THE SELLING SITUATION AS A MEDIATOR OF THE PERSONALITY/SALES PERFORMANCE RELATIONSHIP: AN EMPIRICAL INVESTIGATION

by

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ABSTRACT

This dissertation reports an investigation of the personality-sales performance relationship and the effect of long and short selling cycle situations as a moderator of this relationship. Research in the area of salesperson performance has failed to establish critical theoretical foundations for testing and predicting salesperson success. Many researchers have attempted to generalize results over all categories of salespeople without consideration of those tasks and traits crucial to success in specific categories of sales employment. Three theoretical frameworks are discussed (trait, situation, interaction) and the interactionist theoretical framework is proposed as a necessary step to study the personality-sales performance relationship. Hypotheses were generated that suggested a personality characteristic may be related to sales success in one selling situation but not another.

The research was conducted in a two week period by surveying salespeople from a large computer manufacturer. The three independent variables were: (1) planfulness; (2) te-

nacity; and (3) locus of control. Multiple dependent variables attempted to measure both objective and subjective measures of sales success. Confirmatory factor analysis was run on the sales-performance measures to check for the unidimensionality of the construct. It was found that the objective and subjective measures were not unidimensional. Based on the sales managers inexperience in rating salespeople, the objective measure of percent of quota was chosen as the best measure of sales success.

In general, the data analysis supported the hypothesized effects. While the results support the premise that the personality-sales performance relationship is moderated by the long and short selling cycle situations, the tenacity hypothesis showed weak effects.

Results of the dissertation are discussed with respect to the major finding and significance to personal selling research. The dissertation concludes with a discussion of the study limitations and directions for future research.

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Chapter I

INTRODUCTION

1.1 OVERVIEW

During the last thirty years, research on personal selling has attempted to predict successful salespeople using a wide assortment of personal characteristics as predictors. One of the more commonly used characteristics has been personality. Even though the study of personality has been approached from a number of different perspectives, relatively little is known about the relationship between personality and sales performance. The literature is fraught with inconsistent findings and few explanations have been given as to why these inconsistencies exist. The purpose of this chapter is to take a conceptual look at the theoretical frameworks available to study the nature of personality. The problem of interest, the personality-performance relationship, is then presented followed by a discussion of the significance of the research problem. Finally, a brief overview of the other chapters of this dissertation is given.

1.1.1 Theoretical Approaches to Studying Personality

A number of perspectives have been adopted by psychologists and marketers when studying personality. The three approaches that have dominated the literature are trait, situation, and interaction frameworks. Briefly, trait theorists believe in the importance of person characteristics (e.g., traits) in regulating behavior. Situationists, on the other hand, emphasize the importance of situational characteristics (e.g., stimuli). A third perspective developed in the early 1970's combining the trait and situationists approaches to studying behavior (e.g., trait x stimuli). Rather than asking whether behavior is caused by the personality of the person or by the situation in which the behavior occurs, the interaction approach investigates how people differ in their behavior in relation to specific situations. These three approaches will be reviewed in depth in Chapter II. First a brief overview of behavior and personality assessment is addressed as are the behavioral assumptions.

1.1.2 Behavioral Assumptions

The interpretation of human action is a formidable task, and any approach attempting to do so must begin with a foundation of assumptions. It is assumed that:

1. there is a cause (or causes) of behavior (Bunge, 1959; Von Wright, 1974)
2. such determinants of behavior originate either from forces or variables outside or inside the individual
3. forces outside the individual consist of either coercive or facilitative stimuli on the one hand or interactive social influence on the other (c.f., Tedeschi, Schlenker, and Bonoma, 1973)
4. forces inside the individual consist of a) phenomena of the human mind, i.e., beliefs, desires, purposes, intentions, rules, values, feelings, etc., and b) symbolic, cognitive, and affective processes such as decision making, motivation, language, interpretation, creative insight, etc. (Harre and Secord, 1973)
5. the causes of behavior can be conceptualized
6. at least some of the causes have direct empirical referents or may be inferred
7. behavior can be measured using personality inventories and scales (Lake et al., 1973)

Given the preceding assumptioins a general discussion will follow on the relationship between personality and behavior.

One of the most frequently stated objectives for the science of psychology is to enable psychologists to predict behavior (Guildord 1959). Guilford (1959, p. 33) contends

> If we are dealing with people and our aims are practical, knowing what we may expect of them often makes things easier for us and also for them. If our aim is to gain understanding, being able to predict behavior successfully is the best kind of assurance that our understanding is correct. The more complete our understanding of the principles of behavior and the more knowledgeable we have concerning individuals, the more fully can we predict their behavior.

In considering all the conditions that may play a role in a person's behavior, first it is essential to make a distinction between the conditions contributed by the situation in whch the person finds themself and those contributed by the person themself. The situation and the organism, then, are the two main sources of information from which prediction of behavior can be made (Guilford 1959).

It has been assumed that behavior can be measured using personality tests. According to Hogan (1982) the language of personality tests is trait terms. Trait terms serve a number of functions but in a measuring sense they indicate the likelihood or probability that a person will act in a certain way. To describe someone as talkative suggests that, relative to the population norm for verbal behavior, the person talks a great deal.

Another function of traits subsumes their use as predictive and interpretive tools, in this case traits are used to evaluate others. Words like honest, dependable, intelligent, and pleasant are clearly value laden. The primary

function of trait ascription is to evaluate other people (Hogan 1982).

A third category of traits refers to inferred psychological structures such as motives, needs, interests, and goals (c.f. Alston, 1973). These kinds of traits explicate behavior, i.e., they make it meaningful. Although traits may be classified in various ways, their function is usually the same. Trait terms are evaluative - they reflect social consensus regarding a person's behavior as it bears on the welfare of the group. Personality then is viewed as consistent behavior patterns. How an individual behaves in one context will be similar to how they behave in another context. Thus, how a person has behaved in the past ought to allow prediction on how they will act in the future. Personality theorists would contend that a high score on a planfulness scale would depict an orderly, detailed typed person. Putting this person in an unstructured, disorderly environment would probably cause this person to be uncomfortable.

Researchers ultimately have not been content to study a person's behavior alone. Applied settings have offered researchers the chance to study the personality-performance relationship. In this context performance does imply evaluation. For instance in jobs that require structure and organizations (i.e. secretarial work) a high score on planful-

ness would indicate who the better performers are and low scores the worse performers. A high priority would be given to this trait if it consistently proved to be necessary for success. It can be argued that in other jobs (i.e., artist) that planful people are not required to be high performers. This job may require spontaneous people who don't have the need to get bogged down in detail. Creativity and planfulness may have a negative relationship, and people who score low on the trait may be the best artists. Typically, research done in the personality-performance arena collected scores on a large number of trait dimensions and correlated them to performance measures without taking into consideration whether the trait was essential for success on the job.

Finally, the specific personality-sales performance relationship in this research study will be discussed in light of the interactionist's perspective. First, it should be noted that a majority of past personality-sales performance research has measured many personality predictors and correlated them to performance. This research study will attempt to explicate predictors which are essential to success in one selling situation but not in another. The selling situations chosen are long versus short selling cycles. More detail are given to these constructs in Chapter III. Briefly, arguments are made that selling cycles require different

types of sales people to be successful on the job. Specifically, a salesperson in a short selling cycle might require flair, charisma, and the ability in the short run to pick up on what is going to close. Because of the nature of the short selling cycle the ability to 'wing it' and 'roll with the punches' on the greater number of unsuccessful closes is needed.

On the other hand the salesperson in the long selling cycle must be able to take the longer view of the dyadic relationship and foresee every possible obstacle. This salesperson has the time to line up each obstacle and overcome the problem. If the interactionist perspective is correct in assuming the selling situation moderates the personality-sales performance relationship, then future research should change to reflect the interactionist theoretical framework.

In summary, many organizations have given their work forces personality inventories to profile the types of workers in the organizations. The next step in the process included attempts to determine the personality-performance relationship which rarely if ever included the selling situation as a contributor of behavior. More recent efforts by Weitz (1979) and Churchill, Ford, and Walker (1982) have called for the inclusion of the selling situation as a moderator of the personality-sales performance relationship. This research study makes such an effort.

1.2 THE PERSONALITY-PERFORMANCE PROBLEM

The research problem is to design and conduct research that investigates the effect of the selling situation (long and short selling cycles) on the personality-performance relationship.

Past personality-sales performance research has been concerned with identifying personality constructs which discriminate between successful and unsuccessful salespeople. The consensus is that little knowledge has been gained from this research (Weitz 1979; Churchill, Ford and Walker 1982). The shortcomings of this research stream seem to be centered on such issues as: (1) the quality of the field studies, (2) methodological inadequacy, and (3) the absence of conceptual implication. Hogan (1984) argues many personality-performance studies use concepts loosely, employ inadequate measures, and do not appropriately analyze the data. Consequently, it is not surprising that research which has attempted to relate personality to sales performance is inconsistent and inconclusive. Finally, Churchill, Ford, and Walker (1982) and Weitz (1979) contend that until research includes the situational determinants a salesperson encounters, little progress will be made in this research stream.

A review of past literature reveals earlier research was undertaken using a trait or person approach to personality

assessment. This study will include not only the person effects or situation effects of behavior, but the interaction of the two. More specifically, this study compares competing theoretical hypotheses.

Trait theorists believe that if a personality construct is important for success in a given sales type, then it will be important to the success of all sales types regardless of the situations in which the salespeople are selling. The situationists believe the environment is accountable for the behavior and is specific to a given selling situation. Interactionists believe the situation is a moderator of selling success and because of the different selling tasks that must be carried out by each salesperson in the specific selling cycle, differences in the personality characteristics of the salespeople that can complete them successfully will vary from sales job to sales job.

A test is developed to compare the results of the person-situation interaction against the measures of person and situation. The theoretical hypothesis to be tested is as follows:

> The interactionists approach to predicting the effect of personality on performance will be more accurate than the trait approach.

If the interactionists are correct, then the models developed for each selling cycle ought to do a better job of

predicting performance than the combined model for the entire sample. Operational hypotheses are developed in Chapter Three to test for the consistency of the competing theories. With this in mind, the primary emphasis is on developing hypotheses that relate personality constructs to specific selling situations.

1.3 IMPORTANCE OF THE PERSONALITY-PERFORMANCE RELATIONSHIP

1.3.1 Theoretical Importance

Past personality-performance research has done little to explicate the role of selling situations. Thus, it has never been determined what moderator effect the long versus short selling cycle situation has on this relationship. The theoretical importance of this research study is to assess a framework to study the person by situation interaction.

Many of the research instruments formally used in the personality-sales performance research has been criticized because they were designed to test for differences between "normal" and "abnormal" individuals, not for differences among the "normal" (e.g. MMPI). Two instruments are used in this study and their validity assessed for the short and long selling cycle situations. Hogan's Hopkins Personality Inventory (HPI) and the Rotter I-E Scale were developed specifically to be useful in assessing individuals for jobs re-

quiring interpersonal activities. As Hogan (1984) and Kassarjian (1971) point out, many personality studies were done using instruments designed to measure something other than the "normal" personality. Until instruments were developed to tap a range of normal personality behaviors, little progress could be made. To date, both scales have met with success in other settings. The HPI is used for the first time in a sales setting.

In sum, two crucial theoretical issues stand out:

1. Lack of understanding of the relationship between the various constructs, namely, performance, personality and the selling situation.
2. Inability to adequately measure personality using past personality instruments.

1.3.2 Business Importance

The importance of the personality-sales performance relationship for business lies in the potential for reducing various personnel costs. It currently costs firms in the United States more than $7 billion per year to recruit and train replacements for industrial salespeople who either quit or are fired. A Sales and Marketing Management Survey (1983) listed the average cost of sales training per salesperson for industrial products at $22,480, consumer products

$15,090 and services $14,720, an overall increase of 8.5% since 1981. With the cost of hiring and training salespeople rising every year, it has become imperative that research aimed at reducing these costs be initiated. If industrial sales firms could reduce turnover by 10%, $700 million dollars could be saved annually. Thus, the focus should initially be on selecting those individuals that have the capability to perform successfully on the job. Churchill, Ford, and Walker (1982) maintain little has been published in our research to guide managers in deciding what personality characteristics and abilities are most important in performing specific selling tasks or what criteria they should use in selecting new employees. This study will attempt to inform managers on these issues. One would hypothesize that if managers could hire those people who have the characteristics most likely to succeed in a job and not hire those who do not, then turnover should be reduced and the cost to recruit, train, and keep salespeople would be effectively controlled.

1.4 NATURE AND SCOPE OF THE STUDY

If progress is to be made in personality-sales performance research, a new research paradigm must be developed. The interactionists approach has been offered as an alternative that may have the potential to ofer greater insight into this relationship. Work in the areas of consumer behavior (Pung and Stewart 1983), and segmentation (Dickson 1982) have been the first in marketing to call for the inclusion of the the person-situation interaction. At this time, in the sales literature, the interactionists approach is not readily accepted.

1.4.1 Summary of Major Findings

The primary findings of this research centers on the unidimensionality of sales performance and the impact of the selling situation on the personality-sales performance relationship. First, past research indicated that objective and subjective performance measures yielded different sets of significant predictors (Lamont and Lundstrom 1977). Confirmatory factor analysis was used in this study to determine the unidimensionality of the constructs. When assessing performance the objective and subjective measures were highly reliable but a further check indicated the two measures were tapping different dimensions of performance. Second,

the moderated regression analysis models did a better job predicing performance than the model which included the entire sample. The evidence suggests the interactionists framework does a better job of predicting sales success than the trait approach.

1.5 BRIEF OVERVIEW OF CHAPTER TWO

Chapter Two traces the conceptual and methodological issues revolving around the personality performance research. Past studies have relied on trait theories without explicitly considering its appropriateness for studying certain personality measures and their relationship to performance within a specific job context. That is, personality variables have been measured in situations where they are not appropriate. This being the case, then inconsistencies in past research may be attributable to the inclusion of inappropriate variables for the sales job being studied.

Chapter Two will also deal with measurement issues in past research studies. It has been pointed out that instruments have also been used in settings where they are inappropriate. The problems relating to using only one measure of performance will also be addressed. It has not been uncommon for the researcher to collect a single measure of performance and correlate this with personality. A compo-

site versus a multiple criteria format will be discussed. In sum, Chapter Two will address the conceptual as well as the empirical issues that are clouding the personality-performance research.

1.6 BRIEF OVERVIEW OF CHAPTER THREE

The purpose of this study is to gain a better understanding of the effects of situational determinants on the personality-performance relationship. Chapter Three develops the models to be tested and arguments offered to explain the specific relationships of the models. One theoretical hypothesis and six operational hypotheses are developed to demonstrate the hypothesized relationship between personality, situation, and performance. The selling situations are described and the criteria used to choose the situations discussed. The instruments to be used in the study are outlined and further arguments as to their utility presented.

The procedure employed to achieve the objectives of the study is a multiple linear regression analysis that is moderated by the selling cycles. The regression analysis was run on the two selling cycle samples as well as the aggregate sample. The independent variables are the selling situations, planfulness, tenacity, and locus of control. The dependent variable is quota attained in 1983 for each sales representative.

1.7 BRIEF OVERVIEW OF CHAPTER FOUR

This chapter presents the results from the tests of the developed hypotheses. First, all preliminary procedures performed on the data are outlined. Second, the analysis of the data is discussed including: (1) testing for multicollinearity of constructs; (2) separating the data based on long and short selling cycles, and (3) results of the study are analyzed with respects to the hypotheses presented in Chapter Three.

1.8 BRIEF OVERVIEW OF CHAPTER FIVE

The last chapter of this dissertation provides a brief overview of the study and a discussion of the major findings. Based on the interpretations of these results the significance of the research is examined. Finally, the chapter concludes with an analysis of the limitations of the research and a discussion of possible directions for future research.

1.9 SUMMARY

After forty years of trying to identify personality constructs related to successful selling, little progress has been made. The time has come to step back and take a look at why past research efforts have been slow in developing.

Recent articles by Punj and Stewart (1983) and Dickson (1982) have called for a new framework for studying individuals. In the personal selling literature Churchill, Ford, and Walker (1982) and Weitz (1979) have made similar pleas.

Problems in past personality-performance research were identified, and theoretical and practical importance of this research was discussed.

Chapter Two will discuss current findings and critically examine the unresolved issues and their impact on the work proposed in this study. The primary focus of Chapter Three will be to present logical arguments explaining the existence of the personality-situation-performance relationship. In particular, the focus will be on:

1. The effect of the selling situation on the personality-performance relationship;
2. the measurement of the personality constructs and performance.

In sum, this research study will be aimed at:

1. The development of selling situations for the personality-performance relationship;
2. two instruments whose validity will be assessed in this sales setting;
3. demonstrating the relationship between several dependent measures and person and situation measures.

Chapter Four presents the results and Chapter Five reviews the findings and offers directions for furture research.

Chapter II

LITERATURE REVIEW

2.1 OVERVIEW

The objectives of this chapter are to review past research on the personality-performance relationship, to integrate the previous findings of this research area, and to isolate some of the persistent research issues.

The chapter examines the utility of resurrecting personality measures and the meaning of personality will be defined. Then, the three frameworks for studying this relationship, person, situation, and interaction, will be reviewed. Rather than merely cataloging past findings, the objective of this chapter will be to review the past research on a issue by issue basis using the framework of Monroe and Krishnan (1983). Finally, this chapter will review those issues that will play a role in the design of the proposed research.

2.2 THE MEANING OF PERSONALITY

A major aim of psychologists has been to identify the characteristics of human beings and differences among them. Concern with individual differences lies at the heart of personality psychology. It is these similarities and differences that are important in identifying successful and unsuccessful performers in given selling situations.

Thus far, personality has not been specifically defined. Several definitions have been adopted throughout the years by personality psychologists. Which definition a particular researcher uses appears to depend on the researcher's theoretical orientation. For instance, psychologists with a deterministic, generic orientation often choose a definition that emphasizes the operation of psychological processes within one person. For example, Eysenck (1953 p.3), defines personality as "the more or less stable and enduring organization of a person's character, temperament, intellect and physique, which determines his unique adjustment to his environment." On the other hand, psychologists who view human beings as adaptive creatures, whose behavior is determined largely by experience, tend to stress past learning and current situational factors in their definitions. Thus, Mischel (1976 p.2) defines personality as "the distinctive pattern of behavior (including thoughts and emotions) that

characterize each individual's adaptation to the situations of his or her life." Still other psychologists emphasize the measurement of personality in their theories, and have developed definitions that stress predictive utility of their measurement. Cattell (1950 p.2-3) defines personality as "that which permits a prediction of what a person will do in a given situation." This definition is adopted by the interactionists. Personality then can be described as consistent behavioral patterns that an individual has across many situations. Hergenham (1980) contends it is these consistent behavior patterns that make it possible for our future behavior to be predicted with a certain accuracy.

This definition was adopted because it recognizes the importance of the situation and its interaction with an individual's personality. The importance of situational variables will be presented in a subsequent discussion. Now a brief discussion on theoretical approaches to personality research will be provided.

2.3 WHY STUDY PERSONALITY?

Personality research used to predict performance has come under increasing scrutiny the last forty years and while deemed an interesting area to study, it has not been found a very fruitful area in terms of results. Some progress has

been made in the past twenty years to overcome those problems that have troubled researchers who believed personality research was pointless. Hogan (1984) notes that, based on several earlier reviews (Ellis 1946; Ghiselli and Barthal 1953; Guion and Gotlier 1965) personality measures are not dependable sources of information about on-the-job performance.

While this conclusion was probably reasonable given the evidence on which it was based, (largely from the period between 1930 and 1965), it appears that early research regarding the relationship between personality factors and occupational performance was handicapped in two ways. First, many early personality measures (e.g., the MMPI) were designed to detect psychopathology. That is, the study of extreme deviance. These early instruments of personality assessment were designed to separate fairly normal people from deviant individuals. These measures did not take into account the wide variations that can be found between normal people. For instance, extroversion and introversion both are personality characteristics which describe normal people but they are also discriminating descriptors of personality types. Therefore, many of these instruments are inappropriate for personnel selection.

Hogan (1984) also argues that the poor empirical validity of the psychopathology-based measures was, to a large degree, inevitable. As Jackson (1980 p.80) notes, "Conclusions regarding the empirical validities of personality questionnaires developed 30 or 40 or even 50 years ago (Ellis 1946; Guion and Gottlier 1956) simply may not apply to measures based upon adequately-defined constructs and abetted in their construction by computer-based sequential strategies for scale construction".

Hogan (1984) indicates that early research on personality and job performance was also handicapped by the fact that, prior to the 1960's, there was no consensus among personality psychologists regarding the structure of personality. That is, the question, "What do you measure when you measure personality?" was unanswered. With the apparently definitive work of Tupes and Christal (1961) and Norman (1963), there is now considerable agreement that personality can be described in terms of five or six broad dimensions--e.g., sociability, adjustment, conscientiousness, intelligence, ambition, and likeability (Hogan 1982). According to Hogan, this means that researchers can now largely agree as to the constituent elements of personality.

Hogan (1984) furthermore lists other considerations as to why it might be timely to reexamine the role of personality

measures in personnel selection. For example, the development of the California Psychological Inventory (CPI; Gough 1975) led to a series of studies showing that, when adequately assessed, personality is an important predictor of job performance (c.f., Cobb 1962; Goodstein and Schraeder 1963; Hogan 1971; Johnson and Hogan 1981; Mahoney, Jerder, and Nash 1960; Rawls and Rawls 1968). Second, the adoption of Uniform Guidelines on Employee Selection Procedures (Equal Employment Opportunity Commission, Civil Service Commission, Department of Labor, and Department of Justice, 1978) and the evidence that standard ability and achievement measures frequently have adverse impact on selection procedures, have prompted a search for alternative, less discriminatory selection procedures. The present evidence indicates that fewer black-white differences are found on measures of normal personality than on intelligence and achievement tests (c.f., Kurtimes, Hogan and Weiss 1975; Lauffer, Johnson, and Hogan 1981). Third, reviews by Jackson (1980) and Busch and Hogan (1982) show that there is considerable accumulating evidence for validity of personality measures in applied settings.

