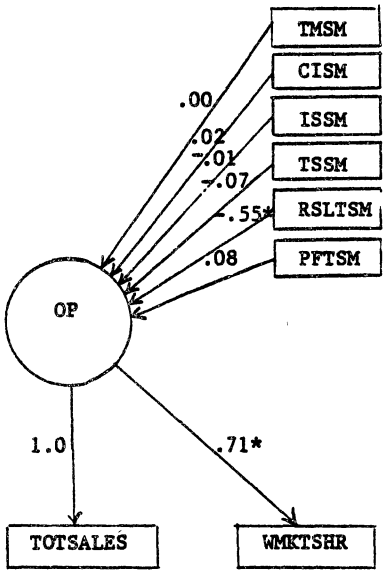
Coefficient of Determination
for the y Variables = .90
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .24

χ^2 = 1.64 (prob. level = .89)
d.f. = 5
Goodness of
Fit Index = .99
Adjusted Goodness
of Fit Index = .95
Root Mean Square
Residual = .01

*t - value above 2.0

4. Sales Manager Evaluation



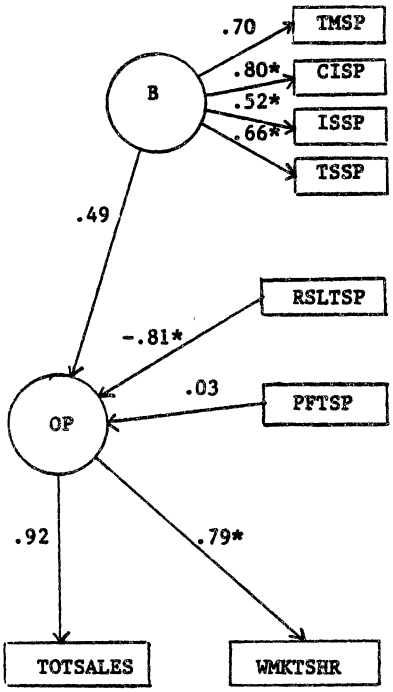
Coefficient of Determination
for the structural equations = .23

χ^2 = 5.19 (prob. level = .95)
d.f. = 12
Goodness of
Fit Index = .98
Adjusted Goodness
of Fit Index = .94
Root Mean Square
Residual = .03

*t - value above 2.0

Figure 9. (Continued)

5. Salesperson Self Evaluation



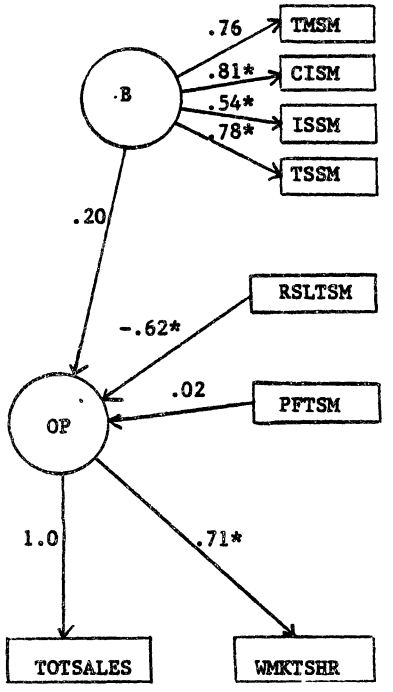
Coefficient of Determination
for the y Variables = .870
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .25

χ^2 = 16.31 (prob. level = .43)
d.f. = 16
Goodness of
Fit Index = .94
Adjusted Goodness
of Fit Index = .87
Root Mean Square
Residual = .05

*t - value above 2.0

6. Sales Manager Evaluation



Coefficient of Determination
for the structural equations = .23

χ^2 = 40.36 (prob. level = .00)
d.f. = 20
Goodness of
Fit Index = .90
Adjusted Goodness
of Fit Index = .81
Root Mean Square
Residual = .06

*t - value above 2.0

Figure 9. (Continued)

simultaneously with the LISREL VI program. Models 5 and 6 in Figure 9 present the behavioral construct in its unidimensional form.

Models depicted in Figure 8 show the common relationship between the individual dimensions of salesperson performance. Although all relationships were significant and a substantial portion of the variation between the measures is represented (coefficients or determination, generalized reliability estimates, for salespersons and sales managers were .84 and .81, respectively), the overall fit of the models is marginal at best. This suggests that the construct is not explaining much of the variance of the measure.

The weakest relationship found between the dimensions and this common factor in the salesperson self-evaluation model was the internal support sub-dimension (standardized parameter of .53). This suggests that the report generation area is not highly related to the other performance criteria hypothesized to represent the complete domain of the construct. The most highly related dimensions to this factor were the customer interaction behavioral sub-dimension and the salesperson performance results dimension (standardized parameters of .82 and .77, respectively).

The sales manager model produced similar findings with respect to the internal support sub-dimension. However, the sales managers' model also suggests a relatively weak association between the profitability dimension and the common factor of salesperson performance (standardized parameter of .56).

The assessment of the overall fit of these models indicates that a common unidimensional salesperson performance construct representing a common portion of the individual contributions from the sub-dimensions and dimensions of salesperson performance may be inappropriate. These findings add credibility to the argument advanced by Rush (1953) and Adkins (1979) that the elements of salesperson performance are unique and separate constructs. These authors' suggestions are further supported by the findings of this study which examined the relationship of this unidimensional construct to organizational performance.

Figure 9 presents the findings of the relationship of salesperson performance to organizational performance. A very important aspect of the proper representation of the salesperson performance construct deals with its relationship to organizational objectives and performance. Notice the inadequate fit of models 1 and 2 in Figure 9 that attempt to represent a causal relationship between a unidimensional measure of salesperson performance and organizational performance. Every statistic produced in that analysis suggests rejection of the formulation.