One final reason personality-performance research should be revisited is that past research was heavily dependent upon the person or trait theoretical frameworks. That is,

in a selling context, little or no attention was given to the situation in which the salesperson was selling. Weitz (1979) expresses the need for contingency approaches in personal selling research. The research in this report adopts the interactionist theoretical framework by hypothesizing that sales performance is contingent upon the selling situation. The frameworks previously discussed in Chapter One will be reviewed in the following sections.

2.4 THEORETICAL FRAMEWORKS

During the 1940's and 1950's the field of personality was dominated by internal, centralists theories (e.g. trait theories) and related assessment techniques. In the 1960's there developed a serious, "situationists" challenge to these dominant "person" views. Most recently, interactionists have proposed that it is necessary to study both the person and the situation as opposed to one or the other. The trait approach will be reviewed as to its impact on personality research.

2.4.1 Trait Theory

"Trait" has become a confusing term because it is often used in several different ways. At the simplest level, a trait refers to the differences between the directly observ-

able behavior or characteristics of two or more individuals on a defined dimension. For example, a trait has been defined as any distinguishable, relatively enduring way in which one individual varies from others" (Guilford 1954, p.6). In this sense, a trait is merely a summary label for some observed stable individual difference in behavior.

A trait can also be a personality construct created for its explanatory convenience and power. In this context, a trait is a construct or abstraction to account for enduring behavior consistencies and differences; as such, it does not necessarily have any concrete real existence as a "thing", "state", or "process" within persons.

Many personality theorists, however, have conceptualized traits as underlying characteristics, qualities, or processes that exist in persons (Allport 1937, 1961). Generally, traits have been viewed both as psychological realities that exist in some tangible form in the person and also as the cause of behavior (Allport 1961; Cattell 1950). Allport (1961 p.2) contends: "a trait has more than nominal existence...and is dynamic, or at least determinative of behavior". An aim of the trait approach to personality research is to infer the underlying personality structure of individuals and to compare persons and groups on specific trait dimensions. Underlying traits are inferred from behavior

and in turn, are invoked to account for observed behavioral consistencies.

While there has been some divergence on the exact conceptualization of a "trait" it can be assumed that psychologists who accept the basic assumptions of trait theory believe that personality is made up of certain definite attributes or traits. They also assume that particular traits, or "mental structures", are common to many people, vary in amount, and can be inferred by measuring their behavioral indicators (e.g. Cattell 1957; Guilford 1954). Most importantly, it is widely assumed that traits are relatively stable and enduring predispositions that exert fairly generalized effects of behavior (Sanford 1963; Allport 1961).

There have been a number of reviews discussing the empirical evidence of these assumptions (e.g., Mischel 1968, 1969; Peterson 1968; Vernon 1964). Several themes have emerged from these reviews. With the possible exception of cognitive and intellectual ability functions, there is little evidence of longitudinal stability and cross-situational consistency in trait theory research. Since behaviors are often construed as stable personality trait indicators and are actually dependent upon evoking and maintaining conditions in the environment, traditional trait theory may be called into question. Since assessment devices based upon

dispositional theories (e.g., projectives such as the Rorschach and TAT, and personality questionnaires such as the Cattell Sixteen Personality Factor Inventory) are of limited utility in predicting behavior in a situation, the use of such assessment devices may also be questioned.

Thus, researchers were then looking for alternatives to overcome the problems of the trait approach. One argument that surfaced was whether behavior was consistent or situational in nature.

2.4.2 Situational Framework

The basic argument made by Mischel (1968) was that except for cognitive and intellectual functions, the evidence indicates considerable specificity to behavior. Behaviors that are often construed as stable personality trait indicators actually are highly specific and depend on the characteristics of the evoking situation. Those who do not believe in consistency in behavior and argued for situational specificity were proponents of the situational framework for studying behavior.

Researchers influenced by the situationists are concerned with determining when the external environment or situation exerts primary influence on behavior. Mischel (1968) suggests, that the prediction of behavior from a trait model

alone is not possible. In particular he claims that, personality trait questionnaires and responses to projectives tests are misleading when used to predict to actual behavior. This is due to the relative situational specificity of behavior.

One must ask "Under what circumstances can situation specific behavior be predicted?" Pervin (1976) concludes that there are two ways in which behavior is affected by the situation. First individuals may interpret the same situation differently, and secondly different situations may differentially affect behavioral consequences for the same person. The available evidence seems to indicate each way is equally likely. Interestingly, both Mischel (1973) and Bandura (1973, after taking strong situationists stands, have concluded that in understanding human behavior one must also take into consideration processes inside the individual (e.g. how the person perceives and even overcomes the situation as well as how he is coerced by it). The development of the interactionists perspective will be reviewed in greater detail and its relevance to the study of the personality/behavior relationship will be explored.

2.4.3 Interactionists Approach

It would not be surprising if by now one is left wondering just what the controversy is about since it seems clear that people are stable in some ways and variable in others, and that behavior must inevitably express both the person and situation. Rather than asking whether behavior is caused by an individual's personality trait or by the situation perhaps one should ask which personal traits and situational characteristics account for individual differences in sales performance (Pervin 1976). In other words, people differ in their patterns of stability and change in relation to situations and it is this pattern of behavior that represents personality.

Interactionist believe that behavior is always a reflection of the interaction between the person and the situation or between internal characteristics and external characteristics. Such an interactional view is gaining popularity in the personality field and has prompted one psychologist reviewing the literature to conclude that "if interactionism is not the Zwitgeist (i.e., spirit of the times) of today's personality psychology, it will problably be that of tomorrow's" (Ekehammar 1974, p. 1045). Not until the work of Punj and Stewart (1983) and Dickson (1982) do we see an appeal for adopting the interactions approach in Marketing.

Bowers (1973) presents evidence that both trait theories and situationism are inadequate. He summarizes the results of eleven studies that examined the effects of the situation, the person, and their interaction. He found that the mean amount of variance explained by the individual was 12.71, as compared to 10.17 percent for the situation. The situation-by-person interaction accounted for 20.77 percent of variance. In 14 of 18 possible comparisons, the interaction term accounted for a higher percentage of variance than either main effect, and in 8 of the 18 comparisons the interaction term accounted for more variance than the sum of the main effects.

Having reviewed the theoretical frameworks a brief review will follow.

2.5 SUMMARY OF THEORETICAL FRAMEWORKS

Three frameworks were reviewed and the following conclusions were drawn.

1. Theorists who emphasize the task as a determinant of behavior would posit a model as follows:

   a) Behavior = f(Task)

2. Theorists who emphasize individual differences as a determinant of behavior would use the following model:

a) Behavior = f(Individual)

3. The interaction framework would suggest the following model:

   a) Behavior = f(Task + Individuals + (Task x Individual))

The interaction model not only provides for the identification of both task and individual main effects, but explicitly recognizes the presence of an interaction effect between the two. The research is being attempted to identify a framework to study the personality-sales performance relationship that goes beyond research efforts done in the past.

The next section begins the development of the literature review. Following this development will come the review based on substantive issues.

2.6 DEVELOPMENT OF THE LITERATURE REVIEW

The following review was influenced by the work of Monroe and Krishnan (1983). The purpose of their paper was to outline a methodology for conducting an integrative review of a research area. Monroe and Krishnan indicate in marketing research, a traditional recommendation at the end of an article is a clarion call for more research to clarify the results reported in the paper. Then, the next published study in the research area begins by noting the inconsistent find-

ings of previous research. This procedure continues without a clear answer as to the underlying research questions.

Monroe and Krishnan state there are many reasons for the general conclusions that there are inconsistent results in a research domain. Some reasons are methodological in nature, primarily revolving around the quality of the reported research. Others are conceptual in that there is little or no theoretical base to the research. Another source for the confusion is our unwillingness to accept the definition of research--to search again, to do over. It is lamented that replication studies lack publishability, yet it is doubtful that we have the tradition of making sense of the results of two or more studies on the same research question. The personality-performance relationship in sales literature seems to have fallen into many of the traps previously mentioned. None of the articles reviewed are a replication of earlier research. Although the primary focus was to determine if certain personal and/or personality types performed better in a sales position, each author had their own methodology and techniques in operationalizing their constructs.

The sample chosen for this study was determined by the existing articles available in the personality-sales performance relationship literature. Seventeen articles were found that attempted to relate personality or personal char-

acteristics to sales performance. All of these articles were included in the review.

The articles were from the areas of psychology, sociology, and marketing. These articles specifically studied the personality-performance relationship. For a good review of the management literature see "Personality and Organizational Behavior" (Weiss and Adler 1984). The paper began with an overview of the way personality has been treated in organizational research, arguing that current negative evaluations about the contributions of personality has been based upon research that is conceptually and methodologically limited. It followed with a discussion of three general topics; situation strength, dependent variable analysis and interactions, to illustrate issues relevant to a more appropriate examination of personality and organizational behavior. It concluded with a discussion of the nature of personality constructs and the efficient use of personality to advance theories of individual behavior in organizations.

One other stream of research centers on Hunter's work and the aptitude-performance relationship. Hunter concluded that aptitude was a better predictor of job performance than any other measures. Hunter's research does not address traditional personalilty research. For a review of Hunter's research, see Hunter 1980a, 1980b, 1981, 1982.

Monroe and Krishnan's (1983) procedure for coding the studies was followed. They listed two objectives to be accomplished in the coding process. First, it is desired to relate the characteristics of the studies to the findings. A second objective is to quantify as far as possible the description of studies whether on a metric or non-metric basis. A careful review, if applied uncritically, may be producing an apparent clear result and impede further research. By glossing over variations due to such differences as settings, types of respondents, measurement and instrumentation, operationalization of variables, range of treatment, and other study characteristics, the review will be less likely to resolve conflict among outcomes.

The review of past research will be presented by classifying studies according to:

1. Development of the dependent measure sales performance;
2. Predictor variables;
3. Measures and scales;
4. Unit of analysis and sampling procedures;
5. Research designs;
6. Hypotheses;
7. Results and analysis;
8. Substantive results;

9. Theoretical development.

To assist in the review of the past personality-performance research, Appendix A presents the basic characteristics of each study in terms of the major dimensions listed above. Both the substantive and methodological characteristics of these past studies will be carefully examined, with the objective of synthesizing past findings. See Table 1 for the coding system used in the integrative review.

2.6.1 Development of the Dependent Measure Sales Performance

Criteria to measure sales performance have been defined in a variety of ways. From one perspective criteria are standards that can be used as yardsticks for measuring employee success or failure (Bass and Barrett 1981; Guion 1965; Stone and Kendall 1956). This definition is quite adequate within the context of personnel selection, placement, and performance appraisal. Cascio (1982) contends competent criterion research is one of the most pressing needs of personnel psychology today, as it has been in the past. Over 35 years ago Stuit and Wilson (1946) demonstrated that continuing attention to the development of better performance measures results in better predictions of performance. Past research has netted thirteen different measures of sales performance (See Table 2). A review of the

TABLE 1

Coding System for the Integrative Review

Dimensions	Categories
Full Reference	Author
	Year
	Article Title
Theoretical Base	Formal Theory
	Naive Hypothesis
	Atheoretical
Variables	Dependent
	Independent
Measures/Scales	
Type	Scale Type (name)
Validation Check	Validation Method
	None
Reliability Check	Method (e.g. Cronbach a)
	None
Hypothesis	Expressed (clearly stated)
	Implied (not clearly stated)
Research Design	Lab Experiment
	Field Experiment
	Questionnaire
	Observation
	Cross Sectional
	Longitudinal
Unit of Analysis	Individual
	Dyad
	Group
Sampling	Strategy (random or nonrandom)
	Sample Size (N and n)
	Characteristics (salesperson types sex, product)
Major Results	Statistical (descriptive, inferential, and p-values)
	Substantive (significant relations and non significant relationships)

different operationalizations will be done along with a critique of why they may be inadequate.

2.6.1.1 Selling Cost Percent

Mosel (1952) operationalized only one dependent variable in his study; selling cost percent. The measure consisted of total selling cost (salary and commission) divided by total net sales. As a measure of job performance, selling cost percent contains an obvious source of contamination. Interdepartmental differences in the price of goods and consumer demand create inequalities in the opportunity to earn net sales. Thus, employee's selling cost would, to some extent, be a function of the department to which she was assigned.

Mosel noted a source of contamination in the fact that there was a relationship between time on the job and selling cost. Previous analysis had shown that up to about six months of employment there is a steady average decrease in selling cost. The only reason given in the Mosel study for using selling cost percent as a criterion measure was the company felt it to be a useful index in as much as it forms the basis for most of the company's personnel evaluations and actions.

TABLE 2

Dependent Measures of Sales Performance

Mosel (1952)	selling cost percent
Tobolski and Kerr (1952)	number of sales/attempts sales managers rank order
Baier and Dugan (1957)	composite measure
Merenda and Clark (1959)	meets quota, promoted
Dunnette and Kirchner (1960)	ranking by manager
French (1960)	sales volume money earned
Kirchner et al (1960)	ranking by manager
Harrell (1960)	sales quota field review appraisal interview company appraisal
Miner (1962)	sales volume
Greenberg and Mayer (1964)	sales volume gross profit per sale
Baehr and Williams (1968)	rating by manager sales volume territory difficulty experience
Cothams (1969)	sales volume, management ratings
Weaver (1969)	average daily sales
Ghiselli (1969)	survival on the job
Tanofsky et al (1969)	n/a

Lamont and Lundstrom (1977)	manager ratings, sales volume, sales activity
Bagozzi (1978)	sales volume

Tobolski and Kerr (1952) studied sales success by using objective (cars sold divided by attempts) and subjective data (ranking by sales managers). Their attempt to measure success with more than one indicator is appropriate (Guion 1961). At this point only the objective criterion will be reviewed (a separate section will follow discussing the subjective criterion). Tobolski and Kerr have a flaw inherent in their objective criterion due to a lack of understanding of the nature of car sales. They do not take into account the differences between the salespeople who work hard versus those who work smart. It is possible for a salesperson to sell 50 cars requiring 500 attempts (10% closing ratio) and score worse on the objective measure than the salesperson who sells 25 cars in 200 attempts (12% closing ratio) during the same time frame. Using this measure, the salesperson who works hard is not as successful as the salesperson who works smart (higher close ratio). It would seem that management's ultimate concern would be to sell more cars. Therefore, performance measures which allow for different selling strategies should be desired. Therefore, the objective data generated by Tobolski and Kerr fails to be a good indicator of success in this context.

2.6.1.2 Composite of Dependent Measures

Baier and Dugan (1957) were the first to use a composite in determining their criteria. That is, a number of objective measures (17) of sales success (e.g., average sales commission, information index, weekly premiums, monthly debit ordinary) were combined to indicate an overall measure of sales success. The Baier and Dugan measure was constructed through the joint efforts of the authors and sales management personnel. They had two primary objectives: (1) to define the major work areas of the sales agent's job and (2) to report to him periodically on his performance in each. They reasoned that this approach would result in effort to do a more balanced and competent job, would provide an economical yet technically adequate criterion, and would be readily and continuously available. The authors did not give any information as to how the composite was formed or why criteria were included that did not correlate highly with other criteria.

2.6.1.3 Sales Volume

Sales volume as a measure of success was used in eight of the studies reviewed (Miner 1962; Merenda 1959; French 1969; Greenberg and Mayer 1964; Baehr 1968; Cotham 1969; Lamont and Lundstrom 1977, Bagozzi 1978). Of these eight studies,

Miner, French, Greenberg and Meyer, and Bagozzi chose to use only the single measure of sales volume as their objective criteria.

Merenda and Clark's (1959) dependent variable, success, was measured by reaching a certain sales volume ($200,000 during the first year and at least $300,000 in the 2nd and 3rd years of employment). An unsuccessful agent was one who either failed to reach production goals, was fired, or otherwise left the company within the three year period. At first glance it appears possible that some successful people (i.e. those meeting the sales volume criterion) may have been passed over for promotion and subsequently left the company before the third year. According to the established criteria, these individuals would now be classified as unsuccessful when in fact they were successful. Of the 522 agents sampled, only 108 were classified as successful. No logical explanation was given as to why the others were classified unsuccessful and these criteria were chosen over others available.

French (1960) was strictly concerned with determining success in a retail furniture sales setting. The author posed as a member of the jewelry department of the sample store and observed the work of the furniture salespeople. The management was never informed that a study of its per-

sonnel was underway; therefore, the salespeople's actual earnings could not be learned. However, it was possible to gather sales volume information because the store management posted the sales of individual salespeople. Because of French's anonymity, he was only able to gather this one measure of sales success.

Greenberg and Mayer (1964) were the first to collect data from more than one job type: auto, real estate, insurance, and mutual funds. The performance criteria they used were gross average monthly sales and average gross profit per sale. The authors did not give reasons as to why these sales types were chosen or why they should all use the same sales success criteria. Average gross profit for autos would be much different than for the insurance or mutuals funds sales. It would also appear highly unlikely that gross average monthly sales would be comparable. The authors gave no indication as to how the adjustments in these figures could be made such that comparisons could be made across job types.

Miner (1962) also chose to gather sales volume information for petroleum salespeople. Miner collected data on gasoline sales, motor oil sales, and tire, battery, and accessory (TBA) sales. A composite of the criteria was formed providing an index of a salesperson's overall effectiveness.

The composite measure was obtained by normalizing the distribution for gasoline, motor oil, and TBA. The average of the salesperson's three scaled scores for the three product groups composed the composite scores.

Baehr and Williams (1968) used two sales volume measures; mean and maximum sales volume. The mean sales volume is a ranking of each member of the sales force on the basis of his or her volume of sales for the year. The measure used here is the average of all ranks assigned to a salesperson over the period in which his sales volume was ranked. The maximum sales volume rank is the figure representing the highest ranking the salesperson received over the last ten years (or over the period of tenure if were less than ten years).

Cothams (1969) was the first to hypothesize that the inconsistency of prior findings was partially due to the differences in the nature and requirements of the personal selling tasks. Moreover, he maintained that the dependence on single measures of selling success should become obsolete, but noted that many researchers are limited by the information the business community makes available to them. Cothams experienced the same problem chronicled in past research when he was forced to depend, in part, on those performance records he was allowed exposure to. Achieved sales

volume and adjusted sales volume were both included. Achieved sales volume was defined as dollar sales volume obtained for all salespeople for a twelve-month period. The cycle length allowed the inclusion of all seasons of selling activity. The adjusted sales volume measure incorporated the limited control salespeople have over all factors influencing their sales performance. This suggests that actual sales production, when used alone, is not as useful or relevant a criterion as it might seem. In an attempt to obtain a more accurate measure of performance, an adjustment was made to allow for store differences affecting a salesperson's selling opportunity. The steps necessary for determining this adjustment were not presented, yet it might be assumed that subjective judgements were made by management.

Lamont and Lundstrom (1977) operationalized sales success with five measures, one of which measured annual sales volume. They were the first to look at a diverse set of criteria including not only sales volume and manager's rankings, but also measures of salespeople activity (e.g., quota, new business conversion, call frequency). No effort was made by the authors, however, to determine if the dependent measures were correlated. The authors conclude the research results were somewhat criterion dependent, emphasizing the need for examining multiple measures of sales performance.

Bagozzi's (1978) objective measure of performance was a single indicator, sales volume. Bagozzi was allowed to use company records, and steps were taken to adjust for or remove those salespeople who quit or were transferred. Also, care was taken to adjust for changes in territory size, shifts in accounts, and other confounds which occurred during the investigation period. Bagozzi did not report how this was accomplished. Overall, Bagozzi reported the greatest detail of what decision making was included when collecting performance data. Management was involved in determining the adjustments to performance criteria used when collecting the data for this study.

In summary, sales volume has been frequently utilized as a measure of performance. Some effort has been made to upgrade this measure. Cothams (1969) contended that single performance measure studies should become a thing of the past. Cothams also hypothesized that the inconsistencies of prior findings were partially due to the differences in the nature and requirements of the personal selling task. Lamont and Lundstrom (1977) recognized the problems of past researcher' reliance on single measures and were the first to look at a diverse set of criterion. No effort was made, however, to determine the quality of the measures. Finally, Bagozzi (1978) sought management's aid when collecting his

objective measure of performance. Adjustments were made to collected data when it felt a confound existed.

2.6.1.4 Promotion

Merenda and Clark (1959) were the only researchers to use promotion as a measure of sales success. As was noted earlier, only 108 of the 522 salespeople studied were classified as successful. It is possible the complex set of circumstances one must meet to be classified as successful in this study was unduly rigorous resulting in an over classification of individuals as unsuccessful. Criteria for promotability typically take on a different focus than indicators used to determine sales success. It may in fact be those who are promoted from within are the only ones left after more successful people have left the organization. Promotion, therefore, can be seen as a tenuous measure of sales success.

2.6.1.5 Sales Quota

Of the seventeen studies reviewed, only Harrell (1960) and Lamont and Lundstrom (1977) measured performance using quota data. Harrell (1960) admitted, however, that the quota system was not looked upon as an accurate measure of the performance of the individual salesman, particularly because

the system was relatively new and, consequently, all the bugs in it had not been removed. Lamont and Lundstrom collected quota data as part of their sales activity measures. They felt it was important to collect objective criteria reflecting major job functions and quota, as part of the measure, served this purpose.

2.6.1.6 Tenure

Baehr and Williams (1968) and Ghiselli (1969) used tenure as a measure of sales performance. While Baehr and Williams used tenure as part of multiple criteria, Ghiselli used tenure as his sole criteria of sales performance. In both cases it was postulated that the longer one stayed on the job, the more successful one was supposed to be. Ghiselli was interested in predicting the success of stockbrokers. He argued that a wide variety of factors are beyond the individual stockbroker's control (e.g., changing political and economic circumstances). Therefore, survival on the job was used as the sole criteria in the evaluation of the tests that were examined (i.e., survival of three or more years equaled success, while less than three years equaled failure). It can be argued that those who lasted less than three years on the job may have found other opportunities that were more desirable than their present job, while those who stayed were not as marketable.

2.6.1.7 Adjusted Earnings

Cotham (1969) does not report a criterion measure of earnings for his sample, but does report an adjusted earnings measure. Adjusted earnings were the monthly earnings for individual salespeople and were adjusted for store differences. While small base salaries were nearly the same for all salespeople, commissions varied between products and were often increased on specific lines or items for promotional purposes. Because of the fluctuating commission rates, reflecting differences in the difficulty of selling various products, adjusted earnings were included as a performance indicator. No information was given as to how they were adjusted.