However, as the individual dimensions are causally related to organizational performance, the fit of the model is drastically improved. (Because Theta-Epsilon (TE) for sales managers was so close to zero in the initial LISREL run, it caused the TE matrix to become nonpositive definite. This required fixing TE 1,1 to zero to clear up the problem. For

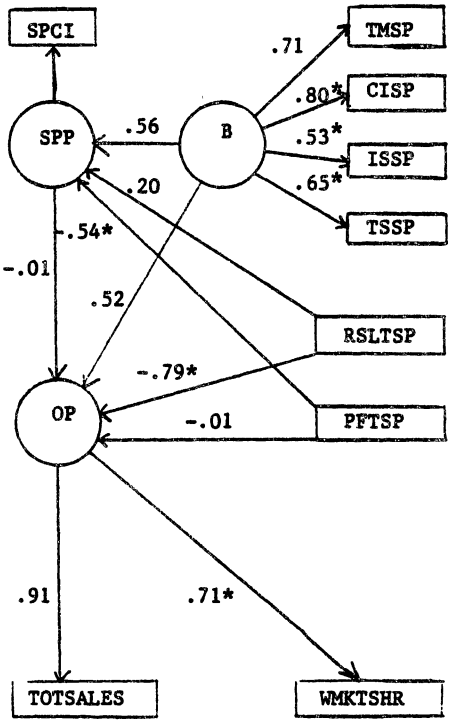
this reason, no generalized reliability estimate is produced for the sales manager model.) The goodness of fit indices and the relatively small χ^2 values associated with models 3, 4, 5, and 6 in Figure 9 suggest that a much improved, if not proper, specification of relationships has been achieved. These findings present a strong case for the representation of the salesperson performance phenomenon as a series of separate constructs.

The Causal Analysis Final Examination: The Full Model

The series of causal analyses examined in the three stages previously discussed have provided a thorough examination of the specific relationships suggested in Figure 4. However, the full model in Figure 4 has not been analyzed in its entirety. In order to provide a certain degree of closure to these causal examinations, the causal analysis of this full model is needed. Figure 10 presents the findings of the final examination.

Little, if any, additional information is provided from this final examination that has not been supplied by previous causal analyses offered in stages one through three. (The generalized reliability estimates offered in this analysis were developed from separate runs examining the behavioral and organizational performance constructs. They represent only rough estimates of the reliability coefficients for the multiple measured constructs.) The salesperson's and sales manager's model exhibited almost identical rela-

1. Salesperson Self Evaluation



Coefficient of Determination
for the x Variables = .73
(generalized reliability estimate)

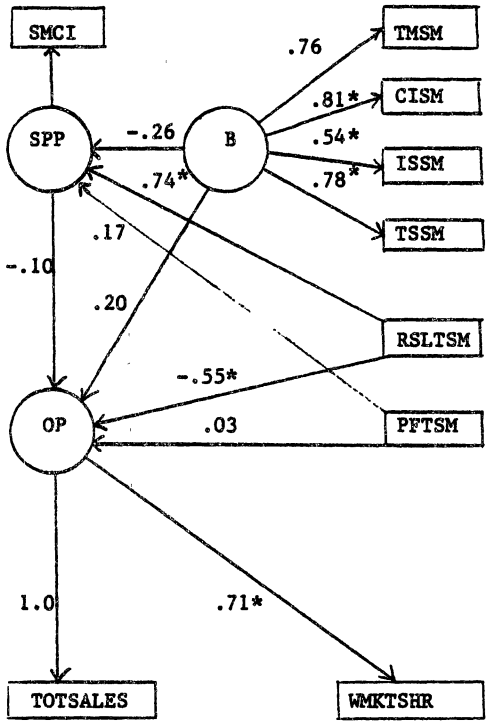
Coefficient of Determination
for the y Variables = .96
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .43

x^2 = 22.90 (prob. level = .47)
d.f. = 23
Goodness of
Fit Index = .93
Adjusted Goodness
of Fit Index = .87
Root Mean Square
Residual = .05

*t value above 2.0

2. Sales Manager Evaluation



Coefficient of Determination
for the x Variables = .86
(generalized reliability estimate)

Coefficient of Determination
for the y Variables = .99
(generalized reliability estimate)

Coefficient of Determination
for the structural equations = .46

x^2 = 45.57 (prob. level = .01)
d.f. = 20
Goodness of
Fit Index = .90
Adjusted Goodness
of Fit Index = .80
Root Mean Square
Residual = .06

*t value above 2.0

Figure 10. Causal Analysis of the Full Model

tionships as those shown in Figure 6, models 1 and 2, with respect to the examination of the salesperson's performance dimensions to a global measure of the salesperson's performance. The implications of these findings are discussed in the stage two analysis and will not be reiterated.

Similarly, the relationships exhibited between the salesperson performance dimensions and organizational performance were presented in Figure 9, models 5 and 6, and discussed in the stage three analysis. Additional elaboration is not needed at this point.

As expected, when the dimensions of salesperson performance were related to organizational performance simultaneously with the global representation, the global representation did not add significantly to the understanding of organizational performance. Perhaps the most surprising finding from this examination was the largely adequate fit of the data to the models. The relatively small χ^2's produced were perhaps due to the strong relationship of the results dimension to the organizational performance construct in both models and its relationship to the global measure in the sales manager's model.

Interpretation of the Results

Several areas of interest which emerged from the findings of this research require additional elaboration. First, the necessary reformulation of the original model in terms of the separation of salespersons' self-evaluations from sales managers' evaluations and the deletion of the objec-

tive measures of the salesperson's performance results and profitability dimensions was unexpected. In retrospect, however, both actions do have some support.

As reported in Chapter II, a study by Mowen, Brown, and Jackson (1980-81) suggests that a sales manager's evaluations of the salesperson may differ from that salesperson's self-evaluation due to differing factors on which the two participants focused. A later study by Mowen, Keith, Brown, and Jackson (1985) identified these influencing factors on which the sales managers focused. They found that sales managers underutilized information related to the salesperson's territory difficulty. Instead, salesperson effort seems to be an important factor in assigning ratings.

Additionally, they suggest that work by Jones and Nisbett (1971) indicates that people being evaluated are very likely to attribute their performance to environmental variables. Consequently, it is not entirely surprising that the subjective evaluations offered by salespersons and sales managers differ. They may indeed be focusing on different influencing factors.

The inadequacies of the objective measures developed for use in this study to represent properly this organization's performance evaluation mind set are understandable. This organization focuses almost entirely on sales produced. Even the quota setting procedures employed to set quotas for their salespersons do not appear to exhibit any significant territorial or organizational variable influences which

differentiate quota levels. For instance, a sales-to-quota index using the organization's present quotas produced a .95 correlation with total sales. Consequently, a measure which attempts to take into consideration outside sales influences is unlikely to be highly related to other performance criteria focused primarily on total sales. Also, there is no evidence that price concessions are stressed as an important evaluative area. Therefore, a measure which differentiates between good and poor performers in this area might not be expected to relate highly to other presently employed performance criteria.

Both of the objective measures are appropriate representations of the salesperson's performance results and profitability dimensions. Unfortunately, they appear to be more of a normative reflection of how certain performance criteria should be established rather than a consistent depiction of this organization's current practice. Particular care was also taken in the development of the subjective measures to represent salesperson performance through different raters. Again, the measurement approach and subsequent analysis failed to provide support that the raters were providing evaluations on the same dimension.

The required reformulization dictated by the deletion of the objective salesperson performance dimensional measures and the splitting of the rater's evaluations is explainable. Understanding why reformulization was necessary does not change the conclusions which must be drawn concern-

ing the construct validity of the measures for the overall model.

Construct validation criteria established by Bagozzi (1980b) and others to support that an abstraction is being measured were not achieved. However, the failure to produce this support may be attributable more to the rather narrow performance appraisal practices employed at the research site than to poor theoretical pinnings employed in the research. Still, the analysis conducted did serve to explain better some of the many relationships of a salesperson's performance which had previously gone unexplored.

For instance, an important finding of this research dealt with the uniscale global performance ratings. The findings indicated that this type of evaluation was not taking into consideration all relevant dimensions of salesperson performance. Most likely, a global rating is indicative of the performance of a salesperson on one key factor. In this research, that key factor was the salesperson performance results dimension. This suggests that researchers who employ this measure along with more specific measures of salesperson performance are not examining a variable representative of a full range of dimensions. Rather, the key aspects of this variable may have already been represented through the examination of other measures.

The findings of this research have also indicated salesperson performance should not be thought of as a unidimensional construct. Rather, the phenomenon of salesperson per-

formance should be thought of as a multidimensional construct with several independent contributing parts. This suggests that appropriate representations or measures of this factor should probably be some composite score of its individual parts.

These findings suggest several important implications for practitioners as well as sales researchers. They also point to areas of needed future research. Chapter VI will deal with these implications and future research directions.

CHAPTER VI

RESEARCH IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

Several of the findings presented in Chapter V represent new contributions to the understanding of salesperson performance in an industrial setting. Salesperson performance was found to be a complex multidimensional construct. The domain of salesperson performance includes behavioral, results, and profitability dimensions which were found to be relatively independent of each other. Also, salesperson performance was empirically shown to be different from organizational performance (i.e., total sales and market share).

Additionally, the subjective salesperson performance evaluation process employed by sales managers and salespersons was found to be complex. Sales managers and salespersons do not seem to focus solely on the specific performance item being evaluated. Rather, sales managers may be confusing a salesperson's effort or ability with performance while salespersons may be confusing territory difficulty with performance. The findings also point to a very real concern that researchers must address in this field. Organizational salesperson evaluation practices may not coincide with

normative theories developed by academicians. Organizations tend to emphasize one salesperson performance dimension in their salesperson evaluations (logically sales results).

Two findings of other researchers were also supported by this research. Territory sales was well represented by a statistical model employing territory POE variables as independent variables in a regression framework. Also, single scaled global salesperson performance evaluations were not found to represent the complete domain of a salesperson's performance.

This study also has some limitations. Only one firm was examined. Therefore, care must be taken in generalizing from this industrial setting to others. The general dimensions proposed in this research are expected to be generalizable, but specific items are likely to differ from setting to setting. Furthermore, a relatively short investigative period was examined (nine months). Measures employed in the causal analysis were developed from a small sample size. Additionally, some data were unavailable, or available in an unusable form (principally, product gross margin data and direct expense data).

While providing such information, these findings also raise a number of unanswered research questions. These questions identify areas of future research which are needed in this field. Chapter VI will present the implications which this study holds for practitioners and researchers, as well as some promising research directions.

Managerial Implications

The research findings of this study and their corresponding managerial implications may be viewed in Table XIV. A number of common practitioner implications seem to emerge from these findings. First, organizations may be well served by re-evaluating many of their current evaluation practices. If salespersons are required in the performance of their job to engage in activities and to achieve outcomes other than the production of immediate sales, organizational emphasis on one salesperson performance dimension across all specific performance items in their salesperson evaluations may be unfair.

Similarly, the use of a global rating (which was found to represent the results dimension in this study) to represent a salesperson's overall performance is inappropriate. It does not represent a generalized performance level; it cannot provide specific feedback to the salesperson that might lead to an enhancement of performance in specific areas; and it may be viewed as unfair by salespersons performing well on dimensions other than the one represented by the global rating.