2.6.1.8 Average Daily Sales/Days Worked

Weaver used a variation of sales volume when he identified sales performances with one objective measure "average daily sales". He computed this by taking the monthly sales revenue of the employees sampled and divided this by the number of days worked each month. Weaver did not take into account what days or shifts people worked. Those who work during the busiest times (the more experienced) may appear to be more productive when, in fact, the work schedule is in their favor.

2.6.1.9 Sales Activity

As previously discussed, Lamont and Lundstrom (1977) were wary of the potential limitations of one measure of sales success. Rather than using only behaviorally based ratings, objective criteria reflecting the salesforce's major job functions were also developed. Sales activity was collected from management and the sales force detailing: number of sales calls made, the proportion of calls made on prospective and current accounts, and new accounts sold. Lamont and Lundstrom did not attempt to correlate any of these measures to determine the quality of individual performance measures.

2.6.1.10 Ranking by Managers

Much has been written about the problems encountered in the use of rankings as a measure of performance. Criterion contamination occurs when the operational or actual criterion includes variance that is unrelated to the ultimate criterion (Cascio 1982). Bias represents systematic criterion contamination, and it can correlate with predictor measures. It is imperative that managers have no knowledge of predictor information before they supply their criterion. Bias due to group membership can also be a factor. If salespeople with better education are paid more and looked upon more highly than others, then this may cause raters to rate un-

fairly. Also, if managers have had little contact with the individual they are rating, there may exist an unequal opportunity on the part of subordinates to demonstrate proficiency, personal biases, prejudices, or an inability on the part of the rater to distinguish and reliably rate different dimensions of job performance. This may also result in bias.

Despite frequent dependence on subjective rating, this literature has not suggested ways to overcome the problems inherent in these ratings. When analyses are made, it is not uncommon to find conflicting results depending on whether one uses objective or subjective criteria (Harrell 1960; Cotham 1969; Lamont and Lundstrom 1977). Rater training and multiple raters could be used in future research as an attempt to overcome past deficiencies. The studies examined were also void of any information pertaining to whether raters were given criterion to be used when making assessments. Rater training can be used to overcome problems of interpretation when managers are taught to observe and record work-related behavior systematically and representatively which may well be the key to making accurate, error-free appraisals of sales performance. The appraisal process is complex, yet it is given little attention in many studies. This is indeed unfortunate, for research indicates that well designed training programs can serve to reduce

considerably both technical and interpersonal barriers (Spool 1978). Where possible, multiple raters can be used to allow for post hoc consultation of raters if ratings vary by large degrees. Using more than one rater has shown to reduce the halo effect and to increase rater reliability.

Seven studies used behaviorally based ratings as a measure of sales performance (Tobolski and Kerr 1952; Dunnette and Kirchner 1960; Kirchner et al. 1960; Harrell 1960; Baehr and Williams 1968; Cotham 1969; Lamont and Lundstrom 1977). Little is reported in these studies concerning steps taken to enhance rater reliability. Typically managers were asked to rate their sales force based on who they considered successful as opposed to those which are not.

Toboski and Kerr (1952) gathered subjective data on the salesforces of two different auto firms. In examining their work it is impossible to determine how many managers ranked the salespeople. No information is available to determine if the same criteria to rank salespeople was used. There is also no indication of multiple raters being used to enhance reliability.

Dunnette and Kirchner (1960) and Kirchner et al. (1960) use only one measure of performance in each of their studies: subjective ranking by managers. With a sample of 120 and 539 3-M Company salespeople, the consistency of the rat-

ings throughout the company must be an area of concern. Having not reported any means of establishing standards for managers to use in their ratings, Dunnette and Kirchner, in a few instances, were able to obtain ratings from two managers independently rating the same group of men. The coefficients of correlation between the sets of rankings ranged from 0.5 to 0.8 with a median value of 0.74. The multiple rating offered the opportunity for managers to make comparisons after the ratings were made and to make adjustments if warranted. The Kirchner et al. study collected the ratings of 539 salespeople. Although no exact number was given, many participating sales managers were accustomed to rating their salesforce. No information was given, however, concerning those standards used in internal ratings. There is no indication that more than one rater was used to rank any of the salespeople. Kirchner et al. (1966) found that many older salespeople were rated extremely high in sales effectiveness. If managers feel experience is imperative to successful selling, then it is not unusual to find these results. Training may have helped to overcome this bias.

Harrell (1960) was the first to directly review and rate the salespeople using a Field Review Appraisal Interview. Harrell believed that a more discriminating appraisal would be obtained in an interview than from the official appraisal

records available from the company under study. The sample was small enough (N=21) to permit the use of such a time consuming technique, as interviews were conducted with both managers and supervisors.

Baehr and Williams (1968) contribute an empirical study that takes into account a number of dimensions previous research lacked. Multiple criteria were were used to allow for the collection of both subjective and objective measures of sales success, and an effort to reduce rater bias and halo effect resulted in the implementation of a paired comparison performance rating. This latter technique forces raters to simultaneously determine the best and worst worker, then the next best and worst and so on. The method not only forces the manager to pick a best and worst, but over a number of raters, results will be normally distributed. This eliminates the problem of central tendency, or of typical manager ratings that find a majority of the sales force rated above average. Using three different raters offers the capability of comparing results and discussing those individuals whom raters cannot agree upon. The paired comparison technique was also used to rate the sales routes in a region from the most to least difficult in the realization of sales potential.

Cothams (1969) acquired management ratings from store managers who regularly worked with the sales staff and by department managers who were the salespeople's immediate supervisors. Using a ten point scale, three dimensions of salespeople's performance were tapped, including overall performance, interest in work, and ability to maintain customer satisfaction in day-to-day interactions with the store clientele. Cothams was the first researcher who instructed each rater in the use of the rating form to help reduce the possiblity of various types of rater bias inherent in the use of such devices. Baehr and Williams, and Cothams are the only two studies that reported some information about how subjective data was acquired. They recognized the problems that can transpire gathering subjective data and took steps to overcome some of these problems.

Lamont and Lundstrom (1977) operationalized sales success with a subjective measure. This study found the characteristics of successful salespeople dependent on the criteria chosen for success (subjective or objective). No information was given as to how training was used to overcome contamination by the raters. For example, raters may have felt empathy was an important inhibitor to sales success. In this case managers may have rated empathetic salespersons as being less successful. This potential artifact could have ac-

counted for the negative relationship between empathy and performance noted in their study. Multiple raters and training could have been used to overcome this problem.

2.6.1.11 Conclusion

Many different definitions, and consequently many different operationalizations of the performance construct can be observed in past research. Quoting Cothams (1969 p.33) "Generally, researchers seem to have examined performance measures which interested them or which were readily available." Although no specific reasons were offered, past studies were found to rely on either objective or subjective measures, but rarely both. Little was reported when collecting subjective measures to determine if adequate steps were taken to assure raters understood what they were being asked to measure. Part of the problem centers on the restrictions placed on some researchers to gather more than one measure because of the limited data made available by the company supplying the salespeople. When, in fact, researchers used multiple criteria, not one of the researchers attempted to correlate the measures. A great deal of rigor will have to accompany future research efforts in an attempt to ascertain and validate performance measures. The next section will review the independent variables that were chosen for the studies.

2.7 PREDICTOR VARIABLES

The literature is abundant with multiple predictors chosen to be correlated with performance. Other than Greenberg and Mayer (1964), Lamont and Lundstrom (1977), and Bagozzi (1978), none of the other studies made an effort to explain why any of the predictors should be used in a sales setting. Most of the early research on salesperson effectiveness was directed toward relating salesperson performance to scores on personality tests, ability tests, and application forms typically used in the selection process. The results of the studies reported after 1950 are summarized in Table 3. Unfortunately, most of the studies were atheoretical. Anticipated relationships were rarely specified, and when they were, an explanation of how the salesperson's characteristics affected performance was not considered. What follows is a brief review of each of the studies' predictor variables. Two areas of study by researchers were personal history and personality characteristics.

2.7.1 Personal Data Blank Information

Mosel (1952) was one of the first to use the personal data blank in an attempt to find personal data that could be used to predict sales performance of department store saleswomen. All the information was gathered from an application

TABLE 3

Summary of Results of Sales Effectiveness Studies

Author	Significant Predictors of Success
Mosel (1952)	age, education
Tobolski and Kerr (1952)	empathy
Baier and Dugan (1957)	sales related knowledge
Merenda and Clark (1959)	education, aggressiveness, sociability
Dunnette and Kirchner (1960)	dominance
French (1960)	social area index, car driven
Kirchner (1960)	age
Harrell (1960)	stability, dominance, self-confidence, drive and aggressiveness, tact and diplomacy, vocational interest, sense of humor, sales sense
Miner (1962)	dependence, self-confidence, happiness
Greenberg and Mayer (1964)	empathy, ego-strength
Baehr and Williams (1968)	financial responsibility, early family responsibility, stability
Cothams (1969)	experience, amount of time wife works
Weaver (1969)	age, education

Ghiselli (1969)	supervisory ability, intelligence, self-assurance, decisiveness, achievement motivation, need for self actualization, need for job security
Tanofsky (1969)	prior salary, number of dependents
Lamont and Lundstrom (1977)	endurance, social recognition, height
Bagozzi (1978)	self-esteem, verbal intelligence

blank. Forty-two independent variables were drawn from the blank such as age, education, height, and weight. No attempt was made to theoretically link any of these independent variables to performance. Although 12 personnel data items significantly distinguished between high and low performers, no knowledge was gained as to why these relationships should exist. The thirty predictors that were not found to be predictive of sales success were not included in the study. Why such predictors as marital status and time on next to last job are significant predictors of performance and thirty other predictors were not, was not addressed by Mosel.

Baier and Dugan (1959) developed an instrument to measure life insurance knowledge. Specifically, the test attempted to measure product knowledge, belief in one's product, motivation and length of service. No reliability and validity checks were included in their study nor was information on the nature of the instrument given. It was stated that belief in one's product was measured by the salesmen's own buying behavior. The study was devoid of testable hypotheses and no effort was made to theoretically link the criterion and predictors.

Merenda and Clark (1959) attempted to measure personal history characteristics. The personal history questionnaire

included vital statistics, training, and experience factors such as age, marital status, number of children. These data were all recorded on the date of application for employment of each of the agents in this study. Only five variables were found to discriminate between successful and unsuccessful performers: number of children, educational level, number of offices held, monthly living expenses, and amount of insurance owned. Merenda and Clark did not attempt to explain why these five proved to be good measures of success while the remaining fifteen did not. There were no formal testable hypotheses listed, nor were there any attempts to theoretically link the personal variables to the criterion.

The first three studies discussed are examples of how personal history data was used to predict performance. Further efforts by French 1960; Kirchner et al. 1960; Baehr and Williams 1968; Cothams 1969; Weaver 1969; Tanofsky et al. 1969; met with no more success. Moreover, these authors all failed to present theory or evidence to relate the predictors to performance. When predictors were found to be significantly related, no effort was made to explain why they were related or why insignificant predictors were not not related to performance.

Baehr and Williams' (1968) investigation was designed to identify and define some of the underlying dimensions of

personal background data. The dimensions were identified through successive factor analyses of responses to a wide variety of background items by an occupationally heterogeneous sample of 680 male employees. The final factor analysis yielded 15 interpretable oblique first order factors. The same problems arise as in past research. The factor analytic technique may be a good start in determining a number of personal background data dimensions that could predict performance in a number of sales types. The flaw arises when theory is not generated to explain why any of these dimensions might be related to performance.

Cothams' (1969) contribution stems from his attempt to explain inconsistencies in past research. The inconsistencies of prior findings suggest that the value of specific personal history items as selection criteria apparently varies according to differences in the nature and requirements of the personal selling tasks. Thus, Cothams concluded, it does not necessarily follow that because typical application form information is useful in one organization, the same information will be helpful in other firms. Therefore, unless specific personal history items are situationally validated, there is little justification for using the application form as a selection tool. Even after this most evident statement, little has been done to follow up on these assertions.

Lamont and Lundstrom (1977) were the only authors to attempt to theoretically link personal history variables to performance. However, their inclusion of age, height, and weight as predictors is really not based on theory but rather on past research findings. Age was included because it had been previously found to be significantly related to most measures of sales performance in retail and life insurance sales. However, their study used industrial salespeople. So, unless it can be explained how retail salespeople, life insurance salespeople, and industrial building suppliers are similar their arguments for including age, height, and weight are inappropriate. Other studies cited by Lamont and Lundstrom have also been criticized for their failure to theoretically link personal data variables to performance. Although the authors state "personal" characteristics provide a useful source of data when they can be linked theoretically to job behavior and performance criteria, they provide no such link.

2.7.2 Summary of Personal History Data

Many predictors were measured and found to be statistically significantly related to performance (See Table 4). At the same time, many others were found to be insignificant. As previously mentioned, it is not uncommon to find a

number of the same predictors significant in one study and insignificant in another. It has not been evident from the literature reviewed that theoretical linkages have been developed for personal data variables. The interaction framework offers an explanation that may help clear up the inconsistencies that exists. It is possible that once the selling situation is included when studying this relationship, predictors can be chosen and be shown to have a theoretical base. It may be that certain variables were chosen and tested in settings where they did not have an effect on success, while in other settings they were quite important. Thus, each selling situation should be viewed independently of each other when selecting predictors.

2.7.3 Personality Predictors

As opposed to relating personal history data items to performance, a number of studies included personality variables (Tobolski and Kerr 1952; Merenda and Clark 1959; Dunnette and Kirchner 1960, Harrell 1960; Miner 1962; Greenberg and Mayer 1964; Ghiselli 1969; Lamont and Lundstrom 1977, Bagozzi, 1978). Many of the same concerns of personal history data apply to the personality-performance relationship. Although a number of items significantly distinguished between high and low performers, no knowledge was gained as to

TABLE 4

Summary of Personal History Results

	Significant Predictors	Insignificant Predictors
Mosel (1952)	age, weight height, time on last job, number of children, number of dependents, marital status, education, experience, domicile, absences,	not reported
Merenda & Clark (1969)	number of children	age marital status military status
French (1960)		age, marital status, education, time on job, auto driven, experience
Kirchner (1960)	age	
Baehr and Williams (1968)	Family responsibility, stability	education, experience, sales related knowledge
Cothams (1969)	experience, amount of time wife works	age, height, marital status, number of dependents
Weaver (1969)	age education	marital status
Ghiselli (1969)	supervisory ability, intelligence, self assurance,	age

	decisivness, achievement motivation self actualization jobsecurity	
Tanofsky et. al. (1969)	prior salary, number of dependents	age, education, sales related knowledge
Lamont and Lundstrom (1977)	height, endurance, social recognition	age, weight, education

why these relationships should exist. Even in post hoc manner, no attempt was made to explain why certain personality predictors were found to be important to success while others were not.

An attempt was made by Greenberg and Mayer (1964) and Lamont and Lundstrom (1977) to theoretically link empathy to performance. The theory section in the Greenberg article states "the basic theory underlying the development of our test is that a good salesman absolutely needs at least two basic qualities, empathy and ego strength." Lamont and Lundstrom report that empathy is commonly cited as a desirable characteristic in salesmen. As part of their reasoning, Greenberg and Mayer are cited as having successfully used empathy to predict the sales performance of automobile salesmen, insurance salesmen, and mutual fund salesmen. Again, no attempt is made to explain why empathy is important to success. For that matter, no real consensus has taken place as to what empathy really is or how it can be measured.

Bagozzi (1978) was the first to rigorously attempt to link personality measures (e.g. self-esteem) to performance. Drawing from the psychological literature Bagozzi linked self-esteem to performance using balance or consistency theory of cognition. Because little work has been done in

developing theories in personal selling, Bagozzi made arguments for a causal relationship between other variables but could not draw upon specific theory. His effort was an attempt to originate theory of his own (i.e. performance-satisfaction).

Dunnette and Kirchner (1960) attempted to determine psychological test differences between industrial salesmen and retail salesmen. The biggest problem with this study surfaced as the classifications of salesmen was based on whether one sold to industrial outlets or retail outlets, rather than whether or not a salesman sold in a retail outlet. Dunnette and Kirchner did reason that implicit in many of the past studies was the assumption that the same pattern of personality characteristics may have been associated with top notch selling regardless of the products sold, the kind of people called on, or other differentiating characteristics. They believed that the rather negative results obtained in many such studies stem in part from the fact that the foregoing assumption is probably not valid. In other words, many investigators have run afoul of the easy tendency to compare persons with one another who may be assigned to essentially different duties and responsibilities.

The authors' shortcomings are rooted in the fact that they, too, did not attempt to theoretically link any of the

predictors to performance. The salespeople were asked to complete four psychological tests which included the: Wesman Personnel Classification, Strong Vocational Interest Blank, Edwards Personal Preference Schedule (EPPS), and the Adjective Checklist. The test scores were compared for the two groups. Using the EPPS, only orderliness and affiliation were significantly differentiating between the two groups. Retail salespeople scored higher but Dunnette and Kirchner made no effort to explain why affiliation should have anything to do with success.

2.7.4 Summary of Personality Predictors

Many personality predictors were measured and found to be statistically related to performance (See Table 5). At the same time, many others were found to be insignificant. It was not uncommon to find a number of the same personality predictors significant in one study and insignificant in another. Although Dunnette and Kirchner provided some insight for the different personality characteristics important to specific selling jobs, it has not been evident from the literature reviewed that theoretical linkages have been developed for personality constructs and performance for specific jobs or selling situations. The interactions framework again offers an alternative view that each person-

ality- situation-performance relationship must be looked at independently. Each selling situation will influence the type of personality that will be successful in that context. Past inconsistencies can possibly be attributable to the measuring of personality constructs in selling situations that did not warrant the construct to measured. Until a more rigorous effort is focused at this problem, little progress will be made in predicting sales success. A review of the measures and scales used in these studies will follow.

2.8 MEASURES AND SCALES

Early research regarding the relationship between personality factors and occupational performance was handicapped because (1) the trait measures were erroneously generalized, (2) incomplete reporting made findings irreplicable, and (3) measures of traits were interpolated or otherwise extracted from the full profile (Kassarjian 1971; Mischel 1968; Hogan 1983). Mischel (1968) argued that assessment devices based upon trait theories (e.g., Rorchack and TAT, Cattell Sixteen Personality Factor Inventory) are of limited utility in predicting behavior in a situation. Hogan and Kassarjian noted that many of the early personality measures (e.g., MMPI) were designed to detect psychopathology or the measure of extreme deviants. Recall, these early instruments of

TABLE 5

Personality Variables as Predictors of Sales Performance

	Significant Predictors	Insignificant Predictors
Tobolski and Kerr (1952)	empathy (new car)	empathy (used car)
Merenda & Clark(1959)	aggressiveness sociability	emotional control, social adaptability
Dunnette & Kirchner (1960)	dominance	
Harrell (1960)	dominance, self-confidence aggressiveness-drive	stability, tact, humor
Miner (1962)	dependence, self-confidence happiness	low-aggression
Greenberg and Mayer (1964)	empathy ego strength	
Lamont & Lundstrom (1977)	endurance ego strength empathy	
Bagozzi (1978)	self-esteem, verbal intelligence	other-directed-ness

personality assessment were designed to separate fairly normal people from deviants. Therefore, it is not surprising that instruments such as the MMPI were not very effective in differentiating the personalities of "normal" people. As a result these measures were not very useful for personnel selection. More specifically researchers and practitioners extrapolated beyond the range of contexts for which these measures were meant to be generalized.

Greenberg and Mayer (1964) relied extensively on the MMPI while Lamont and Lundstrom (1977) relied on Cattell's Sixteen Personality Factor Inventory. Neither study discussed generalizability of traits or reasoned as to why the tests chosen would be effective in either setting.

Toboski and Kerr (1952) in their effort to measure empathy had the salesmen fill out a questionnaire developed by Kerr. Kline (1963) states "The evidence for validity for these (empathy) tests is so slight as to eliminate empathy." Hogan (1984) has concurred that, to date, an instrument to adequately tap this construct is not available.

The reason these three studies were briefly reviewed were twofold. First, Sawyer and Peter (1983) contend that there should be more value placed on replication in marketing research. With the information supplied (no detail on how instruments were administered), it is virtually impossible to

replicate any of the reviewed studies. Second, Monroe and Krishnan (1983) contend there are concerns with the validity of the measurement of study properties which include the correctness and completeness of the information reported in the reviewed studies and the amount of inference a coder must make in interpreting the written report.

It was not unusual to discover partial reporting of how the research instrument was administered or evaluated. Baier and Dugan (1957) collected data using an information index but do not report the nature of the instrument other than its general purpose as a test of life insurance knowledge. Ghiselli (1969) reports the use of a 64-item inventory that was administered to candidates for sales jobs. He did indicate that the inventory was a forced choice type, each consisting of a pair of personally descriptive objectives. Tobolski and Kerr (1952) implemented an instrument to measure empathy which was a fifteen minute completely objective test. They gave no indication whether this test was being used for the first time or had prior successful applications. Merenda and Clark (1959) utilized an Activity Vector Analysis which they indicated was a self concept personality instrument. A review of how it was administered or whether it measured more that the four factors profile was left unanswered.

Dunnette and Kirchner's (1960) measures were derived from four sources and no arguments were made as to why the Strong Vocational Interest Blank, the Edwards Personal Preference Schedule and the Adjective Checklist should be used in the sales setting. No validity or reliability estimates were made available.

Harrell (1966) chose six personality tests to use in his study and he, too, failed to offer any reliability or validity checks. No information was given on how the scales were administered or used.

Bagozzi (1978) used a number of scales; Jackson Personality Inventory, Collins Other-Directedness Scale, Borgatta's Word Association Form, Job Related Tension Index, and a six item scale developed by Bagozzi to measure specific self-esteem. Reliabilities were reported and ranged from 0.70 to 0.81. There is a question of the validity of the test when a single trait is taken from a full test, such as Bagozzi's self-esteem measure taken from the Jackson full scale. The validity of the test in this usage is questionable, both in terms of construct validity and observed differences. This, as mentioned, is especially relevant when single trait scales are used versus full tests. "Normals" may have an unusually high single scale score while the full profile is within normal limits. Moreover, it is easier for respon-

dents to detect a scales intent and thus give desirable answers when single scales are used.