Organizations employing total sales as a measure of salesperson performance also risk alienating the sales force. Total sales, a measure of organizational performance, may not properly reflect the performance of an individual. Reward decisions or disciplinary action based only on this variable may be flawed. Variables which influence

TABLE XIV

RESEARCH FINDINGS AND MANAGERIAL IMPLICATIONS

Research Finding	Managerial Implication
Territory sales may be well represented by a statistical model using POE variables.	1. The importance of using development procedures which take into consideration territorial differences. 2. The potential benefits of adopting a statistical quota setting model which could differentially identify and weight important territory influences on territory sales
Organizational tendency to emphasize one salesperson dimension (logically sales results) in their salesperson evaluations.	1. Some aspects of a salesperson's performance are not being evaluated. 2. Fairness of reward allocation may be questioned, as it may be based on an incomplete appraisal. 3. Implementation of more complete appraisal systems may require the training of performance evaluators.
Sales managers and salespersons do not seem to focus solely on the specific performance item being evaluated. (Sales managers may have tendencies to confuse effort or ability with performance.)	1. Evaluations might be made on factors not intended to be gauged. 2. Salesperson promotion and reward decisions might be made based on criteria other than those intended through the evaluation process. 3. Salesperson training and selection decisions may be hindered. 4. The need to train performance evaluators.

TABLE XIV. (Continued)

Research Finding	Managerial Implication
Single scaled global salesperson performance evaluations do not represent the full domain of a salesperson's performance.	1. The global rating is probably a reflection of a salesperson's performance on a single performance dimension. 2. The importance of identifying what is being represented by a global rating. 3. The importance of restricting the use of a global measure when the evaluation of the entire salesperson performance job is desired.
Salesperson's behavioral, results, and profitability performance are independent dimensions.	1. The importance of measuring each salesperson performance aspect with specific performance items. 2. The need to train performance evaluators. 3. The need to communicate specifically to the salesperson (if each of the dimensions are measured) the range of factors on which they will be evaluated. 4. The need to structure a reward system which will reflect a salesperson's performance on all of the important performance items to the firm. 5. The need to use a composite overall salesperson performance measure which combines specific aspects of the evaluation system into an overall score. 6. The potential to adapt specific performance items to unique characteristics

TABLE XIV. (Continued)

Research Finding	Mangerial Implication
	and objectives of the sales organization and to change items as organizational goals and objectives change.
Salesperson performance and organizational performance are distinct constructs.	1. The importance of measuring only what a salesperson does or achieves, separately from measuring what an organization achieves (such as total sales or market share). 2. The need to re-evaluate the use of total sales as a salesperson performance measure.
Organizational salesperson evaluation practices may not coincide with normative theories developed by academicians.	1. The possibility that current evaluation practices which have no theoretical ground might be inappropriate. 2. The possibility that esoteric theories serve primarily to complicate "real-world" concerns.

total sales across territories must be taken into account. This is often accomplished through the use of quotas. However, quotas established without the use of a systematic procedure may be unfair. For instance, the participating organization in this study established quotas, but they were primarily a reflection of past sales (firm sales-to-quota ratio correlated with total sales was .95). Therefore, the use of a model-generated-quota, such as the one employed in this study, should be seriously considered.

Each of these findings suggests the need for organizations to re-evaluate their salesperson evaluation procedures. This re-evaluation is certainly needed if present practices exhibit some of the shortcomings found in this organizational investigation. Consequences of continued use of inappropriate evaluation systems may be decreased sales force morale; unsound promotion, retention, or reward decisions; and increased sales force turnover.

The need to train performance evaluators was also an important managerial implication drawn from some of the findings in this research. Perhaps sales managers might be trained to focus better on the specific evaluation item under consideration. The influence of sales results performance, on salesperson behavioral or profitability performance measurement, confounds the evaluation process. Similarly, the measurement of salesperson performance determinants, such as effort or ability, should be separate from the measurement of salesperson performance. Failure to remove these influences

clouds the evaluation process. Training, selection, reward, and promotion decisions are enhanced as clarity is brought to the evaluation of performance.

The need to evaluate each salesperson performance dimension with specific behavioral, results, and profitability items is further supported by the finding that these dimensions are relatively independent. Specific item evaluations coupled with the measurement of performance determinants will allow the organization to train and select salespersons more effectively. Specific item evaluations will also allow the firm to better express organizational goals and objectives, and give the organization the opportunity to change or emphasize specific items as changes occur in organizational goals.

Furthermore, this finding suggests that generalized salesperson performance evaluations should be comprised of items from each dimension. Measurement of only one aspect of salesperson performance may not reflect a salesperson's performance on the other dimensions. Consequently, a system which focuses on one dimension may be viewed as unfair, and negative consequences may result.

To this point, the implications drawn from the research findings have assumed the proposed models and theories are correct and relevant to practitioners. However, the possibility that the detailed evaluation procedures suggested here serve primarily to complicate "real-world" concerns is feasible. In the vast majority of cases, a salesperson's

function is to produce sales. Sales must be produced this month and next year. Organizations are justified in their emphasis of the results dimension. Perhaps at an organizational level, the expense of documentation--in both monetary terms and in man-hours--to understand why a salesperson is not performing may not be cost justifiable. The correct organizational action may be the removal of the salesperson who is not meeting expected sales levels. Academicians must recognize that their normative theories may not translate well into dollars and cents.

Researcher Implications

The implications which this research holds for researchers in the sales management field are summarized in Table XV. Two general conclusions may be drawn from the findings of this study for researchers. First, the consequences of employing easily operationalized measures for the salesperson performance construct may prohibit understanding and proper representation of the phenomenon. Second, researchers must be cognizant of the tremendous complexity involved in the use of subjective ratings and the possibility that confounding variables will interact with specific item evaluations.

Global representations are not representative of a generalized salesperson performance construct. Without a thorough investigation, the dimension (or dimensions) these ratings reflect is undeterminable. Consequently, interpreta-

TABLE XV

RESEARCH FINDINGS AND RESEARCHERS' IMPLICATIONS

Research Finding	Researcher Implication
Territory sales may be well represented by a statistical model using POE variables.	1. Researchers have a tested tool for the development of objective salesperson performance results measures.
Organizational emphasis on one salesperson performance dimension (logically sales results) in their salesperson evaluations.	1. Recognition of this possible "halo effect" and its potential effects on the evaluation of other items. 2. The need to emphasize to respondents the importance of rating the specific performance item requested. 3. The difficulty of properly gauging the independent dimensions of salesperson performance.
Sales managers and salespersons do not seem to focus solely on the specific performance item being evaluated. (Sales managers may have tendencies to confuse effort or ability with performance. Salespersons may confuse territory difficulty with performance.)	1. Recognition of these possible confounding factors and their potential effect on the evaluation of rated items. 2. The need to emphasize to respondents the importance of rating the specific performance item requested. 3. The need to identify and remove these confounding factors. (For instance, an ANOCOVA procedure might be employed in an analysis of variance routine.) 4. The difficulty in properly gauging the independent dimensions of salesperson performance.

TABLE XV. (Continued)

Research Finding	Researcher Implication
Single scaled global salesperson performance evaluations do not represent the full domain of a salesperson's performance.	1. The importance of weighing the benefits of using an easily developed measure versus a series of measures which are more accurate but more difficult to develop. 2. Recognition of the potential confusion which might result if a global measure is used in conjunction with more specific measures. The global measure is probably a reflection of one of the more specific measures.
A salesperson's behavioral results and profitability performance are independent dimensions.	1. The importance of employing a salesperson performance measure which properly reflects the type of salesperson performance the researcher is examining. 2. "Generalized" salesperson performance is best represented by a composite measure comprised of performance items from each dimension. 3. The importance of reconceptualizing the independent nature of the salesperson performance construct.
Salesperson performance and organizational performance are distinct constructs.	1. The importance of measuring only what a salesperson does or achieves, separately from measuring what an organization achieves (such as total sales or market share).

TABLE XV. (Continued)

Research Finding	Researcher Implication
	2. The need to re-evaluate the use of total sales as a salesperson performance measure.
Organizational salesperson evaluation practices may not coincide with normative theories developed by academicians.	1. Organizations may not know how to evaluate salespersons properly. 2. Academicians may be emphasizing aspects of the selling situation which are unimportant, thus making a simple process complicated. 3. Researchers must be aware of this possible difference between theory and practice. They should not expect tremendous results when they are testing theories of how an organization should evaluate salespersons when an organization's current practices are not theory-based. 4. If organizations do not follow generalized theory, the chance of developing generalized measures that are applicable across different selling situations is remote.

tion based on findings using this type of variable may be misleading.

Additional confusion may result when this measure is used in conjunction with other salesperson performance measures. A likely consequence of such an action is a repetitive analysis of a specific performance item through a surrogate measure of that item in the form of a global evaluation. Given the potential inadequacies of such a measure, its use must be questioned.

Similarly, the use of an easily accessible total sales figure as a salesperson performance measure is suspect. The findings of this research suggest that salesperson performance is a separate construct from organizational performance. Consequently, studies which employ a total sales measure may not be representing the individual's performance at the individual level. Interpretations, again, may be misleading.

Even the use of a firm supplied quota, which is assumed to differientiate total sales based on territorial factors, may be inappropriate. The researcher may be well advised to develop a model-generated-quota to be assured that sales are truly adjusted for factors outside the control of the salesperson.

The apparent problems of interpretation and proper representation of the salesperson's performance construct through the use of these easily operationalized salesperson performance variables should dissuade their common use by

researchers. Additionally, single item measures will preclude validity investigations. A more appropriate representation of the construct might be achieved through the use of measures which specifically evaluate each dimension of salesperson performance. Support for this type of measurement procedure is advanced through the finding that salesperson behavioral, results, and profitability performance dimensions are independent.

The independence of the salesperson performance dimensions requires a divergent conceptualization of the construct from previous conceptions. Salesperson performance is not a construct that has many highly related components. Perhaps an illustration that best describes salesperson performance is that of the European continent. This common land mass is comprised of many independent nations with common borders. The nations act largely as independent agents with minimal overlap.

This analogy suggests that to represent the common output of the continent, the contributions from its individual parts must be summed. To properly represent generalized salesperson performance, a salesperson's behavioral, results, and profitability contributions must be measured and combined. The measurement of only one dimension of salesperson performance will not necessarily reflect that individual's performance in the other areas. The independence of the dimensions also suggests that the researcher must

take care in selecting the type of salesperson performance that best reflects the purpose of the investigation.

Unfortunately, the measurement of salesperson performance with specific dimensional items also has problems. Findings from this research suggest that subjective salesperson performance evaluations may be comprised not only of specific item evaluations but of several confounding variables. A salesperson's results (sales) performance may produce a halo effect affecting ratings on the other dimensions. Additionally, sales managers may confuse a salesperson's performance with his or her effort or ability. Salespersons may focus on territory difficulty when they rate themselves. This suggests that researchers must take special care in their use of subjective evaluations. Where possible these confounding influences should be identified and removed from the performance evaluation. Failure to remove these influences would further complicate and confuse the evaluation process.

Finally, these findings suggest that organizational salesperson evaluation practices may not coincide with normative evaluation theories developed by academicans. This may reflect negatively on the organization or on the proposed theory or both. However, in any case, the consequences in terms of theory testing and development, from an academic view point, are serious. Researchers may not be able to verify normative theory when the research site does not employ theory-based practices. If organizations, in

general, do not follow generalized theory, the chance of developing theory-based models and generalized measures that are applicable across different selling situations is remote.

Future Research Directions

Jacoby (1978) suggests that there is a place for replication in the consumer behavioral research field. Replication provides needed information in refining and developing a theoretical base. This call for research replication applies to most areas of marketing research. It certainly applies to research in the sales area, of which this research is a part. The conceptual framework proposed in this investigation needs additional corroboration. The sample used in this investigation was small. It was restricted to a specific company in a specific industry. Its conclusions, therefore, are tentative. Future salesperson performance investigations examining sales forces in different industries using the procedures and framework employed here are needed.