Validity issues should be of major importance to all researchers. A brief review of validity issues in relation to the articles will follow. For a review of personality tests used in previous research see Table 6.

2.8.1 External Validity

External validity examines whether or not an observed causal relationship should be generalized to and across different measures, persons, settings, and times (Calder, Phillips, and Tybout 1982). Hence when response and non response are different along some dimension or when the sample is different from the parent population with reference to some variables, the question arises: does the difference have any theoretical meaning for the phenomena under study? A number of authors use their results to generalize to all salespeople. An example of this phenomenon can be seen in Baehr and Williams (1968 p.103) when the authors conclude that "on the basis of these results, the picture that emerges of the successful salesman or sales manager is one of a man with a background of competent handling of his personal economy, an early vocational start with prime or sole responsibility for managing family finances, and particularly

TABLE 6

Personality Tests

Tabolsky (1952)	Kerr's Empathy Scale
Baier and Dugan (1957)	Information index
Merenda and Clark (1959)	Activity Vector Analysis
Dunnette and Kirchner (1960)	Adjective Checklist EPPS
French (1960)	NORC
Harrell (1960)	Otis Test of Mental Ability Bernreuter Personality Inventory Washburne Social Adjustment Inventory
Miner (1962)	WAIS Kuder Preference Record PAT
Greenberg and Mayer (1964)	Gordon Personal Profile Greenberg Interest Profile MMPI Bernreuter Personality Inventory
Lamont and Lundstrom (1977)	Cattell Sixteen Personality Factor Test Hogan Empathy Scale PRF
Bagozzi (1978)	Jackson 16 PF, Collins Scale

for the managers, a past history of sales achievement and present stability in work and family situations." Other examples could be given but they are not crucial for making the point that researchers must be more careful when attempting to generalize their findings to other settings and sales types.

2.8.2 Construct Validity

It has been questioned whether personality tests and sales success measures adequately tap the constructs in question (Hogan 1982). For construct validity to be met, the statistical relationship must be substantively plausible and the cause and effect measures must represent the constructs. It is also important to determine if the sample and research settings are appropriate for the substantive question. A necessary but not sufficient condition for construct validity is reliability. With the exception of Bagozzi (1978), reliability typically was not measured in the studies reviewed concerning criterion or predictors. The best efforts were simply reports of reliabilities in past studies for a few of the criterion measures. Mosel (1982) reported that past studies using cost criterion had a correlation of 0.88. No scale reliability measure was reported for his study. At this time no rigidly controlled study of the reliability of

the job performance criteria is available. Lamont and Lundstrom (1977) collected six measures of sales success but did not attempt to determine if any of the measures were poor indicators of sales success. No scale reliability measures of predictor tests were given.

2.8.3 Statistical Conclusion Validity

At this point in time there is no way to determine the statistical conclusion validity of the reported results. Incomplete reporting of means and standard deviations in all of the studies makes it impossible to draw any conclusions. Power and effect size was not an issue in any of the studies and not one reported that calculations were done on either. A heavy reliance has been placed on significance values but it is evident p-values are highly susceptible to sample size increases and do not indicate the probability of a type II error. All of the insurance studies drew large samples ($N > 300$) and quite possibly this explains many of the significant findings in these studies. None of the authors addressed sample size issues.

2.8.4 Internal Validity

Given the statistical conclusion validity, the issue for internal validity is one of having the ability to rule out rival hypotheses for the observed effects, thus concluding the relationship is as specified. After reviewing the research to date many rival hypotheses exist that may help explain the inconsistencies of past work. Hogan (1984) and Kassarjian (1971) point out that improper utilization of personality tests have been a problem and give credence to poor internal validity. Single objective and subjective measures of performance point to the research method as an alternative explanation. Judd and Kenny (1982 p.33) contend "the assignment rule used in deciding the condition under which an observation is taken is of fundamental importance for achieving internal validity. On the average, a random assignment rule produces the condition of perfect internal validity." The nature of sales hiring practices make it impossible to randomly assign salespeople. Thus, reseach efforts will have to control for as many extraneous variables as possible (i.e. compensation programs, training).

2.8.5 Summary

It is evident that many scales were administered in the past thirty years to measure personality. Arguments have arisen that many of the scales were developed to be used in settings other than for sales. Using inappropriate personality tests give rise to a number of validity issues. The MMPI, for instance, may not be tapping the personality constructs in question and construct validity may be violated. Alternative hypotheses can be generated to explain why the results were found and internal validity violated. External validity has also been a problem in past research as generaliztions made have been inappropriate. Validity and reliability issues must be addressed in future research. Finally, reporting of procedures on how questionnaires were developed and administered must be included in all studies so replication can take place in future research efforts. Complete reporting will also help future literature reviewers in determining flaws in past procedures and will allow for developing new ways to overcome past deficiencies.

2.9 UNIT OF ANALYSIS AND SAMPLING PROCEDURES

Unit or level of analysis as defined by Monroe and Krishnan (1983) can be an individual, group, organization, firm, channel, family or dyad. The unit of analysis requires the researcher to be consistent in the nature of the constructs that are studied. If the unit of analysis is the individual, then the construct should focus upon the individual, not the group, family or dyad, or other level of analysis. Each of the studies reviewed focuses on the individual salesperson.

The sampling method in all of the studies appears to be convenience sample. Salespeople were used in all cases, and the insurance industry tended to have much larger samples than the other settings (e.g., retail and industrial). The average sample mean for insurance sales was found to be N=674, retail N=167, and industrial N=174. None of the authors discuss how they arrived at the number of subjects in their studies; however, Harrell (1960 p.66) addressed why the subject pool was so small (N=21 petroleum salespeople) in his study stating: "Although the production data were available on only 21 salesmen, the rarity of such information and the presence of information from a field review appraisal, plus some trends with tests, made the study worth reporting." Sawyer and Ball (1981) in an effort to assess

statistical power clearly show that sample size is a determinant of power. Power is defined as the probability a statistical test will correctly reject the null hypothesis. With a sample of twenty one it must be concluded that low statistical power exists and the rejection of the null hypothesis is less likely even if the null is false. The effect size and alpha level should also be taken into consideration to make this assessment when the information is reported. Not enough information was reported in this study to calculate power or effect size to determine the effect the small sample has on the studies' outcomes.

On the other hand, Tanofsky et al., (1969) sampled 1,525 life insurance agents and Sawyer and Ball (1983) contend very large sample sizes usually allow even small effects to be statistically significant. It is especially important with high-powered research designs to measure and report effect sizes in addition to statistical significance. Reporting by Tanofsky does not allow effect size or power to be calculated.

Future research will continue to focus on the individual salesperson when attempting to measure the personality/performance relationship. As team selling becomes more prevalent, the unit of analysis may change. Sampling has centered on convenience samples with little attention paid to

power or effect sizes. This must be a concern of future research.

2.10 RESEARCH DESIGN

The typical study was a cross-sectional descriptive study that collected data at one point in time. Greenberg and Meyer (1966) and Lamont and Lundstrom (1977) were the only two exceptions to this rule. Lamont and Lundstroms' instrument was deemed too long to administer at one point in time so it was divided into two parts with salespeople filling out the questionnaire during two sittings, six months apart. Greenberg and Mayer administered their test to auto, insurance, and mutual funds salespeople but collected performance data at six months and approximately one year later. This study was complicated by the drop out rate of salespeople, but the authors found performance to be fairly consistent.

All of the empirical studies reviewed here represent field studies involving self-reported information (e.g., filled out application blank, or written pscyhological test, or completed researchers questionnaires). There were no laboratory experiments or field experiments, and only one observational study, but data eventually was collected from written reports.

Reported data was incomplete in regards to how much rater instruction was given. When large samples are rated, there is the potential for different criteria to be used to do the rating. Monroe and Krishnan (1983) contend that studies on the surface may appear to be quite similar, but often will have important qualitative differences in procedures used to collect data. Even though a number of studies attempt to rate salespeople, there is no way of knowing if the procedures within studies were consistent let alone between studies.

A few of the personality instruments were used more than once in the reviewed studies. Differences could have occurred due to the order in which tests were presented, instructions given, or if the researcher or an assistant were there to administer it. Reporting of this information is also imperative if replication is to take place.

A heavy emphasis was placed on a research design that collected data at one point in time from sales personnel. Since the researchers were informed by trait theories there was no effort to design research that included the effect of selling situations. The data was collected in the field and experimental designs were non-existent. Incomplete reporting of the instruction on how instruments were administered and what critiera were set for managerial ratings causes in-

ferential leaps when trying to assess what was done in past research efforts. Hypotheses will be addressed next.

2.11 HYPOTHESES

Monroe and Krishnan (1983) contend the exact theoretical and operational hypotheses should be specified. Moreover, the coder should indicate whether the hypotheses were explicitly given or inferred by the coder. Only Lamont and Lundstrom (1977), and Bagozzi (1978), explicitly stated their hypotheses (See Table 7). The remaining fifteen articles tested many relationships between predictors and performance without explicitly laying out the theoretical or operational hypotheses. It had to be assumed that the researchers were testing the relationship between personal history variables and performance, or personality variables and performance. This early research could have been classified as exploratory research and the efforts were aimed at identifying personality and personal characteristics that could be used in future research and measured over a number of job types, but the author's failure to explain their purpose allows this notion to be dismissed.

TABLE 7

Hypotheses Tested in Past Studies

Bagozzi (1978)

There is a positive relationship between sales performance and job satisfaction. The greater the sales performance, the higher the level of satisfaction with the job.

There is a positive relationship between self-esteem and performance. The greater the self-esteem, the greater the performance.

There is a positive relationship between self-esteem and job satisfaction. The greater the self-esteem, the greater the job satisfaction.

There is an inverse relationship between other-directedness and self-esteem. The greater the other-directedness, the lower the self-esteem.

There is an inverse relationship between role conflict and sales performance. The greater the perceived role conflict, the lower the sales performance.

There is an inverse relationship between role conflict and job satisfaction. The greater the perceived role conflict, the lower the felt job satisfaction.

There is an inverse relationship between role conflict and self-esteem. The greater the perceived role conflict, the lower the felt self-esteem.

There is an inverse relationship between role ambiguity and sales performance. The greater the perceived role ambiguity, the lower the sales performance.

There is an inverse relationship between

role ambiguity and job satisfaction. The greater the perceived role ambiguity, the lower the felt satisfaction.

There is an inverse relationship between role ambiguity and self-esteem. The greater the perceived role ambiguity, the lower the felt self-esteem.

There is a positive relationship between sales potential/workload and sales performance/job satisfaction/self-esteem. The greater the sales potential and workload, the greater the sales performance, job satisfaction, and self-esteem.

Lamont and Lundstrom (1977)

The combined set of personality variables and personal characteristics are significantly related to the selected measures.

Increasing levels of the personality traits dominance, endurance, social recognition, empathy, and ego strength are associated with higher levels of sales performance.

Decreasing age and increasing height, weight, and formal education are associated with higher levels of sales performance.

Increasing involvement in civic and professional organizations and outside activities is associated with higher levels of sales performance.

2.12 RESULTS AND ANALYSIS

As Monroe and Krishnan (1983) state, the unlimited reality is that a limited number of studies provide sufficient data for a meaningful assessment of the research domain. The personality-performance literature has fallen into this trap. The statistical methodology on the empirical studies tends to be fairly simple and straightforward. Many studies involve no more than reporting of correlations (Tobolski and Kerry 1952; Baier and Dugan 1957; Dunnette and Kirchner 1960; French 1968; Cotham 1969). Merenda and Clark (1959) utilized discriminant analysis in their study while Kirchner et al. (1960), used ANOVA. Baehr and Williams (1965) used t-tests and Lamont and Lundstrom (1977) and Bagozzi (1978) regression models. In each and every case incomplete reporting would not allow calculations for effect sizes which would then not allow calculation of the power of the test. The amount of quantitative data that could be salvaged was minimal.

2.13 SUBSTANTIVE RESULTS

Great care must be taken when drawing conclusions from the existing literature base. As has been stated, it is quite evident that contradictory results exist for the same personality constructs in a number of studies. An alterna-

tive hypothesis has been set forth that a personality type may be important for one selling situation but not another. Much criticism has been directed at sloppy research efforts as the cause for the confusion. Finally, the past research efforts have not rigorously pursued theory development. This shortcoming has stifled the development of exact theoretical and operational hypotheses so that cause and effort relationships could be established. Based on the existing research, any conclusions that may be drawn are tenuous at best.

2.14 REVIEW OF THEORY DEVELOPMENT IN PAST RESEARCH

With the exception of Bagozzi (1978), all of the studies reviewed looked upon personality as an internal mechanism that controls behavior. It is the nature of this internal mechanism that determines a person's personality. "Self-theories" or "trait" theories fall into this category. For example, a person is said to possess certain traits, and these traits, in turn, determine how a person will behave in <u>any</u> given situation. Although these studies depended heavily on trait theory in their assessment, none actually developed a theory. Trait theory still has a following as noted by Block (1977). He states if personality studies are competently done, then trait theory can be used. Mischel

(1968) and his followers have developed a theory based on traits and the situation (environment) in which one is working. Only when both internal and external characteristics are combined into an interactive approach can personality be assessed. This approach will be tested in this study.

Throughout much of Chapter II a great amount of criticism has been directed at the theoretical development in this literature base. Weitz (1979) admits that almost all of the studies have been atheoretical in nature. Only Greenberg and Mayer (1966), Lamont and Lundstrom (1977), and Bagozzi (1978) attempted to use theory when choosing personality predictors. With these few exceptions, any of the theory that the researchers have used had to be implied, due to incomplete reporting.

2.15 CONCLUDING REMARKS

In summary, sources of inconsistency have been revealed in this chapter. Some sources are methodological in nature, centered around the quality of reported research (measurement of performance construct, reliability of scales, validity of constructs), while others are conceptual in nature (little or no theoretical base for the research). In essence, most of the past personality-performance research efforts are exploratory in nature, contributing little towards solving the persistent research problems.

Based on the literature that has been reviewed, the following conclusions can be drawn:

1. All but one of the studies reviewed have implicity adopted the trait theorists' point of view, without making an explicit connection between the personality construct-performance relationship in their studies.
2. Personality-performance research has not included the effect of selling situations and their impact on this relationship.
3. Few researchers have concerned themselves with explicating the construct of performance.
4. The reliability and validity of personality-performance measures were never adequately addressed in past research. Only a few studies considered multiple measures of the dependent variable.
5. Most studies gave no proper reasons why specific personality predictors were selected.
6. Past studies have neither provided a theoretical base nor empirical support for the inclusion of a multitude of variables for testing the personality-performance relationship.

Chapter three will focus on developing a background for testing the personality-situation-performance relationship. The chapter will concentrate on suggesting solutions for

some of the persisting problems previously mentioned. Specifically, the proposed research will use:

1. The interactionists framework;
2. Scales developed for testing normal interpersonal behavior; and
3. Multiple measures of performance.

Chapter three will also present the proposed research hypotheses, and design and measurement methodology for this dissertation.

Chapter III

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The term "methodology" has at least four meanings (Kaplan, 1964, pp. (8-27). For a few philosophers, methodology means epistemology, theory of knowledge. For some, methodology is synonymous with the so called scientific method. In this usage, it signifies the more-or-less honorfic formation, observation test, and theory reformulation. For still others, methodology refers to the particular methods, techniques, and procedures used by scientists. Finally, as used by most contemporary philosophers of science, methodology denotes "the study - the description, the explanation, and the justifications of methods, and not the methods themselves" (Kaplan, 1964, p. 181).

In this section methodology will be used in the restricted sense of referring to the procedures of scientific inquiry used in the research. The discussion begins with a description of the conceptual model. Next the variables are presented along with the scales that will be used to operationalize the constructs. Third, the hypotheses and the rationale behind them are outlined. Finally, the research design and procedures are described.

3.2 PROPOSED CONCEPTUAL FRAMEWORK

As opposed to past research which centered on either interpersonal differences predicting the performance of salespeople, or the situation affecting the salesperson performance level, an effort will be made to combine these two viewpoints in this study. The work is consistent with proposed interactional psychology. A statistical-based meaning of a person/situation interaction is the definition of a mediating variable. To the extent that the correlation between A and B varies significantly as a function of some third variable (selling cycle), then that third variable is a mediating (moderator) variable. A mediator affects the bivariate relationships between a predictor and criterion. The three components of the model: person, situation, and performance will be described (See Table 8).

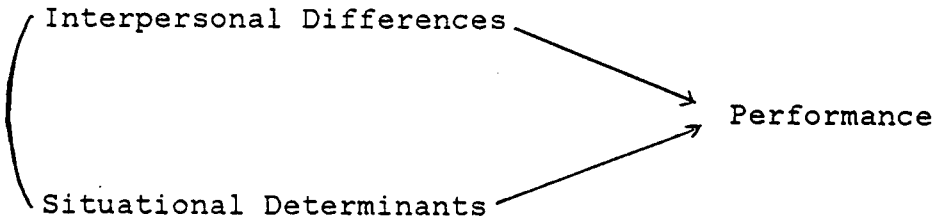
3.2.1 Situation

Two general procedures for construeing a situation have been suggested in the literature (Ekehmmar 1974). The first approach has its origins in the human factors literature and may be called "task response" analysis. This definition focuses on the psychology of the individual.

The second approach, "task description" analysis, seeks an objective description of the task. This approach focuses

TABLE 8

Conceptual Model



Performance = Interpersonal Differences + Situation
(Interpersonal Differences x Situation)
+ Error

on the external characteristics of the task. In one sense, task description may be viewed as an independent variable (Punj and Stewart 1983). "Task description" provides information about the content of the task. In this sense, the situation (task) is viewed as physical characteristics that are in some way coercive, facilitative, or constraining on the individual, his or her performance, or some other physical events related to the individual (Hackman and Lawler 1971). A considerable amount of research has focused on identifying dimensions of the task environment (Punj and Stewart 1983). Newell and Simon (1972) suggest task complexity, time pressure, information format, and information load as potential dimensions of a task typology. It is the differences in the tasks for each of the selling cycles that results in different sales types necessary for success on the job.

3.2.2 Performance

What constitutes performance is somewhat a normative and arbitrary issue. Management sets company and individual salesperson goals based, in part, on the history of sales, the cost of production and administration, profit expectations, the ability of the salespeople, estimates of territory potential, competition, and so on. The salespeople, in

turn, perceive and interpret company goals in terms of their needs and unique situation.

In this research performance will be defined in terms of two broad classes of attributes. The principle category of performance will include the set of normative measures deemed important by management. Rather than limit these to broader measures such as total sales, however, an attempt will be made to identify finer distinctions which better reflect efforts, abilities, and interests of salespeople. As a result, performance will measure new business generated, per cent of quota attained, and number of existing accounts lost.

The second class of performance concepts deals with the more personal aspects of human labor. Salespeople and management are increasingly becoming concerned about the subjective outcomes of the work experience. Managers were asked to rate their salespeople subjectively on a number of dimensions thought to be important to success on the job.

3.2.3 Indepdendent Variables

The independent variables in this study are the personality traits and selling situations. Each variable will be presented along with the method for operationalizing it.

3.3 SITUATIONAL DETERMINANTS

Two selling situations, long and short selling cycles, will be reviewed to uncover differences which may help determine which types of personalities are most appropraite for each (See Table 8). The situational (task) criteria suggested by Newell and Simon (1972): task complexity and time pressure will be discussed in detail for each selling cycle. These two situations were chosen because they (1) represent actual selling situations faced by many firms, (2) on the surface seem to require different personalities and selling styles, and (3) allow for the control of some variables extraneous to the sales situation (e.g. product category, company characteristics, and geographic factors).

It is not unusual that many large computer manufactures are diversifying from large mainframe systems to include medium, small, and bottom of the line personal computers. As technology has brought the cost of computer systems down in line with small businesses and home users, computer manufacturers are faced with reorganizing sales forces to include large systems sales as well as sales to small businesses and professionals. Short selling cycles generally require 1 to 3 months to complete a sale whereas long selling cycle sales require 4 to 6 months, or longer, to complete. Moreover, the two cycles differ in terms of the mo-

ney value of the sale. Small systems costs between $30,000 to $140,000 (Business Week, August 1983). However, larger systems typically will cost $150,000 and upwards. Additionally, the selling cycles have different levels of task complexity. Large systems salespeople must be prepared to deal with more people in the selling process (typically a buying center). This group of people require constant attention and the salesperson must be able to uncover complex interrelationships of the buying center. Each member of the buying center has different needs and goals so a salesperson has to approach and satisfy each differently.

There are not as many close opportunities or presentations made in comparison to short cycle salespeople in the course of a year. This requires that when sales presentations are made by long cycle salespeople the quality of the presentation must be excellent. Typically, these presentations are customized to the specific customer and a great deal of preparation goes into the presentation. On the other hand, the short cycle salespeople deal with fewer people during the selling process. This selling cycle requires that fewer people must be contacted as typically one person has the responsibility to make the decision.

The short cycle salesperson must make many presentations and attempt to close more often than the long cycle sales-

person. A long cycle salesperson may only have to sell one system a year to be considered successful while a short cycle salesperson may have to sell many systems to be considered successful. Less time than is available for customizing presentations by the short cycle salesperson.

The large computer systems selling offers the longer selling cycle, which in turn has the greater task complexity, this requires a personality that includes planfulness because: (1) more technical knowledge is needed, (2) more information must be presented to the customer so longer lead time is needed, and (3) more people must be contacted during the course of the selling process. On the other hand, the small computer systems sales requires the salesperson to make many more contacts, presentations, and close attempts, during a shorter period of time. A planful person may become frustrated in short selling cycle sales so the trait may not be as important for successful selling in this selling cycle.

Finally, the two selling situations were chosen because they allowed for the control of variable extraneous to the relationships studied in the research effort (e.g. company reward systems, product category, company characteristics). For example, each salesperson was rewarded on a salary plus commission basis. Failure to control for this factor could

have resulted in an alternative explanation for the results due to the type of compensation plan. By confirming this study to the same industry, the same type of products (computers), and the same company, these alternative explanations can be rendered less plausible. However, it should be noted that generalizability is greater reduced by these stringent controls. More on this subject will be discussed in the conclusion section.