Additionally, several unanswered questions arise from this investigation that require examination. For instance, do sales managers focus on variables other than those being rated in specific salesperson performance item evaluations? If they do, are these unspecified confounding variables consistent across sales forces? Are they identifiable? Some support exists which suggests that these variables are identifiable (Mowen et al. 1985). However, Mowen's dis-

covery was produced in an experimental setting. May these same supportive results be found in a different research environment? This type of investigation would certainly have relevance to sales researchers and practitioners.

Many organizations may employ incomplete or poor salesperson performance measures. What specific effects do inadequate appraisal systems have on the salesperson and the sales organization? From a research perspective, what effects do organizational evaluation practices that deviate from normative theory have on the research findings?

This research also raises the question of whether a more thoughtful representation of a salesperson's performance may increase this research field's ability to understand the salesperson performance phenomenon. Past attempts at explaining a salesperson's performance have not been completely successful. Research which employs better salesperson performance measures is needed. This study has suggested a framework and procedure which might be used to produce a better salesperson performance measure. It now needs to be used in order to verify its value.

Conclusions

Salesperson performance evaluation is an important area of concern for sales practitioners and sales researchers. Attempts at refining measures of salesperson performance are few. This investigation has provided useful information concerning the relationships between salesperson performance

and organizational performance, the dimensions of salesperson performance, the measures of salesperson performance, and several data sources that might be used in a salesperson performance investigation. This research has offered a sound conceptual salesperson performance model and has suggested a methodological procedure for collecting, developing, and refining measures of a salesperson's performance. The study represents a thorough investigation of the salesperson performance phenomenon.

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APPENDIX A

ORIGINAL MEASURES FOR SALESPERSON PERFORMANCE APPRAISAL STUDY

TABLE XVI

ORIGINAL MEASURES DEVELOPED FOR THE SALESPERSON PERFORMANCE APPRAISAL STUDY

	Variable Name	Variable Description	Data Source
1)	SMCI	Single scaled global evaluation of a salesperson's (SP) performance	Sales Manager (SM)
2)	Fifty-eight SP performance	Multi-item evaluation instrument measuring a SP performance	SM estimate
3)	SMTIME	Percent of SM total time with his/her SP	SM estimate
4)	SMEXPER	SM experience measured by # of years SM has been with firm	SM estimate
5)	SPDAYSW	SP days worked in research period	SM estimate
6)	SPCALLS	SP total calls made per day (avg.)	SM estimate
7)	SPNEWCAL	SP new account calls made per day (avg.)	SM estimate
8)	SIZETERR	Size of territory (square miles)	SM estimate
9)	INDSALES	Industry sales in territory for period	SM estimate
10)	WALSALES	Firm's total sales in territory for research period	SM estimate
11)	ALLACCT	Total # of potential and active accounts in territory	SM estimate
12)	ACTACCT	Total # of active accounts in territory	SM estimate
13)	SMTIMESP	Percent of time SM spends with individual	SM estimate
14)	SPANCTL	# of SP under SM control	SM estimate
15)	COMPSTG	Competitor strength estimate in territory	SP estimate
16)	SPCI	Single scaled global self evaluation of SP performance	SP estimate
17)	Fifty-eight item SP performance self evaluation instrument	Multi-item self evaluation instrument measuring a SP performance	SP estimate
18)	SPEXPR	SP experience measured by # of months SP has been with firm	Objective Records

TABLE XVI. (Continued)

	Variable Name	Variable Description	Data Source
19)	Product Sales (booked)	SP booked sales for six product categories	Objective Records
20)	Firm set product quota	Quotas presently used by organization for six product categories set for SP	Objective Records
21)	Product Price Concessions	SP price concessions for six product categories	Objective Records
22)	Product Gross Margins	Five gross margin percentages for five product categories for district level	Objective Records
23)	TOTSALES	SP total sales for all products	Objective Records
24)	TOTQUOTA	Total sales quotas presently used by firm for SP	Objective Records
25)	TOTPRCON	Total price concessions incurred by SP	Objective Records
26)	OBJACCTT	Total # of active accounts in territory	Objective Records
27)	OBJTOTSL	Total sales shipped for each SP	Objective Records
28)	Direct expenses	Four direct expense category usage levels per SP	Objective Records
29)	GTFIRMAV	# of accounts with sales which are greater than the firm's average account sales in SP's territory	Objective Records

APPENDIX B

SALESPERSON PERFORMANCE EVALUATIONS

Salesperson Overall Performance Self-Evaluation

Salesperson's Name _____

Sales Manager's Name _____

Sales District _____

Instructions

Salesperson performance may be measured in a variety of ways. The number of new accounts sold, the quality of a sales presentation, the level of sales volume achieved, the profitability of sales, the continuing commitment to education, the general helpfulness exhibited, or the effort devoted to the job are all potentially relevant factors relating to the performance of a salesperson. Please read the statement below, rating your overall job performance compared to an average salesperson on a scale of "outstanding" to "needs improvement," for the period of August 1, 1983, through April 30, 1984.

For example, a checkmark placed on the scale in the position indicated below would suggest that the salesperson recognizes that he/she needs some improvement on his/her overall job performance compared to an average salesperson.

Outstanding ___ ___ ___ ___ ___ x ___ Needs Improvement

Performance Statement

Considering sales performance factors such as those mentioned above, please compare yourself to an average salesperson doing similar work and rate your overall job performance for the period of August 1, 1983, through April 30, 1984. Place your response on the scale provided below.

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement

Salesperson Overall Performance Evaluation

Sales Manager's Name _____

Salesperson's Name _____

Sales District _____

Instructions

Salesperson performance may be measured in a variety of ways. The number of new accounts sold, the quality of a sales presentation, the level of sales volume achieved, the profitability of sales, the continuing commitment to education, the general helpfulness exhibited, or the effort devoted to the job are all potentially relevant factors relating to the performance of a salesperson. Please read the statement below, rating the overall job performance of the salesperson whose name appears above compared to an average salesperson on a scale of "outstanding" to "needs improvement," for the period of August 1, 1983, through April 30, 1984.