3.3.1 Personality

This study operationalized three personality characteristics: locus of control, planfulness, and tenacity. Planfulness and tenacity were chosen because of their expected relationship to sales performance. Gwin and Perreault (1981) offer support for these relationships. The role of call planning and its relationship to sales effectiveness is developed in the context of time trade-offs among sales activities. One of the situational determinants was the length of the selling cycle. Salespeople with planful personalities may be more effective in sales jobs that require more planning. Empirical evidence is needed concerning the relationship of planfulness and sales effectiveness in different situations. It may be counterproductive to place a person with a planful personality in a sales job that

doens't require much planning. The very nature of the salesperson's job may require a personality that includes planfulness, depending on the existing time constraints for making a close. On the other hand, sales jobs with short selling cycles may require a personality that is less dependent on planfulness. Locus of control was chosen because evidence suggests that the more internal subjects are, the more resistant they are to attempts to coerce them; the more sensitive they are to challenges to their selling skills, and they seek more information about what is going on around them (Lefcount 1972, 1976).

3.3.1.1 Locus of Control

Locus of control in past research has generally been comprised of having two levels: internal and external. Internal locus of control involves the salesperson's perception that the selling interaction is contingent upon his or her own behavior or his/her relatively permanent characteristics. Certain selling situations call for the salesperson to feel they can make a difference. Other selling situations, by virtue of their nature, will not require a high level of internal locus of control.

External locus of control refers to the salesperson's perception that his/her actions have little effect on the

TABLE 9

Situational Dimensions and Type of Personality Required

	Large Computer Systems	Small Computer Systems
Time		
	4-18 month selling cycle	1-3 month selling cycle
Task Complexity		
	higher task complexity	lower task complexity
	must be prepared to deal with more people (buying center)	deals with fewer people
	fewer presentations	more presentations
	not as many close opportunities	must attempt more closes
Customer Contacts		
	many calls to same customers	fewer calls to same customers
	close personal customer relationship	impersonal customter relationships
	little time prospecting	much time prospecting
	fewer customers	more customers
Required Personality		
	high planfulness	low planfulness
	low tenacity	high tenacity
	high locus of control	low locus of control

sales outcome: the outcome is perceived to be the result of luck, chance, or fate. Certain selling situations by their very nature (i.e. infrequent short customer contacts) may not require that the salesperson has a great deal of control over the outcome. The two levels of this personality construct were measured using the Rotter (1966) Internal-External Locus of Control Scale.

Rotter (1966) described the I-E Scale as an additive scale. That is, the items represent an attempt to sample I-E beliefs across a range of situations, such as interpersonal situations and work situations. Because it samples a variety of areas, the scale can more nearly lay claim to being a measure of generalized expectancy. The research to date has addressed the internal consistency of the scale and test-retest reliability. Concerning internal consistency, it is probably the additive nature of the test that resulted in the moderate but rather uniform set of internal estimates reported by Rotter (1966). These estimates ranged from 0.65 to 0.79. As Rotter suggests, the noncomparability of the items in an additive scale of this type makes it difficult to achieve high estimates of internal consistency (Phares 1976).

Phares (1976) contends in general, the test-retest reliability for the test appear adequate. Rotter (1966) report-

ed reliabilities for several samples that varied from 0.49 to 0.83 depending upon the time interval and the sample involved. These numbers are close to the 0.48 to 0.84 range reported by Hersch and Scheibe (1967). Similarly, Harrow and Terrante (1969) reported a reliability figure of 0.75 over a six-week time span. No sales studies have measured locus of control and figures available from a sales setting are nonexistent. The scale has been most successful when predicting for those who are involved in personal mastery or coping effects. This seems to coincide with the situations described.

The attractive feature of the I-E scale is its brevity (29 items). Other scales reviewed (Nowicki-Duke Scale, Intellectual Achievement Responsibility Questionnaire (IAR), Nowicki-Strickland Locus of Control Scale) were either too lengthy or devised especially for children. At this time, the I-E scale (Rotter 1966) remains the most frequently used test to assess individual differences in locus of control beliefs.

3.3.1.2 Planfulness

Planfulness entails the organization of one's time. In a long selling cycle, typically those associated with a buying center, the salesperson will have to budget his/her time to

insure all the members of the buying team are contacted, qualified, and aware of the salespersons company, products, and capabilities of the sales agent. Once a contact has been made, the salesperson must lay a course as to how to approach the account, who within the organization to contact, and how to make the presentations and close. In the short selling cycle, there is neither the time available nor is it necessary to spend a great deal of time on planning. This is because of the nature of the job to sell many systems to be successful. More time must be spent prospecting and quickly qualifying. These salespeople must be making anywhere from 1-5 new contacts a day to ensure potential close opportunities exist. It should also be pointed out competition for the smaller systems is becoming more intense with the entry of more vendors.

After a brief review of the problems of past personality questionnaires, a discussion will follow on the Hopkin's Personality Inventory (HPI) any why it was chosen.

Instruments to measure personality have come under attack from several sources (Mischel 1969), Kassarjian (1971); Hogan 1983). Recall, Mischel (1968) contends since assessment devices based upon trait theories (e.g., projectives such as the Rorschack and TAT, and personality trait questionnaires such as the Cattell Sixteen Personality Factor Inventory)

are of limited utility in predicting behavior in a situation, the use of such assessment devices may also be called into question. Kassarjian (1971 p.413) presented the problem, "tests validated for specific uses on specific populations, such as college students, or as part of mental hospital intake batteries are applied to available subjects in the general population." Finally, Hogan (1984) argues that many early personality measures (e.g., the MMPI) were designed to detect psychopathology (deviant behavior), and therefore, are inappropriate to the task of personnel selection.

Hogan's HPI was chosen because his instrument attempts to match standard personality dimensions to performance. Hogan contends his dimensions encompass aspects of human performance that are relevant to individual status within a group, and the possession of which makes an individual a more or less desirable group commodity. Hogan developed a "self-report" inventory (HPI) designed to assess these factors. Hogan's work extends the fundamental work of Norman (1963) and suggests there is now a systematic basis for doing personality inventory construction. Hogan constructed a scale with six broad factors which seemed especially crucial for success in any group. They were: intellectance (good memory, generates ideas); self control (planful, caution); ascen-

dance (tenacity, influence level); sociability (sociable, expressive) adjustment (self-confidence, self-esteem); and likeability (tolerance, cooperative, dependable). The six primary scales have an alpha reliability of about .90. Each scale is composed of a set of Homogeneous Item Composites (HIC'S). These HIC'S are like miniature scales, each having an alpha reliability of .50 or better, and each correlating more with its parent scale than with any other. Thus, the six scales are composed of 45 HIC'S. Hogan found, in conducting analysis with this test, that it is possible to utilize them at either the scale or HIC level. Analysis at the HIC level allows for very discrete patterning of prediction on criterion data in a way that faithfully reproduces the complexity of meaningful real world criterion data. At the same time the results are interpretable in psychological terms because the HIC'S are distinct psychometric units.

Hogan mentions that, on theoretical grounds, his research group expected that personality inventory constructed in this manner would be a valid predictor of job performance in the everyday world. There are two reasons for this expectation. First, the dimensions scaled are the primary dimensions of interpersonal evaluation within the context of viable, ongoing groups, and the dimensions reflect competence rather than psychopathology. Secondly, with this inventory,

actors are forced to describe themselves in terms of the dimensions that observers naturally use to make evaluations. In the six validity studies completed to date, his expectations have been met. His work thus far shows that the HPI is a robust predictor of a range of everyday job performance outcomes (Busch, Schroeder, and Biersner 1982; Hogan, Hogan, and Busch 1983; Hogan 1984). To assess the internal consistency of the scales used in the research, Cronbach's alpha reliabilities are calculated for each scale (The survey used in the study can be found in Appendix B).

3.3.1.3 Tenacity

Tenacity implies persistence and repetition (Hogan 1982). Those who sell in short selling cycles find persistence and repetition as part of their regular routine. Frequent customer contacts must be made by those who sell in a short cycle situation. The salesperson will meet repeated failures as many closing attempts are required to meet the goals of selling more systems to be successful. Making more contacts requires more travel. Making many calls does not allow for the planning that a long selling cycle does, but it calls for an individual who will not tire from a strenuous routine. Hogan's HPI (1982) is used to measure this personality construct.

3.4 DEPENDENT VARIABLE

Three major deficiencies have plagued performance measures in past research: (1) convenience was a major criterion in their selection, (2) single indicators were frequently used, and (3) corporations constrained information they would release to researchers. Overall, researchers have focused on a wide variety of predictor variables thought to explain differences in the performance of salespeople in sales organizations. However, far less attention has been given to determining appropriate performance criterion variables (Cothams, 1970). The unimpressive results of previous research in this area may be due, at least in part, to insensitive measures of salesperson performance.

Research in employment psychology has provided ample evidence of the multidimensional nature of performance criteria (Smith, 1976). This means that more than one criterion measure should be utilized when measuring job performance. However, multiple criterion measures should be combined into a single unidimensional composite that yields a measure of job success, or value to the organization or researcher (Fralicx and Raju, 1982). A number of weighting techniques have been recommended for accomplishing this goal. Fralicx and Raju found management weights, equal weights, unit weights, and factor weights to yield almost identical re-

sults. They contend that their results suggest that practitioners may use a simpler method such as equal weights or unit weights while still obtaining a composite as good as the one derived with the more complex method of management weights. They further content that management weights are generally the most desirable way to form a single measure of job success, but it is not always easy to obtain the needed weights. Additionally, a composite can only be used if all of the measures are unidimensional.

A remaining question is which dependent measures should be collected. Cravens and Woodruff (1973) argue that the decision must be made only after interviewing managers within the company being studied. That is, the actual selection of the variables should only be collected after extensive discussions with the firm's management. Although objective (percent of quota attained) and subjective (manager's rating) were initially identified to be collected, others were added through management's input: (1) new accounts generated, (2) number of existing accounts lost in past year, and (3) time and territory management.

Behrman and Perrault's (1975) subjective rating scale was used to rate the salespeople (See Appendix C). The scale was modified slightly by adding the time and territory measure at the request of the company. This was done after top

management reviewed the scale and offered suggestions on how the scale could be adjusted to better meet their needs. The scale measured:

1. salespeoples efforts in working with other personnel in your firm;
2. the extent of their technical knowledge and how they use it;
3. their efforts to control company expenses;
4. their ability to produce sales;
5. their work in promoting customer goodwill for the company;
6. their efforts in providing different types of information to the firm;
7. their skill in giving sales presentations and in dealing with customers during the sales call; and
8. their ability to manage their time and territory.

Each scale gave a short description of what each salesperson was to be rated on. The Behrman and Perreault (1975) scale was a thermometer scale divided into increments of ten. If a salesperson was perceived to be average by the rater, then a score of 50 was to be administered.

3.5 RESEARCH HYPOTHESES

The following hypothesis were derived from the contradictions between trait theory research and situational research. Sawyer and Peter (1983) contend there may be situations which at least allow a sorting out of the best currently available theory from several alternatives. This approach involves comparing competing hypotheses where support for one hypothesis (theory) implies rejection of the others. The interactionistic approach has argued that trait theory alone is not enough to link the performance-personality relationship. The situation in which one is selling is also important. Each general hypothesis has been structured so that rejection of trait theory implies acceptance of the interactionists' theory.

Trait theorists today argue that past research on personality assessment was, in fact, poorly done and with the sophistication and know-how available today, their theory can predict behavior of those who will be successful on the job. Recall, Block (1977 p.3) stated "many studies in the field are poorly done - methodologically inadequate, without conceptual implication, and even foolish." He went on to argue that many studies used concepts loosely, employed inadequate measures, and did not appropriately analyze the data. He reasons that if personality research is poorly executed, the

personality/performance relationship may appear inconsistent when, in fact, little can be concluded from the erratic nature of the findings. Furthermore, Block (1977 p.37) contended "It may well be that the current dismal assessment of the personality literature depends too heavily on the poor 'batting averages' our sloppy empiricism has attained. When pressed to uncover competently performed studies, that support trait theory, Block could only cite one; his own (Block 1971).

As has been noted, the selling literature is abundant with trait theory research. Theoretical support for the personality-performance relationship, when given, was presented in terms of trait theory. For the reasons previously mentioned (i.e., conflicting results), the interaction hypothesis was presented as an alternative theory. The selling situation in which a person is involved was thought to have a moderating influence on the personality-performance relationship. The general hypothesis which tested these two competing theories is:

> H1:00 The interactionists approach to predicting the effect of personality on performance will explain more variance than the trait approach.

The remaining hypotheses were developed to relate specific personality constructs to specific selling situations. If, in fact, the situations are moderating the personality-per-

formance relationship, certain personality attributes might be effective in some selling situations but not in others. If, on the other hand, the trait theorists are correct, there should be no personality differences across selling situations. That is, each personality trait should operate the same way regardless of the specific situation.

The first set of hypotheses deal with the two personality measures planfulness and tenacity. In short selling cycles, such as small computer sales, not a great deal of time is available for planning. If the salesperson is intent on rigorous planning, time may be taken away from calling on potential customers. The person in a short selling cycle must have the tenacity to go out every day and attempt to make more contacts. Because the selling cycle is so short, being at the right place at the right time is much of the battle.

In a long selling cycle, such as larger computer sales, planfulness is a characteristic that is of utmost importance. A great deal of time is spent diagnosing customer problems, interviewing different members of the buying center, and getting ready for the presentation. Usually a custom-made demonstration for each specific prospect is necessary. This selling situation does not allow time for the salesperson to call on as many potential prospects as in the short selling cycle situation. Therefore, the person that

sells large computers may only be rejected 15-20 times a year. As a result, tenacity may not be as necessary in this situation. These notions are presented in the following hypotheses.

> H1:11 In a long selling cycle situation, there is a positive relationship between planfulness and sales performance. The more planful the salesperson, the better the sales performance. There will be a negative relationship between tenacity and sales performance in the long selling cycle situation.
>
> H1:12 In a short selling cycle situation, there is a positive relationship between tenacity and performance. The more tenacious the salesperson, the better the sales performance. There will be a negative relationship between planfulness and sales performance in the short selling cycle situation.

The next two hypotheses deal with internal and external locus of control. In a long selling cycle, an internal locus of control might be important because sales people must believe they can be the difference between making the sale and not making it. If the salesperson in the long selling cycle meets failure, then it would seem imperative that the salesperson take the time to step back and determine which of his or her behaviors need to be changed or enhanced to ensure success in the next contact. That is, because the individual feels accountable for his/her own behavior, he/she should introspectively evaluate the potential causes of failure. Possibly not enough time was spent in the pre-approach, or

inadequate preparation was made for the presentation, or a problem was not solved. In any case, the salesperson spends too much time with one account planning, presenting, and diagnosing to not feel he or she can make a difference.

If, on the other hand, the salesperson had an external locus of control and believed luck, chance, and fate were responsible for the sale, then there would be little incentive for spending the extra time planning activities, writing alternatives proposals, or devoting time to learning about competition or the company's history.

The nature of the short selling cycle does not lend itself to spending great amounts of time on personal assessment. The selling cycle is so short that being at the right place at the right time is essential. Placing an individual with an internal locus of control in a job like that might well frustrate the individual to the point of quitting. Because of the number of contacts that must be made in a short selling cycle, a salesperson does not have time to step back from each failure and analyze it. It may be better to have a salesperson with an external locus of control in this type of selling situation. They can attribute their short term failures to luck and and continue to make more sales contacts. Whether or not "internals" and "externals" may perform better in one selling situation or another is tested in the following hypotheses:

H1:13 In a long selling cycle situation, there is a positive relationship between locus of control and sales performance. The more internal the salesperson, the better the sales performance.

H1:14 In a short selling cycle situation, there is a negative relationship between locus of control and sales performance. The more external a salesperson, the better the sales performance.

Planfulness and locus of control have been hypothesized to positively influence performance such that those who are high (internal) on both should also be successful in long selling cycles. Furthermore, tenacity and locus of control have been hypothesized to influence performance such that those who are high on tenacity and low (external) on locus of control should be successful in the short selling cycle. The result is the following prediction equation:

$$Ssc = a + b_1 T - b_2 L C + b_3 P + e$$

$$Lsc = a + b_1 P + b_2 L C + b_3 T + e$$

where

Ssc = Short selling cycle

Lsc = Long selling cycle

T = Tenacity

LC = Locus of Control

P = Planfulness

The two hypotheses to be tested are:

H1:15 In a long selling cycle situation, internal locus of control and planfulness will increase sales performance, while tenacity will not.

H1:16 In a short selling cycle situation, external locus of control and tenacity will increase sales performance, while planfulness will not

A review of the hypotheses can be found in Table 10.

3.6 SAMPLE SELECTION CRITERIA

To meet the current research objectives the following criteria for sample selection were deemed necessary: (1) salespeople from the same organization, (2) similar reward and performance evaluation systems, and (3) similar products sold by the salesforce. In order to eliminate as many rival hypotheses as possible (e.g. different reward systems or different products sold were the cause of the results) one company was chosen. A very large computer firm offered two selling situations (long selling cycle versus short selling cycle to allow comparison) with similar products and reward systems. The purpose of the study is to test the theoretical relationship between personality-situation-performance, and in this exploratory research study, the sample appears to have the characteristics desired. Tversky and Kahneman (1971) persuasively argue that it is foolish and frustrating for researchers to gather data if there is only a 50-50 chance of obtaining a significant effect. Cohen (1965) and Brewer (1972) suggest that, if one adheres to the conventional Type I error rate of 5%, power ought to be at least

TABLE 10

Summary of Operational Hypotheses

In a long selling cycle situation, there is a positive relationship betweeen planfulness and sales performance. The more planful the salesperson, the better the sales performance. There will be a negative relationship between tenacity and sales performance in the long selling cycle situation.

In a short selling cycle situation, there is a positive relationship between tenacity and performance. The more tenacious the salesperson, the better the sales performance. There will be a negative relationship between planfulness and sales performance in the short selling cycle situation.

In a long selling cycle situation, there is a positive relationship between locus of control and performance. The more internal the salesperson, the better the sales performance.

In a short selling cycle situation, there is a negative relationship between locus of control and performance. The more external a salesperson, the better the sales performance.

In a long selling cycle situation, internal locus of control and planfulness will increase sales performance, while tenacity will not.

In a short selling cycle situation, external locus of locus and tenacity will increase sales performance, while planfulness will not.

80%. Using Cohen's power analysis tables and an expected effect size equal to .5, the desired sample for each selling situation was found to be 50. The nature of the sample does not allow for randomly assigning the salespeople to either of the selling situations and because of this problem a true experimental design is ruled out.

3.7 RESEARCH DESIGN AND EXECUTION OF STUDY

The purpose of the research design is to test the operational hypotheses. This exploratory study employed a correlation survey research design to test the strength of the relationships proposed. Hunter and Gerbing's (1979) procedure for testing the unidimensionality of constructs was used on all the measurement instruments included in the study. The regression equations for each of the sales groups are compared. Differences between the personality/performance relationship should depend on the situation in which they were being tested. Chronbach's alpha will be assessed for all scales. Analysis will center around standard regression procedures which are:

1. Review the scatterplots;
2. Assessing the significance of the overall F ratio;
3. Examining the analysis of variance table;

4. Testing the significance of the t-values for each variable; and
5. Determining the predictive accuracy of the models through the prediction sum of squares (PRESS).

The execution of the study included the following data collection procedures:

1. questionnaire development
2. questionnaire administration
3. dependent variable data
4. sample characteristics

Each area will be covered in detail pertaining to the methods used in implementing the procedures.

3.7.0.4 Questionnaire development

The questionnaire was developed by combining the Rotter Internal/External Locus of Control Scale (29 items) and the Hopkins Personality Inventory (304 items). These two scales were used to operationalize planfulness (17 items), tenacity (8 items), and locus of control (29 items). Churchill, Ford, and Walker's (1974, 1975) scales to measure job satisfaction, role conflict, and job ambiguity (217 items) were also added to the instrument but not used in the analysis. A group of questions preceded the survey that asked for general information from the sales representative (See Appendix

B). The general information questions also required the salespeople to answer ten questions that were proprietary information for the client firm. These questions are not included in Appendix B. The total survey consisted of 585 questions. Because of the length of the survey a pretest was done using a sample of former salespeople and students (N=10). The objective of the pretest was to determine the length of time it took to complete the questionnaire and whether the instructions and questions were clear. The average time to complete the questionnaire was 48 minutes. The instructions and questions appeared to be clear so the survey was sent on to the company to be examined for further changes. The client firm asked that no further changes be made to the questionnaire. All of the scored questions used in the survey were asked in the first 30 minutes of the session. The items from the Churchill, Ford and Walker scales were placed at the end of the survey. Thus, an argument could be made that fatigue played a part in the results, but the fatigue factor was of greater concern for the latter scales and not the personality inventories.

The salespeople were given a sum total score on each of the personality constructs. The sum scores for each salesperson were the data used in the analysis.

Two questions (questions 18 and 20) were asked in the general information section to determine salesperson placement in one of the two selling cycles. Cutoffs were set at three months or less for the short selling cycle group and greater than three months for the long selling cycle group. Furthermore, systems sales of $150,000 or less was the cutoff for short selling cycles and greater than $150,000 for the long selling cycle group. The salespeople had to meet these cutoffs to be placed in either group. The mean scores for the long selling cycle group were 8.7 months and $625,000. The mean scores for the short selling cycle groups were 2.1 months and $100,000.

3.7.0.5 Questionnaire Administration

The entire sample took the survey during a weekly branch meeting held in the branch. None of the salespeople were allowed to take the surveys home to complete. The survey was given to all the salespeople between June 4, 1984 and June 14, 1984. The data collection spanned nine working days in an effort to reduce environmental biases (i.e., one branch informing another branch of the study's intent). The salespeople were asked to respond to the questions by answering on an opscan sheet that could be read by a scanner. During a two week period each salesperson's raw data sheets

were compared to the computer printout and checked for errors. A majority of the data was collected by this researcher going from branch to branch. The data was collected either at nine a.m. or one p.m. and both selling cycles were equally represented during the sessions. The remainder of the surveys were mailed to the branch managers who administered the survey during a branch meeting during the June 4th to 14th time frame. The salespeople were asked to mail the completed questionnaires directly back to the researcher instead of the company in an effort to enhance anomymity. It was felt that this procedure also would cut down on evaluation apprehension.

3.7.0.6 Dependent Variable Data

Objective and subjective measures were collected to assess the major dimensions of salesperson's performance. The objective data was collected from employee records which included quota, number of new accounts generated, and number of existing accounts lost. The subjective performance dimensions included: (1) effectiveness in making sales presentations; (2) providing customers with necessary information; (3) technical knowledge; and (4) success in meeting sales objectives to name a few. Sales managers were asked to evaluate and rate "each salesperson under your authority

as he/she compares with all other salespersons you have known or worked with in a similar situation" on a percentage rating scale (1-100) for each dimension of job performance. A performance composite score was computed based upon ratings on the nine job performance dimensions to determine each salesperson's overall subjective job performance (Berhman, Bigoness, and Perreault 1981).

3.7.0.7 Sample Characteristics

The company surveyed in the study was a large computer manufacturer that sold both large and small scale systems domestically and internationally. The domestic salesforce was used in the study as over 70% of the salesforce took the survey. All of the geographic regions were covered. The company guaranteed 250 respondents and 244 actually took the survey. After incomplete surveys and employees who hadn't worked all of 1983 with the organization were removed the resulting sample used in the study totaled 197. Ninety five were short selling cycle salespeople and one hundred and two were long selling cycle salespeople. The salespeople were told not to sign their name on the response sheets but were asked to provide an employee number so performance scores could be matched to survey responses.

The previous steps were critical in the accomplishment of three main objectives:

1. A division of the salespeople into the two selling situations;
2. The operationalization of the independent variables planfulness, tenacity, and locus of control using the Hopkins Personality Inventory and Rotter I/E; and
3. The gathering of data on the performance measures from the salesmanagers and data on the predictor variables from the salespeople.

3.8 SUMMARY

The proposed research design tests the operational hypotheses developed in this chapter. Specifically, the independent variables, planfulness, tenacity, and locus of control, were measured in two selling situations (long and short selling cycles). A number of performance measures (objective and subjective) were collected, and a composite was formed and correlated with the personality measures.

The personality variables were measured using Hogan's Hopkins Personality Inventory and Rotter I/E scale. The scales used in this study allowed for a departure from more traditional personality traits (e.g. ego-strength, dominance, empathy) toward traits that were thought to be more

directly related to selling (e.g. planfulness, tenacity, locus of control).

Salespeople from a larger computer industry firm were used as the respondents. The data from the personality inventories and the performance measures were analyzed using correlational analysis. Unlike past studies, this study explicitly considered the nature of the selling situation as a moderator of the personality-performance relationship.

Chapter IV

RESULTS AND ANALYSES

4.1 INTRODUCTION

The results of the hypotheses tests are presented in this chapter. First, all preliminary procedures performed on the data are outlined. Next, the analysis of the data are discussed including: (1) testing for multicollinearity of the constructs; (2) separating the data based on long and short selling cycles; and (3) analyzing the results of the study with respects to the hypotheses presented in Chapter III.

4.2 PRELIMINARY PROCEDURES

Prior to submitting the data to regression analysis, a number of preliminary procedures were conducted. Specifically, these involved (1) preparation of data; (2) deletion of cases; (3) study of constructs for unidimensional measurement; (4) assessment of reliability; and (5) determination of power and effect sizes.

4.2.1 Preparation of Data

The salespeople were asked to take a paper and pencil survey of the personality scales. All of the salespeople's responses were placed on computer coded answer sheets. The

salespeoples' responses then formed a data set which was put on the computer. The data set was visually reviewed to check for gaps and the salespersons failure to answer questions. The salespeople received a score on each variable by summing their responses.

4.2.2 Case Deletions

Objective 1983 sales performance data were provided by the sales managers for each individual salesperson. Great care was taken to inform the sales managers that partial years should not be reported for new employees. Forty five out of 244 response sets were deleted because the sales representative had not spent the entire 1983 year in the current territory.

The returned surveys were also examined for completedness. While a vast majority of subjects did a thorough job, two cases had multiple missing values on the independent variables. As a result, these cases were eliminated from further analysis.

4.2.3 Study of Constructs for Unidimensionality

The scales used in the study were assessed using confirmatory factor analysis to determine if they measured the construct purported to being measured. Danes and Mann

(1984) and Hunter and Gerbing (1982) offer a number of techniques for evaluating and creating a set of unidimensional indicators: internal consistency, external consistency, and homogeneity of content. Each of these concepts will be defined.

4.2.4 Internal Consistency

The causal relations between the items of a unidimensional cluster are determined by their causal relationship to the underlying trait. Thus, a useful guide for the evaluation of the fit of the observed correlations among the items on the scale is an inspection of the correlation matrix. If all the items in a cluster measure the same factor, then the correlations between the items ought to be uniformly high and consistent.

Another test for internal consistency is an inspection of the partial correlation matrix that partials out the trait variable. If the cluster is unidimensional, each partial correlation should be close to zero and only represent sampling error. Thus, if all the items in a cluster measure the same factor, the partial correlations between items ought to be uniformly low (i.e. near zero) and consistent.

4.2.5 External Consistency

A second test for unidimensional measurement is parallelism. Hunter and Gerbing (1982) contend the criterion of external consistency (parallelism) specifies how these items should correlate with variables outside of the cluster. The items in a unidimensional cluster should have similar patterns of correlations with items in other clusters or traits. The general statement of parallelism is that the items in a unidimensional cluster have similar patterns of correlations with (1) items in other clusters or (2) other traits. Thus, when items from planfulness are correlated with an item from tenacity, the inter-item correlations should be about the same (within sampling error).

4.2.6 Homogeneity of Content

Homogeneity of content should be discussed when determining unidimensional measurement. This procedure is more of an art than a science. The attempt during survey construction is to pick items that have approximately the same semantic meaning. Thus, one is attempting to measure one construct by asking multiple questions and any carelessness in this procedure is assumed to be random and will average out for a large number of items. An expert in the field of study would be a good start to review questions and check them for

face and content validity. It is imperative that the researcher generate a large number of items to overcome bad items that will drop out of the pool. Items should not be mixed together in the same cluster unless the items share a specific and common meaning.

4.2.7 Criterion for Testing for Unidimensionality of Constructs

The criterion used in this study to delete scale items that are not unidimensional are:

(1): The inter-item correlation matrix was analyzed to determine if the correlations were consistent (similar) across all items in the pool. Also the partial correlations were assessed as a second test of internal consistency.

(2): The similarity coefficients were assessed to determine if the items' coefficients in the pool were correlating consistently with items outside the pool.

(3): the factor loadings were assessed to determine if the items were loading on the parent construct or one of the other constructs in the measurement model. For example, a planfulness item must be more highly correlated to the planfulness construct than tenacity or locus of control.

4.2.8 Test of Unidimensional Measurement

The measurement model that was tested included the Rotter Internal/External Locus of Control Scale (29 items), two scales from the Hopkins Personality Inventory, planfulness and tenacity (17 and 8 items), and 12 performance measures (9 subjective, and 3 objective). Each scale will be individually evaluated based on the criterion presented (See Table 11 for the constructs investigated and a sample of operational indicators).

4.2.9 The Rotter I/E Locus of Control

The I/E scale was tested for unidimensionality based on the criterion previously mentioned (i.e. internal consistency, external consistency, factor loading assessment). It should be noted questions 2, 8, 14, 19, and 24 are filler questions that are not scored. These questions are used to keep those who are taking the test from guessing its intent. These questions should not and do not fit in with the others. The pairwise correlations are contained in Appendix D. Items 10 and 13 are not correlating as highly and consistently as with the remaining item correlations. The factor loadings for items 10 and 13 are also low when compared to the remaining items (See Table 12). A majority of the scored items have factor loadings in the 30's, 40's and 50's

TABLE 11

Sample of Constructs Investigated and Operational Indicators

Theoretical Construct	Variable Code	Operational Indicator
Locus of Control	L6	a. Without the right breaks one cannot be an effective leader. b. Capable people who fail to become leaders have not taken advantage of their opportunities.
	L8*	a. Heredity plays the major role in determining one's personality. b. It is one's experiences in life which determine what they're like.
	L11	a. Becoming a success is a matter of hard work, luck has little or nothing to do with it. b. Getting a good job depends mainly on being in the right place at the right time.
	L28	a. What happens to me is my own doing. b. Sometimes I feel that I don't have enough control over the direction my life is taking.
Planfulness	P2	I never know what I will do tomorrow.
	P3	I plan my work very carefully in advance.
	P6	It is always best to stick with a plan that works.

	P14*	I won't start a job unless I know I can finish it.
Tenacity	T1	Success is mostly a matter of will power.
	T2*	I have learned to accept failure.
	T3	If I decide I want something, I won't quit until I have it.
	T4*	I have a tendency to give up when I meet difficult problems.

* Items have been dropped from pool.

while items 10 and 13 are in the teens. Non-scored items such as 8 and 14 have factor loadings just about as high as items 10 and 13. This suggests items 10 and 13 may be measuring something other than locus of control.

4.2.9.1 Planfulness

The pairwise correlations are contained in Appendix D. Items 43, 44, and 46 are not correlating as highly as the remaining items in the pool. In fact, item 46 is the only item in the pool that correlates negatively with the remaining items. The factor loadings are also very consistent except for items 43, 44, and 46 (See Table 12). It should be noted that items 43, 44, and 46 loaded more highly on tenacity than the parent planfulness scale (Appendix E). This suggests these three items are measuring something other than planfulness. The similarity coefficients for items 43, 44, and 46 are inconsistent with the remaining items. For example, the similarity coefficients for the remaining item are approximately .5 while item 43 has similarly coefficients with items 37-41 as .116; .249, .147, .372 and .312. Based on this analysis, item 43, 44, and 46 will be removed from the items to be used in the analysis.

TABLE 12

Factor Loadings

Locus of Control

Vbl. Number	Factor Loading
1	33
2	-3*
3	23
4	37
5	39
6	31
7	32
8	15*
9	22
10	19*
11	51
12	51
13	13*
14	13*
15	44
16	41
17	49
18	46
19	-11*
20	29
21	24
22	43
23	26
24	-3*
25	55
26	27
27	31
28	41
29	21

* Items have been dropped from pool.

Planfulness		Tenacity	
Vbl. Number	Factor Loading	Vbl. Number	Factor Loading
30	39	47	54
31	51	48	-8*
32	50	49	46
33	46	50	0*
34	58	51	35
35	44	52	26
36	38	53	28
37	33	54	24
38	46		
39	40		
40	40	Performance	
41	27		
42	41	Vbl. Number	Factor Loading
43	18*		
44	22*	Subjective Measures	
45	38	55	69
46	-17*	56	78
		57	22
		58	81
		59	86
		60	77
		61	87
		62	85
		63	94
		Objective Measures	
		64	23
		65	-7
		66	5

* Items have been dropped from pool.

4.2.9.2 Tenacity

The pairwise correlations for the construct tenacity can be found in Appendix D. Items 48 and 50 appear to be quite different from the remaining items as these two items are consistently negative. One advantage of running confirmatory facator analysis is the two negative items alerts the researcher to the fact the questions could have been coded wrong or they need to be recoded because the negative questions getting at the construct tenacity. After a thorough check, this was not found to be the case. All of the questions were coded correctly. Items 48 and 50 were inconsistent when compared to the factor loadings for each of the tenacity items (See Table 12). Items 48 and 50 correlated as highly with the other constructs as they do with tenacity. The similarity coefficients are also low and inconsistent in comparison to the remaining items. Based on the correlation matrix analysis and the similarity coefficients analysis items 48 and 50 were removed from the eight item tenacity scale.

4.2.9.3 Performance

The pairwise correlations for performance can be found in Appendix D. The scale included nine subjective measures (items 55-63) and three objective measures (items 64-66).

The objective measures have lower correlations than the subjective. The two sets of items appear to be tapping two different dimensions of performance. The correlations for both sets are internally high but the objective measures are lower. The factor loadings seem to also suggest the subjective measures group together as one performance construct and the objective do the same (See Table 12).

The subjective and objective measures will be kept separate and the single measure of quota attained will be used to test the hypotheses. For a summary of the eliminated items and their violation see Table 13.

4.2.10 Summary of Unidimensionality

The scales were assessed on whether they were internally consistent, externally consistent, and loaded on the parent scale more highly than on another scale. Hunter (1979) recommends the analysis be rerun with only the items to be included in the measurement model. Confirmatory factor analysis was rerun and the scales were found to be internally consistent and and all of the factor loadings were high and uniform. Finally, the similarity coefficients were consistent for the remaining items. A review of the remaining items can be found in Appendix F.

TABLE 13

Summary of Item Elimination

Locus of Control	Correlation Matrix Violation Internal Consistency	Similarity Violation External Consistency	Factor Loading Violation
2 (not scored)			
8 (not scored)			
10	x	x	x
13		x	x
14 (not scored)			
19 (not scored)			
24 (not scored)			
27 (not scored)			
Planfulness			
43	x	x	x
44	x	x	x
46	x	x	x
Tenacity			
48	x	x	x
50	x	x	x
Performance			
55	x		
56	x		
56	x		
57	x		
58	x		
59	x		
60	x		
61	x		
62	x		
63	x		
64	x		
65	x		
66	x		

note: x means item was eliminated for reason provided by column heading.

4.2.11 Reliability Assessment

The reliability and unidimensionality of a set of indicators are independent concepts (Green, Lissitz, and Mulaik 1977). If a number of items are unidimensional, then all the items measure the same trait. Just because an item is reliable does not mean the indicator is part of an unidimensional construct. Thus, the value of alpha should be interpreted only after the items have been demonstrated to satisfy the criteria of unidimensionality. For example, performance has a coefficient alpha of 0.88 but only after confirmatory factor analysis is run can one determine that new and lost accounts are not unidimensional and the managerial scales and percent of quota are tapping two different aspects of performance. The full model and the new model coefficient alphas are listed in Table 14. When the indicators were eliminated from the scales, which were not measuring the constructs, the coefficient alphas improved. Tenacity's reliability increased from .34 to .46 by eliminating items 48 and 50. Although tenacity's reliability is still low, it does approach the reliabilities reported by Hogan (alpha = .51) for the previous research efforts (1980). Because reliabilities in excess of .6 generally are

regarded as sufficient for research purposes (Nunally 1967) the remaining constructs are generally reliable when compared to results by other researchers. Further, these values compare favorably with those found by other researchers (Hogan 1982, Rotter 1966).

Based on this preliminary analysis, it was concluded that three of the four groups of variables provided reliable measures of the four underlying constructs.

4.2.12 Multicollinearity

Whenever more than one independent variable is being measured in a regression analysis, it is necessary to determine the extent to which the explanatory variables can be treated as relatively distinct or whether the variables are multicollinear (i.e., they measure the same construct). Montgomery and Peck (1982) contend multicollinearity can be assessed using the variance inflation estimator. The variance inflation estimator is the degree in which a change in one variable influences change in another. Thus, the lower the variance inflation estimator the less influence one variable has on another and the variables are said to be independent. A score of less than ten is accepted as low multicollinearity (Montgomery and Peck 1982). The highest variance inflation factor is for tenacity at 1.201. Thus, multicollinear-

TABLE 14

Reliabilities (coefficient α)

Scale	Full Model	New Model
Locus of Control	.72	.75
Planfulness	.72	.75
Tenacity	.34	.46
Performance	1.00	1.00

TABLE 15

Variables Used in Data Analysis after Package was Run

CONSTRUCT	VARIABLES
Locus of Control	1, 3, 4-7, 9, 11-12, 15-18, 20-23, 25, 26, 28, 29
Planfulness	30-42, 45
Tenacity	47, 49, 51-54
Performance	64

ity is most likely not a problem, and the explanatory variables can be treated as orthogonal or relatively independent of each other (see Table 17).

4.2.13 Selling Cycles

Two measures were reported by the salespeople to indicate what types of accounts they called on. First, they indicated how long it took from initial customer contact to the close of the sale (on the average). Second, the salespeople reported the average cost of the systems they sold. Cutoffs for the two samples were three months or less and systems that sold for less than $150,000 for the short selling cycle salespeople and greater than three months and $150,000 for the long cycle (Business Week, August 1983, p.21). There were 95 usable short selling cycle responses and 106 usable long selling cycle responses. Forty-five salespeople did not meet the requirements of having a full 1983 sales year with the company and two did not complete the questionnaire properly (See Table 18).

4.2.14 Analysis

Responses remaining after the before-mentioned deletions constituted the data input for subsequent analysis. Table 19 depicts the response means and standard deviations for

TABLE 17

Variance Inflation Factors

Variables	Short Cycle	Long Cycle	Combined Cycles
Locus of Control	1.113	1.082	1.098
Planfulness	1.048	1.089	1.067
Tenacity	1.107	1.031	1.044

TABLE 18

Questionnaire Response Set

	Long	Short	Total
Number of Questionnaires Completed	129	115	244
Did not spend all of 1983 selling	25	20	45
Questionnaire Not Complete	2	0	2
Number of Usable Questionnaires	102	95	197

the long and short selling cycle groups, respectively. It should be noted that planfulness and tenacity were reversed scored. A low score on both variables means a high level of the personality trait. An examination of Table 19 reveals differences between the mean responses of various independent variables under the different selling cycle levels. For instance, the mean responses for the long selling group is significantly higher than the mean responses for the short selling cycle group for locus of control and planfulness. For planfulness, the short selling cycle mean is significantly larger than the long selling mean indicating the long selling cycle group is more planful. However, there is no significant difference between the two cycles in terms of tenacity. The formula for the t-test with unequal samples was used and can be found in Ott (1977 p.117). The t-test formula is as follows:

$$t_1 = \frac{Y_1 - Y_2}{S_1{}^2/n_1) + (S_2{}^2/n_2)}$$

Y_1 = mean group one

Y_2 = mean group two

$S_1{}^2$ = variance group one

S_2^2 = variance group two

n_1 = sample size of group one

n_2 = sample size of group two

4.2.15 Regression Model Results

The results of the multiple regression analyses for the two models are presented in Table 20 and 21 respectively. A discussion of each model will follow in the next sections.

4.2.16 Regression Analysis for the Short Selling Cycle

The model presented in Table 20 shows locus of control and tenacity to be significant predictors of sales performance. As hypothesized, locus of control has a significant negative relationship on performance. Also a tenacity has a significant negative relationship on performance. Low scores mean high levels of tenacity so the negative relationship was expected. In this model the t-test is significant and indicates at least one of the predictors is significant. In this case locus of control is the most important predictor and tenacity, the second most important predictor. The t-test for the short selling cycle indicates locus of control and tenacity were significant at the .0009 and .0468

TABLE 19

Means and Standard Deviations and Differences Between Selling Cycles

SHORT SELLING CYCLE SAMPLE

Scale	Number of Items	Possible Range	Mean	Standard Deviation
Locus of Control	29	0-29	13.84	3.61
Planfulness	17	0-17	7.08	2.87
Tenacity	8	0-8	4.94	1.12

LONG SELLING CYCLE SAMPLE

Scale	Number of Items	Possible Range	Mean	Standard Deviation
Locus of Control	29	0-29	15.39	3.64
Planfulness	17	0-17	8.87	2.77
Tenacity	8	0-8	4.86	1.16

levels respectively. The adjusted R^2 for the short selling cycle group is .10.

4.2.17 Regression Analysis for the Long Selling Cycle

The model presented in Table 21 shows locus of control and planfulness to be significant predictors of sales performance. As hypothesized, locus of control has a significant positive relationship to performance. That is, the more a salesperson takes personal control over his/her life, the more successful he/she will be. Also, planfulness has a significant negative relationship on performance. Since low scores mean greater planfulness, this result was expected. In this model, the t-test is significant and indicates at least one of the predictors is significant or the null is not equal to 0. In this case planfulness is the most important predictor of performance. Locus of control is the second most important predictor and tenacity the least important. The t-test for the long selling cycle predictors, locus of control and planfulness, were significant at the .001 and .0001 levels respectively. In addition, the value of the adjusted R^2 for the long selling cycle group is relatively high (e.g. explaining 36% of the variation in sales performance for the long cycle sample) and compares favorably with those of previous marketing studies (Bagozzi 1978; .15 to .61 and Lamont and Lundstrom 1977; .33 to .42).

4.3 CORRECTION FOR ATTENUATION

If a researcher wishes to determine the relationship between two theoretical variables, or latent traits, he/she may construct scales to measure them. If the relationship between these scales is linear, then the correlation coefficient indicates the measure of association between the scales. These scales contain error, however, and hence the correlation between the scales is less than the correlation between the traits. If, however, it can be presumed as a reasonable approximation that the true scores on the measurement can be taken to be the traits in question, then an attenuation formula can be used to compute the true correlation between the traits (Lord and Novick 1968).

The idea is that the correlation between observed scores is less than the correlation between corresponding true scores because the former correlation is attenuated by the unreliability of the measurements. If the reliabilities of the measurements are known, then a formula may be used to compute the disattenuated correlations, i.e., the correlations between the corresponding true scores. Thus, by using the attenuation formula, the result gives the correlation between measurements "corrected" for the unreliability of one or both measurements.

The formula used was: $p(Tx, Ty) = \frac{pxy}{relx\ rely}$

p = correlation

T = True Score

x = variable 1

y = variable 2 rel = reliability

The inflated correlations were reentered into the regression analysis and the short selling cycle adjusted R^2 went from .10 to .15. The long selling cycle adjusted R^2 went from .36 to .51. Thus after adjusting for measurement error the true correlation between the traits gives a better indication of the proposed relationships.