For example, a checkmark placed on the scale in the position indicated below would suggest that you feel the salesperson needs some improvement on his/her overall job performance compared to an average salesperson.

Outstanding ___ ___ ___ ___ ___ x ___ Needs Improvement

Performance Statement

Considering sales performance factors such as those mentioned above, please rate the overall job performance of the salesperson whose name appears above compared to an average salesperson doing similar work for the period of August 1, 1983, through April 30, 1984. Place your response on the scale provided below.

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement

APPENDIX C

SALESPERSON PERFORMANCE QUESTIONNAIRES

Salesperson Performance Evaluation Questionnaire

Sales manager's name_____

Salesperson's name_____

Sales district_____

Listed below are a number of performance statements on which the performance of a salesperson might be gauged. Comparing the salesperson's performance whose name appears above to that of an average salesperson in similar selling situations, please evaluate his/her performance on each statement for the period of January 31, 1984 through April 30, 1984. Your assistance is greatly appreciated.

Example 1: "Submitting call reports on time."

Don't Know

Outstanding ___ X ___ ___ ___ ___ ___ Needs Improvement ____

This suggests that the salesmanager feels the salesperson does a very good job in submitting call reports in a timely fashion compared to an average salesperson.

Example 2: "Remembering to ask for order at the close of a sales presentation."

Don't Know

Outstanding ___ ___ ___ ___ ___ X ___ Needs Improvement ____

This suggests that the sales manager feels the salesperson could use some improvement in asking for orders when the sales presentation is over compared to an average salesperson.

PERFORMANCE STATEMENTS

1. Selling to major accounts in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

2. Studying the application of your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

3. Studying the different characteristics of competitors in your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

4. Identifying accounts that are important for the long-run growth of the firm.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

5. Providing reports that are accurate.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

6. Generating sales of "important" products to the firm.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

7. Applying knowledge you have of your firm's products to help your organization deal with product shortcomings.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

8. Generating customer satisfaction.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

9. Maintaining company specified records which are adequate.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

10. Developing good long-term relationships with your customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

11. Generating new account sales.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

12. Helping to minimize inventory costs.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

13. Identifying major competitors in your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

14. Listening attentively to the real concerns of your customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

15. Spending travel and lodging money carefully.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

16. Working out solutions to customers' questions or objections.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

17. Taking the initiative to improve personal performance.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

18. Carrying out company policies, procedures and programs.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

19. Keeping abreast of your company's production and/or technological advancements.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

20. Arranging sales call patterns to cover your sales territory efficiently.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

21. Exceeding sales quotas for your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

22. Maintaining the highest margins possible on the sales of company products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

23. Using established contacts to identify new customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

24. Trying to learn different sales techniques which may improve your sales presentation.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

25. Communicating your sales presentation clearly and concisely.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

26. Studying the manufacturing procedures for your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

27. Studying the different characteristics of the accounts in your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

28. Convincing customers that you understand their unique problems and concerns.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

29. Devoting proper time and attention to details of order entry.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

30. Identifying the difference in sales potential for accounts in your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

31. Providing reports that are complete.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

32. Using company material for more complete sales development (check list, manuals, bulletins, forms library, etc.).

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

33. Servicing your customers after the sale.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

34. Producing a high market share for your company in your sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvemet ____

35. Studying the specifications of your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

36. Varying the frequency of sales calls to different accounts to improve the profitability of your selling effort.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

37. Helping to minimize inventory levels.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

38. Willing to help resolve customers' complaints.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

39. Applying knowledge you have of your firm's products to help customers in their use of your products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

40. Entertaining only when it is clearly in the best interest of the company.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

41. Submitting reports on time.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

42. Providing quick and consistent follow up regarding the collection of customers' past due accounts.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

43. Establishing goodwill with your customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

44. Calling on new accounts.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

45. Reading books, subscribing to trade journals, or attending local independent seminars, meetings, training sessions, and/or demonstrations to gain information for improving your performance as a salesperson.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

46. Selling small orders at appropriate levels to cover cost of order processing, preparation, and delivery.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

47. Quickly generating sales of new company products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

48. Operating within the budgets set by the company.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

49. Generating a high level of dollar sales.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

50. Making effective use of audiovisual aids (layout, brochures, samples, and the like) to improve your sales presentation.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

51. Recommending on your own initiative how company operations and/or procedures might be improved.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

52. Providing assistance to other sales representatives that request help.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

53. Planning selling strategies which are effective in reducing competitors' influence.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

54. Controlling costs in other areas of the company (telephone expense, supplies, etc.).

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

55. Providing quick and consistent follow up regarding customers' complaints.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

56. Applying knowledge you have of your firm's manufacturing procedures to help customers in their use of your products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

57. Helping to control accounts receivable.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

58. Using expense accounts with integrity.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

Salesperson Performance Self Evaluation Questionnaire

Salesperson's name_____

Sales manager's name_____

Sales district_____

Listed below are a number of performance statements on which the performance of a salesperson might be gauged. Comparing your performance to that of an average salesperson in similar selling situations, please evaluate your performance on each statement for the period of January 31, 1984 through April 30, 1984. Your assistance is greatly appreciated.

Example 1: "Submitting call reports on time."

Don't Know

Outstanding ___ X ___ ___ ___ ___ ___ Needs Improvement ____

This suggests that the salesperson feels he/she does a very good job in submitting call reports in a timely fashion compared to an average salesperson.

Example 2: "Remembering to ask for order at the close of a sales presentation."

Don't Know

Outstanding ___ ___ ___ ___ ___ X ___ Needs Improvement ____

This suggests that the salesperson feels he/she could use some improvement in asking for orders when the sales presentation is over compared to an average salesperson.

PERFORMANCE STATEMENTS

1. Selling to major accounts in your territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

2. Studying the applications of your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

3. Studying the different characteristics of competitors in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

4. Identifying accounts that are important for the long-run growth of the firm.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvemnt ____

5. Providing reports that are accurate.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

6. Generating sales of "important" products to the firm.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

7. Applying knowledge he/she has of your firm's products to help your organization deal with product shortcomings.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

8. Generating customer satisfaction.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

9. Maintaining company specified records which are adequate.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

10. Developing good long-term relationships with his/her customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

11. Generating new account sales.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

12. Helping to minimize inventory costs.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

13. Identifying major competitors in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

14. Listening attentively to the real concerns of the customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

15. Spending travel and lodging money carefully.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

16. Working out solutions to customers' questions or objections.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

17. Taking the initiative to improve personal performance.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

18. Carrying out company policies, procedures and programs.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

19. Keeping abreast of your company's production and/or technological advancements.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

20. Arranging sales call patterns to cover his/her sales territory efficiently.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

21. Exceeding sales quotas for his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

22. Maintaining the highest margins possible on the sales of company products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

23. Using established contacts to identify new customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

24. Trying to learn different sales techniques which may improve his/her sales presentation.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

25. Communicating his/her sales presentation clearly and concisely.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

26. Studying the manufacturing procedures for your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

27. Studying the different characteristics of the accounts in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

28. Convincing customers that he/she understands their unique problems and concerns.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

29. Devoting proper time and attention to details of order entry.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

30. Identifying the difference in sales potential for accounts in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

31. Providing reports that are complete.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

32. Using company material for more complete sales development (check list, manuals, bulletins, forms library, etc.)

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

33. Servicing his/her customers after the sale.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

34. Producing a high market share for your company in his/her sales territory.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvemet ____

35. Studying the specifications of your company's products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

36. Varying the frequency of sales calls to different accounts to improve the profitability of his/her selling effort.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

37. Helping to minimize inventory levels.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

38. Willing to help resolve customers' complaints.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

39. Applying knowledge he/she has of your firm's products to help customers in their use of your products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

40. Entertaining only when it is clearly in the best interest of the company.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

41. Submitting reports on time.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

42. Providing quick and consistent follow up regarding the collection of customers' past due accounts.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

43. Establishing goodwill with his/her customers.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

44. Calling on new accounts.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

45. Reading books, subscribing to trade journals, or attending local independent seminars, meetings, training sessions, and/or demonstrations to gain information for improving his/her performance as a salesperson.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

46. Selling small orders at appropriate levels to cover cost of order processing, preparation, and delivery.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

47. Quickly generating sales of new company products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

48. Operating within the budgets set by the company.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

49. Generating a high level of dollar sales.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

50. Making effective use of audiovisual aids (layout, brochures, samples, and the like) to improve his/her sales presentation.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

51. Recommending on his/her own initiative how company operations and/or procedures might be improved.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

52. Providing assistance to other sales representatives that request help.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

53. Planning selling strategies which are effective in reducing competitors' influence.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

54. Controlling costs in other areas of the company (telephone expense, supplies, etc.).

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

55. Providing quick and consistent follow up regarding customers' complaints.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

56. Applying knowledge he/she has of your firm's manufacturing procedures to help customers in their use of your products.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

57. Helping to control accounts receivable.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

58. Using expense accounts with integrity.

Don't Know

Outstanding ___ ___ ___ ___ ___ ___ ___ Needs Improvement ____

TABLE XVII

ITEM DIMENSIONAL REPRESENTATION

Dimension	Question Number
Behavior	
1. Territory Management (TM)	3, 4, 13, 20, 23, 27, 30, 36, 44, 53
2. Customer Interaction (CI)	8, 10, 14, 16, 24, 25, 28, 33, 38, 43, 50, 55
3. Internal (Company) Support (IS)	5, 9, 18, 29, 31, 32, 41, 42, 51, 52
4. Technical Support (TS)	2, 7, 17, 19, 26, 35, 39, 45, 56
Results	1, 6, 11, 21, 34, 46, 47, 49
Profitability	12, 15, 22, 37, 40, 48, 54, 57, 58

APPENDIX D

POE VARIABLES

TABLE XVIII

POE VARIABLES

Variable Name	Variable Description
COMPSTG	SP Estimate of Competitor's Strength in Territory
SMTIME	Percentage of SM Total Time Spent With all SP
SPDAYSW	Percentage of Days SP Worked in Period
WMKTSHR	Company Market Share in Territory
SPCALLS	Average Daily Number of Total Calls SP Made in Period
SPNEWCAL	Average Daily Number of Customers Called on in Period
INDSALES	SM Estimate of Industry Sales in Territory for Period
ALLACCT	SM Estimate of Total Number of Potential and Active Accounts in Territory
ACCTRM	Number of Active Accounts per Square Mile
ACTACCT	Number of Active Accounts for Period
SMTIMESP	Percentage of SM Time Spent With SP
GTFIRMAV	Percentage of Accounts in Territory That Have Sales Above Firm Average
INDSPM	Industry Sales per Square Mile for Territory

VITA

Gregory M. Pickett

Candidate for the Degree of

Doctor of Philosophy

Thesis: TOWARDS A THEORY OF SALESPERSON PERFORMANCE: AN EMPIRICAL INVESTIGATION OF ITS DIMENSIONALITY AND MEASUREMENT

Major Field: Business Administration

Biographical:

Personal Data: Born in Fort Smith, Arkansas, March 18, 1957, the son of Alfred and Wanda Pickett.

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Professional Experience: Assistant Professor of Marketing at Northern Arizona University, Flagstaff, Arizona, January, 1984, to present; author of several refereed articles which have appeared in the Journal of Business Logistics, the AMA national proceedings, regional proceedings, and AMA sponsored consortiums; in 1983, was selected as a Doctoral Consortium Fellow and was the recipient of an Oklahoma State University competitive dissertation grant; presently serving as coordinator for Northern Arizona University College of Business Administration's research seminars.