4.3.1 Regression Analysis for Both Selling Cycles Combined

When both the long and short cycle samples are combined to form a single cross sectional sample of computer salespeople only planfulness is related to performance (See Table 22). Locus of control and tenacity clearly are not important indicators of sales performance for this group. Moreover, the adjusted R^2 for the aggregate sample is quite low (R^2=.03), suggesting the variables selected for the overall group are not meaningful predictors of sales performance. The evidence in the three regression models does suggest meaningful groupings of predictors and moderators does enhance the fit of the models. The purpose of the study was to demonstrate that different selling situations would require

TABLE 20

Regression Analysis For Short Selling Cycle

Variable	DF	Parameter Estimate	Standard Error	Standard Estimate	T for Ho: Para = 0
Intercept	1	161.831	38.182	.000	4.238
Locus of Control	1	-7.025	2.014	-.363	-3.489
Planfulness	1	-2.632	2.523	.102	0.672
Tenacity	1	10.719	6.538	-.169	1.639

Source	Df	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	66265.2	22088.39	4.897	.0035
Error	91	410485	4583.141		
C Total	94	476750			

ROOT MSE	67.69	R-Square	.1390
Dep Mean	98.92	ADJ R-SQ	.1106
C.V.	68.43		

TABLE 21

Regression Analysis For Long Selling Cycle

Variable	DF	Parameter Estimate	Standard Error	Standard Estimate	T for Ho: Para = 0
Intercept	1	-88.689	33.3465	.000	-2.66
Locus of Control	1	5.2115	1.5801	.273	3.297
Planfulness	1	11.8794	2.2279	-.454	-5.332
Tenacity	1	.94432	4.8745	.015	.194

Source	Df	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	174635	58211.81	18.207	.0001
Error	98	313320	3197.147		
C Total	101	487956			

ROOT MSE	56.54	R-Square	.3795
Dep Mean	100.22	ADJ R-SQ	.3605
C.V.	56.45		

TABLE 22

Regression Analysis For the Aggregate Sample

Variable	DF	Parameter Estimate	Standard Error	Standard Estimate	T for Ho: Para = 0
Intercept	1	45.73	27.879	0.00	1.640
Locus of Control	1	-.167	1.391	-.01	-0.12
Planfulness	1	4.592	1.802	-0.18	2.548
Tenacity	1	-3.982	4.419	0.07	-0.901

Source	Df	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	38470	12823.47	2.672	.0479
Error	193	926319	4799.58		
C Total	196	964789			

ROOT MSE	68.82	R-Square	.04
Dep Mean	99.60	ADJ R-SQ	.03
C.V.	69.10		

different attributes to be successful on the job. Trait theorists believe that if a personality construct is important to success in a given sales type, then it will be important to the success of all sales types regardless of the situations in which they are selling. Past research has held fast to this rule as previous attempts to study personality-performance has analized the aggregate results only. The evidence presented in this study indicates the selling situation is a mediator of personality-performance and should be included in future research.

4.3.2 Power and Effect Size

In past studies it was the rule to base conclusions on p-values. However, p-values may indicate the statistical insignificance of a relationship, as well as, low effect size. On the other hand statistical significance does not imply large effect sizes. Effect sizes should however, be taken into consideration when interpreting statistically significant results. In fact, low effect size and statistical significance ($p < .05$) at best imply a weak relationship. However, p-values alone may have lead to a different conclusion. In addition, effect sizes allow one to combine the results across studies and increase statistical power.

This study's reliance on effect sizes to decide the significance of the findings provides a better way to understanding the relationship and therefore can be considered as an improvement over past studies. Cohen (1977, p. 40) lists the following guidelines for effect sizes: small = .2, medium = .5, and large = .8. The power and effect sizes for this study along with Bagozzi's (1979) are reviewed in Table 16. At best, effect sizes in the Bagozzi study were small. On the other hand, planfulness and locus of control have large effect sizes for the long and short selling cycle groups. Statistical significance in this case along with the large effect size offers a more substantive conclusion.

Bagozzi (1979) may have had small effect sizes because of smaller sample size and a weaker manipulation of the selling situation. One of the groups in the study had on N = 38 while the other was N =123. The selling situation was manipulated depending on whether a geographic territory was assigned or whether accounts were assigned to the salesperson. The products that were sold by both groups were the same. Not enough information was given, but there is the possibility the selling situations were not different enough to find significant differences between the groups.

TABLE 16

Power and Effect Size Comparison between Current Study and the Bagozzi Study

Variable	Effect Size	Power
Locus of Control	.84	>.995
Planfulness	.67	>.995
Tenacity	.066	<.26

Bagozzi Study Variable	Effect Size	Power
Role Ambiguity	.11	.23
Job Related Index	.16	<.56
Specific Self Esteem	.23	.56
Generalized Self Esteem	.03	<.23
Job Satisfaction	.004	<.23
Other Directedness	.06	<.23

$$\text{Effect Size} = \frac{m_1 - m_2}{\dfrac{(n_1-1)s_1 + (n_2-1)s_2}{n_1+n_2-2}}$$

Where: m_1 = mean of group 1 (short selling cycle)
m_2 = mean of group 2 (long selling cycle)
n_i = sample size of each group.
s_i = standard deviation for each group.

4.3.3 The PRESS Statistic

The PRESS (Predictive Sum of Squares) statistic is concerned with the predictive ability of a particular model. The PRESS statistic is useful in determining the best model from the standpoint of prediction. This statisic is quite beneficial in discriminating between alternative competing models. Most validation techniques involve either collecting new data or some form of data splitting. In both cases a model is estimated and used to predict the values in the new or split data set. PRESS is one form of data splitting and was used as an additional means of validation.

The procedure selects an observation and deletes this observation from the data. Regression calculations are performed on the remaining data. Next the obtained equation calculates the dependent variable of the omitted point and compares this to the actual value. The procedure is repeated for each point in the data set. The difference in the observed and calculated is squared and summed over all observation points to obtain the PRESS statistic. In summary, the PRESS statistic indicates which model provides the best fit to the data. The PRESS statistic is useful in evaluating alternative models when the objective is prediction. A value of PRESS has been calculated for each model under consideration and the model selected was the model with the smallest PRESS (See Table 23).

TABLE 23

Models Sorted by PRESS

Short Selling Cycle Sorted by PRESS

Model	Locus	Plan	Ten	PRESS
1	y	n	y	446567
2	y	n	n	448199
3	y	y	y	454830
4	y	y	n	455169
5	n	n	n	486948
6	n	y	n	490557
7	n	n	y	493748
8	n	y	y	497425

Long Selling Cycle Sorted by PRESS

Model	Locus	Plan	Ten	PRESS
1	y	y	n	320149
2	y	y	y	325496
3	n	y	n	350691
4	n	y	y	355981
5	y	n	n	426351
6	y	n	y	435209
7	n	n	n	497666
8	n	n	y	502375

Y=Yes the variable was included in the model
N=No the variable was not included in the model

The PRESS statistic indicates that the best predictive model for the short selling cycle group includes both locus of control and tenacity. The PRESS statistic indicates that the best predictive model for the long selling cycle group includes both locus of control and planfulness.

4.3.3.1 Results of the Hypothesis Tests

The following sections will review the results in terms of the hypotheses originally presented.

4.3.3.2 Planfulness

The first hypothesis dealt with the effect of planfulness and its impact on salesperson performance. Specifically, it was hypothesized that planful salespeople will be more successful in long selling cycle jobs than short selling cycle jobs. Therefore, placing salespeople in the type of situation most conducive to their personality should give them the opportunity to be more productive. Alternatively, placing salespeople in a situation that is not conducive to their personality would frustrate them and contribute to lower performance.

In general, the results supported this hypothesis. In the long selling cycle group, planfulness had a significant effect on performance. The evidence from this sample indi-

cates planful salespeople are more successful in long selling cycle than salespeople that are not planful. Also, planfulness does not appear to be an important trait for predicting performance in short selling cycles.

4.3.4 Tenacity

The second hypothesis dealt with the effect of tenacity and its impact on salesperson performance. This hypothesis suggested that tenacious salespeople with high level of tenacity will be more successful in short selling cycle jobs than long selling cycle positions. People who sell small computer systems must contact at any one time a large number of accounts and constantly be seeking out new prospects. Alternatively, long selling cycle salespeople may only deal with 3-4 prospects for an entire year.

The role of tenacity is a bit more difficult to interpret because of a restriction of range problem. As the mean scores indicates for the two groups the short selling cycle group is barely different from the long selling cycle group. The tenacity means in Table 19 shows a vast majority of the salespeople perceiving themselves to be tenacious. It may be that most salespeople who self-select into this sales organization or industry are in fact highly tenacious. This would explain why the tenacity scores are high. There is

not enough variability in the tenacity measure to allow an assessment of its importance as a predictor of sales performance in the computer industry. The HPI tenacity scale may have the potential for being a good discriminator between other types of salespeople but does not seem to have the ability to predict when used solely for computer salespeople within one firm. Although tenacity is a significant contributor to performance for the short selling cycle salespeople, the small effect size indicates the results are tenuous. Further evidence emerges when the small R^2 is also taken into consideration. It would appear a different model for the short selling cycle salespeople must be developed and tested. It should include tenacity but a great deal of variation is left unexplained and points to other predictors which have been left out of this model.

4.3.5 Locus of Control

The third and fourth hypotheses suggested that a salesperson's belief whether they control their environment or whether their environment controls them would make a difference in what selling situation they would be best suited for. It was hypothesized that locus of control would be positively related to performance for the long selling cycle group. Further; it was hypothesized that locus of control

and planfulness would be negatively related for the short selling cycle group.

Overall, the results supported these hypotheses. Salespeople who spend a great amount of time on an account must feel they have some control over the outcome. If salespeople lose an account, they must go back and study why the account was lost and determine what can be done to enhance their chances on the next account.

The short selling cycle representative is involved with many new and old prospects. Many times a deal is completed by being at the right place at the right time. The salesperson does not have the time to evaluate each specific account on what went wrong. This salesperson would be better off to find new prospects and move on. The results show a significant negative relationship between locus of control and performance. Specifically, the more external locus of control one possesses the more productive the salesperson. This suggests locus of control can be used as a discriminatory to place salespeople into different selling situations.

4.3.6 Locus of Control, Tenacity, and Planfulness

The fifth and sixth hypotheses combine the relevant variables to contend planfulness and an internal locus of control are most important in a long cycle sales while tenacity and

an external locus of control are appropriate for short cycle sales. The standard estimates support these contentions. The standard estimates can be rank ordered to indicate which variables are most important to prediction.

4.3.7 Chapter Summary

This chapter has presented the analysis used to test this study's six hypotheses regarding the relationship between personality-performance moderated by the selling cycle.

Although the R^2 is lower than anticipated for the short selling cycle sample, the effort of this study was to show the two groups to be different in the types of success traits needed to be successful in the two selling situations. One explanation for the low R^2 is the variable selected for the short cycles to be tested were not the right ones for the situation at hand. Another evaluation is the inability of the tenacity scale to discriminate between salespeople in the different selling situations. A restriction of range problem existed, a vast majority of the salespeople perceived themselves to be tenacious. There was little variability in the tenacious scores, thus, tenacity contributed only a small percentage of the R^2.

Different regression models surfaced for the two groups as hypothesized and supports the interactionists viewpoint

that it is important to study the person and the situation they are selling in when attempting to predict the types of people who will be successful in the sales job.

Chapter V

CONCLUSIONS

5.1 INTRODUCTION

The last chapter of this dissertation begins by providing a brief overview of the study and a discussion of the major findings. Based on the interpretations of these results the significance of the research is examined. Finally, the chapter concludes with an analysis of the limitations of the research and a discussion of possible directions for future research.

5.2 STUDY OVERVIEW

The overall objective of the study was to test the iteractionists perspective that performance would be a function of the person and the selling situation in which they participated. In constrast to the traditional trait theorists approach of studying personality, the interactionists views behavioral outcomes to rely on not only the person effect but the situation effect also. Empirically, the effect of the personality cue has been examined in the context of personality - performance, but researchers have been slow to adopt the interactionists perpective and research has been slow to develop in this arena. Consequently, this research

examined the role of the selling situation and its effect on the personality-performance relationship. Specifically, an examination was made of the effects of the: (1) long selling cycle represented by those who sell products which take longer than 3 months to sell; (2) short selling cycle represented by those who sell products which take less than 3 months to sell; (3) and the role of three personality constructs; locus of control, planfulness, and tenacity. These independent variables were examined with respect to their impact on the salespeoples performances measured by objective performance measures. A moderated regression analysis was implemented using the two selling situations to moderate the personality - performance relationship.

5.2.1 Discussion of Major Findings

Overall, this study lends support to the conceptual scheme and previous research (mostly outside of Marketing) that suggests performance is a function of the personality of the salesperson and the selling situation in which they participate. Further, in a sales performance measurement context great care must be taken to ensure the construct is indeed unidimensional. Although coefficient alpha was .88 for all performance measures, the confirmatory factor analysis indicated some problem with using both subjective and

objective measures combined. Further, the results are consistent with the original hypothetical hypotheses.

The results of the hypothesis tested will be summarized and a discussion of the conclusions that can be drawn from the tests and their implications will follow. The results are:

1. the planfulness-performance relationship was significant in the long selling cycle group.

2. the locus of control-performance relationship was positive and significant in the long selling cycle group.

3. the tenacity - performance relationship was significant in the short selling cycle group (Small effect size indicates weak relationship).

4. the locus of control-performance relationship was negative and significant in the short selling cycle group.

While the overall results look good, the long selling cycle regression has a much larger R^2. Even though locus of control and tenacity are significant for the short selling cycle group, the concern centers on one or more important variables that are unaccounted for. A speculation into this problem centers on the restriction of range in the tenacity construct. Most everyone perceived themselves as being tenacious. The tenacity measures could not discriminate between low and high tenacious salespeople because most were in

the top 20% of the range. More precise scales will have to be developed to overcome this ceiling effect.

After reviewing the results it is possible to make a number of observations pertaining to their significance. A problem with past research is the multitude of studies that found a particular variable significant in one sales setting but insignificant in another. Part of the problem may rest with improper measurement (i.e., use of wrong scales) and too small of sample (i.e. low power). But a majority of the studies did not build a model in an a priori fashion and ended up correlating many independent variables with a dependent performance measure. This may signal that in a number of the studies predictor variables used were not appropriate for that particular sales settings. The trait approach encourages this type of research and was the underlying theoretical approach accepted by most researchers. The person-situation approach at the very least should force the researcher to look at the situation and build a theoretical model that reflects predictor variables that seem appropriate for the selling situation. If this is not done and many predictor variables are used as in past research, then the interactionists perspective is no better than trait theory. The Interactionists do offer an explanation as to how personaltiy variables can be important in one selling

situation and not in another. Their perspective would answer the question on the inconsistencies in past findings. The interactionist alternative hypothesis is some variables were being measured in settings they had no business of being studied in the first place. In other words the predictors were not important or not as important as another set that should have been developed in that specific setting. Finally, not only do the results confirm that planfulness in a long selling cycle is an important indicator of sales performance, but they also suggest that planfulness is a discriminator that can be used to place salespeople into a specific selling situation in line with their personality. The next step is to place new salespeople into one of the selling cycles based on their score on the planfulness measure. Highly planful people should be placed in the long selling cycle and their career paths monitored. People who score low on planfulness should be placed in the short selling cycle.

5.2.1.1 Implications

This study has implication for (1) selection, (2) placement, and (3) turnover. The current research has important implications for the organization that has more than one type of selling atmosphere as well as the organization which

only has one type. Specifically, the research addresses the following managerially relevant question: Can salespeople be placed in selling situations that are conducive to their personality which will result in a longer period of time on the job and a higher success rate? In general the current research suggests that different types of individuals do indeed fit into long and short selling cycle opportunities. Organizations need to review the differences in the selling tasks that they believe are relevant to success and interview individuals with the intent to match those who are best suited for that specific job. This idea would in turn spillover to selection as interviewers could be trained to probe and get at the issues that are relevant (i.e. long periods of time with no sales, constant prospecting) for success. If interviewers can be made aware of these differences then their success rate of placing people into selling situations ought to improve, and satisfaction of the salesforce should in turn be enhanced. For organizations that have only one type of selling situation they too, should be aware of the factors that are essential for success and look to hire those most closely suited. With this information management must take the time to match salespeople carefully to territories reflective of their personalities. Territories that require constant account penetration and prospect-

ing with smaller companies should be staffed with a different sales type than the more established territory with larger accounts that require nurturing and longer periods of time to establish a relationship.

Turnover is another area that can be directly effected by this research. Career paths can be followed and those who are correctly placed in a selling situation that is in line with their personality should have a longer stay on the job. People who are improperly placed or are in the wrong selling situation before the study began should show lower levels of satisfaction and shorter career stays with the organization. Attention should be paid to the people who are leaving the organization, if correctly placed highly satisfied people are leaving then a review of rewards may be warranted. If incorrectly placed, unsatisfied people are leaving them more support is given to the interactionists perspective.

An important finding of this study is firms must be careful when attempting to generate a measure of performance. The literature has been abundant with calls for multiple measures of performance that can be combined into a single measure. The thoughts on this are many measures will be better than one. This would be accepted if the measures are unidimensional. When the measures are not unidimensional then a confound exists that something other than performance

is being measured and the results will be questioned. It may be that rater bias still plays a big part in subjective ratings. The raw data reflects the fact that low peformers were rated high and high performers were rated low. It is still a good idea to collect multiple measures of performance but more time will have to be taken to eliminate rater bias.

In summary, the study supports the interactionists perspective that the person and situation are contributors to performance. This outcome leads to a rethinking of how placement and selection decisions should be made. Training packages should be developed that reflect the different selling situations relevant tasks that will lead to good performance. Turnover should be monitored and assessed to determine if correctly placed salespeople have long tenure on the job. Finally, the performance dilemna is still a problem as a multiple composite measure of performance was not developed.

5.2.2 Limitations

The major limitations of the research focus on four issues: (1) one company was used (generalizability); (2) testing two selling situations; (3) only three personality variables were studied; and (4) causality cannot be addressed.

The scope of the research was limited and the ability to generalize the results was restricted by the inability to randomly sample salespeople. However, the objective of the research was to test the interactionists theoretical position and advance the state of the art of sales performance theory. Subsequently, the argument can be made that external validity should be of little concern (Calder et al. 1982). All of the people surveyed in the study were with the company for over one and one half years as sales representatives.

The selling cycle was used as a situational moderator in the study. Stronger support will be needed to confirm the interactionists viewpoint. More development is needed on the situational side of the research paradigm. The future research section offers direction in this area.

The short selling cycle model had a low R^2. This suggests more work is needed in developing a short selling cycle model. This study looked at three personality variables planfulness, tenacity, and locus of control. The low R^2 suggests one or more key variables are missing. Comprehensive models will have to be built and tested to inform managers to the key variables that are essential for short selling cycle salespeople.

Finally, since the performance data was collected for 1983 and the salespeople were surveyed during the summer of 1984 it would be inappropriate to speculate on the direction of the relationship. Future research will have to address this problem.

5.2.3 Recommendations for Future Research

Several problems encountered in this study along with many unanswered questions suggest the need for additional research on the personality-performance relationship. In fact, the scarcity of marketing research examining the role of the selling situation as a moderator of the personality performance relationship provides almost limitless opportunities. Ample opportunities exist for research similar to the research reported here. One area of research includes extensions of the current research effort. A second area consists of additional variables that were not examined in this study, and a third area comprises additional work in developing performance measures.

This research should be replicated over a number of different companies in the computer industry and in other fields. These results will have to be replicated in these settings before generalized procedures can be established for firms with long and short selling cycles. As it is now

generalizations should only be made to the other geographic sales areas in the same company. Established scales such as the Californian Personality Inventory and the Jackson Personality Inventory could be used along with the HPI to determine if they are unidimensional and are related to sales performance. Eventually multi-method/multi-trait efforts will have to take place so construct validity can be vigorously tested.

Additional variables to be tested should center on first developing situational variables and then chosing the personality variables that fit theoretically. One such possibility for future thought is to examine the effect of the line of business to which a salesperson sells. Many industries are broken down into whether one sells to manufacturers or wholesalers, government, education, or medical (GEM Accounts), or financial institution. There is reason to believe these sales positions would require different personality types who would be successful in them. If more situational variables are tested and confirmed as moderators then the interactionists perspective would gain more credence and quite possibly get the recognition as a theoretical framework that deserves more attention.

Future research will have to build and test more complex models as opposed to the simpler models proposed. Weitz

(1979) contends the simpler models will have to be better understood before complex models can be given full attention.

Finally, much has been written about criterion development in the sales literature. The call has been made for researchers to collect a myriad of performance measures and then combine them into a composite score of performance. Future researchers will have to take even greater care when collecting subjective managerial ratings because of potential rater bias. If possible multiple raters should be used and raters must be made aware of various rating errors such as leniency, halo effects, and restriction of range. Companies should be evaluated on how much experience the company has with managerial rating of salespeople. Sometimes raters do not have enough experience with performance evaluation to perform the rating task well.

Future research then must include a number of studies testing the moderating effect of selling cycles. Additional moderators must be generated and tested to determine if the interactionist viewpoint is legitimate. Finally, more development is still necessary in the criterion side of the personality-performance relationship. Only when good measures of performance have been ascertained will strong studies surface.

5.2.4 Chapter Summary

In the closing chapter of this dissertation a brief overview of the objectives and design of the research is presented followed by a discussion and summary of the major findings. The overall conclusion is that the selling cycle has been shown to influence the personality-performance relationship. The results of the research suggest that the influence of the selling cycle does indeed moderate the relationship. In view of these findings, the implications of the research were discussed followed by an examination of the basic limitations of the study. The chapter concluded with a number of suggestions for future research.

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Appendix A

STUDY CHARACTERISTICS

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Mosel, James, N., (1952) "Prediction of Department Store Sales Performance from Personal Data" Journal of Applied Psychology, Vol. 36, pp. 8-10	Implicit Behavioral Consistency Theory	Productivity		Total Selling Cost - Total Net Sales	Gross Validation Check on Scoring Key (NIP)	None
			Education Experience Weight Height Time on last job Time on next to last job Number of dependents Marital Status	Bio data Checklist		

Note: NIP means no information provided

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
	H1: Biodata not related to productivity	Descriptive cross sectional questionnaire	Individuals	Non random	N=170 women n=85 split into Low and High Selling group	Retail department store Sales-people

Major Results	
Statistical	Substantive
Chi square (NIP)	1. Productivity and age related 2. Sales success and education related

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Tobolski, Francis P.1 and Kerr, Willard A., (1952) "Predictive Value of the Empathy Test in Automobile Salesmanship," Journal of Applied Psychology, Volume 36, pp. 310-311	Implicit Personality Theory	Productivity		Number of Sales Number of Attempts	None	None
		Manager's Ranking	Sales Manager's	Rank Order Performance		
			Empathy	15 minutes Objective test		

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
	H1: empathy not related to productivity	Descriptive Cross-sectional questionnaire	Individuals	Non-random	N=32 N=32	automobile salespeople

Major Results

Statistical	Substantive
r = .44 sig .02 objective dependent ub1	1. Empathy and productivity related (new car)
r = .71 sig .02 subjective dependent uv1	2. Empathy and productivity related (new car)
r = .12 objective dependent ub1	3. Empathy and productivity not related (used car sales)
r = .17 subjective dependent ub1	4. Empathy and productivity (used car sales)

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Baier, Donald D., and Dugan, Robert D., (1957), "Factors in Sales Success," Journal of Applied Psychology, Vol. 41, No. 1, pp. 37-40	None Atheoretical	Objective Composite Measure of Job Performance		(NIP)	None	None
			Product Knowledge	Information Index (test of life insurance knowledge)		
			Belief in One's product			
			Motivation			
			Length of Service			

Hypotheses		Research Design	Unit of Analysis	Sampling Strategy Size	Sample Characteristic	Sample
Expressed	Implied					
	H1: Product knowledge, and length of service are not related to productivity	Descriptive Cross-sectional Questionnaire	Individual	Non-random	N=346	Life Insurance

Major Results	
Statistical	Substantive
	1. Belief in ones product related to productivity
	2. Length of service not related to productivity
	3. Amount of life insurance owned related to productivity.

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Marenda, Peter I., and Clark, Walter V., (1959) "The Predictive Efficiency of Temperament Characteristics and Personal History variables in Determining Success in Life-Insurance Agents," Journal of Applied Psychology Vol. 43, No. 6, pp. 360-366	Implicit Personality Theory Behavioral Consistency Theory	Quota Promotion to Mgt. Employment Termination for Higher Position		Employee Records Employee Records Employee Records	None	None
			Agressiveness Socialability Emotional Control Social Adaptability Biodata	Activity Vector Analysis Self Concept Personality Assessment Instrument Personal History Data Form		

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
	H1: Personal History not related to productivity H2: Personality not related to productivity	Descriptive Cross Sectional Questionnaire	Individual	Non-random	N=522 modes	Life Insurance

Major Results	
Statistical	Substantive
ANOVA 3.17 < .05	1. Successful agents had higher AVA score on aggressiveness and sociability
ANOVA	2. Successful agents had lower scores on emotional control and social adaptability

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
French, C. L. (1960), "Correlates of Success in Retail Retail Selling," American Journal of Sociology Vol. 66, pp. 128-34	Industrial	Sales Volume		Employee Record Manager Ranking		
		Dollars Earned Productivity		Employee Record Observed		
			Experience Satisfaction Occupational histories Aspiration Friends occupation Demographic Lifesytles	NIP for Independent Variables		

*NORC refers to the National Opinion Research Center

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
N/A	H1: Attitude not related to productivity H2: Group structure not to productivity H3: norms not related to productivity	Descriptive, cross sectional questionnaire and observation	Individual	Non-random	N = 65 N = 11	Retail furniture Salespeople

Major Results	
Statistical	Substantive
t-tests (NIP) p-values (NIP)	1. Productivity not related to experience 2. Productivity not related to satisfaction 3. Productivity not related to NORC Scores 4. Productivity not related to demographics 5. Productivity not related to age 6. Productivity and social area index related

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Dunnette, Marvin D., and Kirchner, Wayne K. (1960), "Psychological and Test Differences Between Industrial Salesmen," Journal of Applied Psychology, Vol. 44, no. 2, pp. 121-125	Implicit Personality Theory (NIP)	Sales Managers Rankings		Rank order by Performance Wesmon Personal	None	None
			Classification Test	Classification Test		
			Interest Test	Strong Vocational interest blank		
			Personal Preference	Edwards preference schedule		
			Adjective checklist	Adjective checklist		

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
	H1: Psychological tests will show no differences between the industrial and retail salespeople productivity	Descriptive Cross-sectional Questionnaire	Individual	Non-random	N = 120 N = 50 Retail N = 70 Industrial	Retail Salespeople Industrial Salespeople

Major Results	
Statistical	Substantive
	1. Productive related to Wesmon for both groups
	2. Productivity related to Edwards for both groups
	3. Productivity related to adjective checklist for retail and industrial
	4. Productivity related to strong vocational interest blank for both groups

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Arnell, Thomas W. (1960), "The Relation of Test Scores to Sales Criteria" Personnel Psychology Vol. 13, pp. 65-69	Implicit Personality Theory	Sales quota		Employee Record	None	None
		Field review		Manager Ratings		
		Company appraisal		Employee Record		
			Stability	Otis test of mental ability		
			Dominance Self Confidence Drive and Aggressiveness	Berneter Personality Inventory		
			Fact and diplomacy	Canfield Sales Service Test		
			Sense of Humor	Washburn Social adjustment Inventory		
			Intelligence	Moss-Hunt-Omwake Social Intelligence Test		
				Strong vocational interest test		

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy Size	Sample Characteristic	Sample
	H1: Personality not related to productivity	Descriptive Cross sectional Questionnaire	Individual	Non-random	N = 21	Petroleum Products Salespeople

Major Results	
Statistical	Substantive
$p < .01$	1. Stability postively related to productivity 2. Dominance postively related to productivity 3. Self confidence positively related to productivity 4. Aggressiveness and drive positively related to productivity

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Ghiselli, Edwin, E., (1969), "Prediction of Success of Stock-brokers," Personnel Psychology, Vol. 22, pp. 125-130	Implicit Personality Theory	Tenure		Employee Record	None	None
			Supervisor ability Intellingence Initiative Self assurance Decisiveness Achievement motivation Self actualization Power High financial reward Job security	64 item Inventory (NIP)		

Hypotheses		Research Design	Unit of Analysis	Sampling			
Expressed	Implied			Strategy	Size	Sample Characteristic	Sample
	H1: Psychological Testing and productivity are not related	Descriptive Cross-sectional Questionnaire	Individual	Non-random	N = 81		Stockbrokers

Major Results	
Statistical	Substantive
$p < .01$	Supervisory ability,
$p < .01$	Intelligence,
$p < .01$	Self assurance,
$p < .05$	Decisiveness,
$p < .01$	Achievement motivation,
$p < .05$	Need for self actualization
$p < .01$	and need for job security related to productivity

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Kirchner, Wayne K, M. Elwain, Carolyn S., and Dunnette, Marvin D., (1960) "A Note on the Relationship Between Age and Sales Effectiveness," Vol. 44, No. 2, pp. 92-93	No Theory	Ranking Managers	Age	Rank Order By Performance Self Report	None	None

Hypotheses		Research Design	Unit of Analysis	Sampling Strategy	Sample Size	Sample Characteristic
Expressed	Implied					
	H1: Age not related to productivity	Descriptive cross-sectional	Individuals questionnaire	Non-random	N=539	Industrial Salespeople

Major Results		
Statistical		Substantive
F	P	
4.40	.001	1. Age and productivity related

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Miner, John B, (1962) "Personality and Ability Factors in Sales Performance <u>Journal of Applied Psychology</u>, Vol. 46, No. 1, pp. 6-13.	Implicit personality theory (NIP)?	Sales Volume		Actual Yearly Dollar (or Unit Sales Volume	None	None
			Ability	Weschsler Adult Intelligence scale (WAIS)		
	Interest	Personality and Record		Kuder Preference		
			Dependence Sociophilia Self-confidence Happiness Low aggresion Sociophobia Strong super ego Over conformity Deviance	Thomkins-Horn Picture Arrangement Test		

Hypotheses		Research Design	Unit of Analysis	Strategy	Sampling Sample Size	Sample Characteristic
Expressed	Implied					
	H1: Psychological not related to productivity	Descriptive cross-sectional questionnaire	Individual	Non-random	N=65 products salespeople	Petroleum

Major Results	
Statistical	Substantive
NIP	<u>High performers</u> 1) Dependence related to productivity 2) Self-confidence related to productivity 3) Happiness related to productivity <u>Low performers</u> 4) Low aggression 5) Strong super ego related to productivity

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Greenberg, Herbert, and Mayer, David, (1964) "A New Approach to the Scientific Selection of Successfull Salesman", Journal of Psychology, Vol. 57, pp. 113-123	No Theory	Gron Average		Employee Records	None	None
	Monthly Sales	Average gross Profit per sale		Employee Records		
			Ego strength	Minnesota Multiphasic Personality Inventory		
			Ego Strength	Berneuter Personality Inventory		
				California F Scale		
				Greenberg Interest Profile		
				Gordon Personal Profile		
				Modified California F Test		

Hypotheses		Research Design	Unit of Analysis	Strategy	Sampling Sample Size	Sample Characteristic
Expressed	Implied					
	H1: There is relationship empathy and ego strength and produc-tivity	Longitudinal questionnaire	Individual	Non-random	Stage I N=300 Rent Estate Funds Stage II N-237 N-127 N-68 Stage III N=144 N=112 Stage IV N=500	Auto Life Insurance Mutual Auto Insurance Mutual Funds Auto Insurance Auto

Major Results	
Statistical	Substantive
Test? $p<.01$	1) Empathy and productivity related Ego strength 2) Ego strength and productivity related

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Baehr, Melany and Williams, Glenn, (1968) "Prediction of Sales Success from Factorially Determined Dimensions of Personal Background Data," Journal of Applied Psychology Vol. 52, No. 2, pp. 98-103	Implicit Behavior Consistency Theory	Manager Rating Sales Volume Tenure	Financial Responsibility Early family Responsibility Stability	Rankorder by Manager Employer Records Personal History Index	None	None

Hypotheses		Research Design	Unit of Analysis	Strategy	Sampling Sample Size	Sample Characteristic
Expressed	Implied					
	H1: Personal history and productivity are not related	Descriptive cross-sectional questionnaire	Individual	Non-random	N=210 products salespeople	Food

Major Results	
Statistical	Substantive
T-tests significant or not significant	1) Education and sales success not related 2) Sales related knowledge and productivity not related Financial responsibility, early family responsibility and stability related to productivity

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Cotham, James C., III, (1969), "Using Personal History Information in Retail Salesmen Selection". Journal of Retailing Vol. 45, No. 2, pp. 31-38	Implicit Behavioral Consistency Theory	Sales Volume Mgt. Ratings	Rank Order by Managers Personal Data Personal Experiences Educational Achievements	Application Blank	None	None

Hypotheses		Research Design	Unit of Analysis	Sampling			
Expressed	Implied			Strategy	Size	Sample Characteristic	Sample
	H1: Personal history item and productivity are not related	Descriptive cross-sectional	Individual	Non-random	N=62		Retail Appliances Salespeople

Major Results	
Statistical	Substantive
	1) Age and productivity not related 2) Experience and productivity related 3) Amount of time wife works and productivity related negatively.

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Weaver, Charles N., (1969) "An Empirical Study to Aid in the Selection of Retail Salesclerks," Journal of Retailing Vol. 45, No. 3 pp. 22-267	Behavioral Consistency Theory	Sales Volume	Age Marital Status	Employee Record Job Application Form	None	None

Hypotheses		Research Design	Unit of Analysis	Sampling		
Expressed	Implied			Strategy	Sample Size	Sample Characteristic
	H1: Personal History variables and productivity are not related	Descriptive Cross-sectional application blank	Individual	Non-random	N=123	Retail Salespeople

Major Results	
Statistical	Substantive
	1) Age and productivity related (= .90) 2) Education and productivity related (= .80)

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Tonofsky, Robert, Snepps, R. Ronald, and O'Neill, Paul, J., (1969) "Pattern Analysis of Biographical Predictors of Success as an Insurance Salesman," Jounral of Applied Psychology, Vol. 53, no. 2, pp. 136-139.	Implicit Behavioral Consistency Theory	(NIP) Marital Status	Age Prior Weekly Salary Sales Experience	Application Blank	None	None

Hypotheses		Research Design	Unit of Analysis	Sampling Strategy	Sample Size	Sample Characteristic
Expressed	Implied					
	H1: Biographical Predictors and Productivity are not related	Descriptive Cross-sectional Application Blank	Individual	Non-random	N = 1,525	Life Insurance

Major Results	
Statistical	Substantive
	1) Productivity related to prior salary and number of dependents 2) Productivity not related to age, education, and sales related knowledge

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Lamont, Lawrence, and Lindstrom, William J., (1977) "Identifying Successful Industrial Salesmen by Personality and Personal Characteristics." Journal of Marketing Research, Vol. XIV, Nov. pp. 517-529	Behavioral Consistency Theory Personality Theory	Manager ratings Sales Volume Compensation Quota New business conversion Call frequency	Dominance Endurance Social recognition Empathy Ego Strength Age, height, weight, education	Rank Order by Sales Manager Employee Record Employee Record Employee Record Employee Call Report Employee Call Report Personality Research form (PRF) PRF PRF Hogan Empathy Scale Sixteen Personality Factor Test Bioblank	None	None

Hypotheses		Research Design	Unit of Analysis	Sampling Strategy	Sample Size	Sample Characteristic
Expressed	Implied					
1. Personality variably related to productivity. 2. Decreasing age and increasing height, weight, and formal education are associated with high levels of productivity. 3. Increasing involvement in civic and professional organizations and outside activities are associated with higher productivity		Descriptive Longitudinal Questionnaire	Individual	Non-random	N = 143	Industrial Building supplies

Major Results	
Statistical	Substantive
Reported T-tests Standardized regression coefficents of multiple correlations	1. Endurance and social recognition related to productivity 2. Height and productivity related 3. Age, weight, and eduction not related to productivity and involvement in organizations not related

Full Reference	Theoretical Base	Variables		Measures/Scales		
		Dependent	Independent	Type	Validity Check	Reliability Check
Bagozzi, Richard P., (1978) "Salesforce Performance and Satisfaction as a function of Individual Difference, Interpersonal and Situational Factory," Journal of Marketing Research Vol. v, Nov., pp. 517-531	Social Learning Theory Trait Theory Balance Theory	Sales Volume Job Satisfaction Generalized Self Esteem		Employee Record Questionnaire Scale		Sample 1=.7 Sample 2=.7 Sample 1=.7 Sample 2=.7
			Self-Esteem	Jackson Personality Inventory		
			Other-directedness	Collins other Directedness		Sample 1=.71 Sample 2=.75
			Verbal intelligence	Borgetta's word association scale		
			Job related tension	Job related tension index		
			Territory potential	Manager Ranking		
			Workload	Manager Ranking		

Hypotheses		Research Design	Unit of Analysis	Strategy Size	Sampling Sample Characteristic	Sample
Expressed	Implied					
H1 Job salesfaction productivity	Regression	Exploratory	Individual	Non-random	N = 161 Salespeoples	Industrial
H2 Self Esteem related to Productivity	Cross Sectional	Analysis			and plastic	sold steel
H3 Self Esteem related to Job Sat.					and seals	strappings
H4 Other Directedness inversely related to self esteem						
H5 Role Conflict inversely related to productivity						
H6 Role Coflict inversely related to job satisfaction						
H7 Role Conflict inversely related to self-esteem						
H8 Role Ambiguity inversely related to productivity						
H9 Role ambiguity inversely related to productivity						
H10 Role ambiguity inversely related to productivity						
H11 Sales Potential and Workload Related						
H12 Sales Potential and Workload Related to Productivity job sat. and self-esteem						

Major Results	
Statistical	Substantive
Self Esteem t = 5.40 F= 35.76	Self-esteem related to productivity
Verbal In- telligence t = 3.43	Verbal intelligence Related to Productivity
reported regression models correlation matrix reliability coefficients	

Appendix B

GENERAL INFORMATION AND SURVEY

GENERAL INFORMATION

This information is requested for classification purposes only. It will help to make the results of the survey more meaningful.

1. Region: _____

2. Branch: _____

3. Your Title: _____

4. Employee Number: _____

5. Your sex: _____ Male _____ Female

6. Race: _____ Asian _____ Black _____ Hispanic _____ White
_____ Other (Please Identify)

7. Your age: _____ Years

8. Your marital status: _____ Married _____ Single _____ Divorced
_____ Separated

9. Number of dependents: _____

10. Education: _____ High School _____ Some College _____ College Grad
_____ Post Grad

11. If you went to college, was your coursework: _____ Engineering
_____ Business _____ Liberal Arts _____ Other (Please Identify)

12. Amount of time you have been with : _____ Years and
_____ Months

13. Amount of time you have been in your present territory: _____ Years and
_____ Months

14. How long have you been in your present position: _____ Years and
_____ Months

15. Amount of time you have been selling your present product line(s):
_____ Years and _____ Months

16. Number of years you have spent in your present or similar sales jobs:
_____ Years

17. Approximately how many hours a week do you spend working at your job and job related activities? _____ Hours

18. On average, how long does it take from initial customer contact to the close of the sale? _____ Weeks _____ Months

19. Approximately how many sales calls do you make in an average two week period? _____ Calls

20. On average, what is the price of an order when you sell a computer system? $_____.___.

21. What type of accounts do you call on? (Indicate % of time spent on each).

    _____ Manufacturers Rep./VAR
    _____ Small Companies
    _____ Medium Companies
    _____ Large Companies
    _____ New Accounts

    _____
    _____
    _____
    _____

22. How many accounts do you currently have responsibility for? _____ Accounts

23. On average how long have you been assigned to your present accounts:
    _____ Years and _____Months

24. A person's health is influenced by many factors, but sometimes it is related to the pressures of his or her job. Would you mind indicating if you:
    a) have ever had trouble with your heart or blood pressure
       _____ Yes _____ No
    b) have ever had ulcers or similar stomach problems?
       _____ Yes _____ No

25. Please check the box that most represents your family.

    _____ Bachelor / Bachelorette
    _____ Young newly married / no children
    _____ Young married couple / youngest child under six
    _____ Young married couple / youngest child over six
    _____ Older married couple / dependent children
    _____ Older married couple / no children living at home
    _____ Older married couple / no children

PLEASE MAKE SURE YOU HAVE GIVEN A RESPONSE TO EVERY STATEMENT IN THIS SECTION; THANK YOU.

PLEASE READ CAREFULLY

Introduction

We all have a variety of complex feelings and opinions about our work. However, we do not always have a chance to express them. There are many reasons for this. Perhaps a difficulty in describing our feelings, possible embarrassment, or fear of the consequences would account for not having expressed our feelings. Perhaps the opportunity to do so has never been provided. This questionnaire provides you such an opportunity without these fears or concerns. You will be asked to provide your opinions about many different aspects of your job and yourself, *and your opinions will be held in strict confidence.*

Questionnaire Design. There are several sections in the questionnaire. At the beginning of each section a brief set of instructions specific to that section is given. Please read these instructions carefully before proceeding.

In this section there are a number of pairs of statements. For each pair, decide which statement you most strongly agree with, and then mark your answer on the separate answer sheet. In some cases, you may find that you believe both statements, or alternatively neither statement; in such a circumstance select the one statement which is closest to your own belief. "THIS IS NOT A TEST." There are no "right" or "wrong" responses to any of the questions which follow. It is your honest opinion that we want. Your opinions will be held in strict confidence. "WORK RAPIDLY BUT ANSWER ALL STATEMENTS"

Part I

1. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

2. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyway.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability; luck has little to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
    b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as on a local level.

Part II

This section contains a series of statements. Read each one, decide how you feel about it, and then mark your answer on the separate answer sheet. A "T" means you agree with the statement; an "F" means you disagree with the statement. Please answer every item, and make sure the number in this section is the same as the number on the answer sheet. Try to work quickly; don't spend too much time on any single question. "WORK RAPIDLY BUT ANSWER ALL STATEMENTS".

30. I start to work on a new project with a great deal of enthusiasm.

31. When I eat a meal with others, I am usually one of the last to finish.

32. I am happiest when I get involved in some project that calls for rapid action.

33. I am often so much "on the go" that sooner or later I may wear myself out.

34. I often wonder where others get all the excess energy they seem to have.

35. I find myself hurrying to get places even when there is plenty of time.

36. I work more slowly and deliberately than most people of my sex and age.

37. I like to have plenty of time to stop and rest.

38. I am the kind of person who is "on the go" all the time.

39. People think I am a very energetic person.

40. I am quick in my actions.

41. I always seem to have plenty of vigor and vitality.

42. I sometimes wish that people would slow down a bit and give me a chance to catch up.

43. I seem to lack the drive necessary to get as much done as other people do.

44. I am able to work for unusually long hours without feeling tired.

45. I talk more slowly than most people.

46. I like to do things slowly and deliberately.

47. I am inclined to rush from one activity to another without pausing enough for rest.

48. I am less energetic than many people I know.

49. I get things done in a hurry.

50. At work or at play other people find it hard to keep up with the pace I set.

51. I dislike to be hurried in my work.

52. People sometimes tell me to "slow down" or "take it easy".

53. I am slow and deliberate in movement.

54. I can turn out a large amount of work in a short time.

55. I often run upstairs taking two steps at a time.

56. Others are often amazed by the amount of work I turn out.

57. It irritates me to have a wait at a crossing for a long freight train to pass.

58. Other people regard me as a lively individual.

59. It is hard to understand why many people are so slow and get so little done.

60. I find it easy to talk to strangers.

61. I never resent it when I don't get my way.

62. I think crowded public events (rock concerts, sports events) are very exciting.

63. I enjoy telling jokes and stories.

64. As a child I was always reading.

65. I sometimes like to gossip.

66. I would rather work with facts than people.

67. Happiness is more important than fame.

68. I am a relaxed, easy-going person.

69. I'm confused about what I want to be.

70. I shouldn't do many of the things I do.

71. I am sensitive to other people's moods.

72. I'll take a new way home just because it's different.

73. Most people think I'm smart.

74. I enjoy making people feel better.

75. Every now and then I get into a bad mood, and no one can do anything to please me.

76. I remember phone numbers easily.

77. Sometimes I feel like I'm going to fall apart.

78. I enjoy planning things and deciding what each person should do.

79. I like classical music.

80. I am apt to show off in some way if I get the chance.

81. I would like to work with high explosives.

82. I believe in striving for perfection in everything I do.

83. There are a lot of things I would like to change about myself.

84. I tend to be critical of others.

85. I hold grudges for a long time.

86. I am cranky and irritable when I don't feel well.
87. I enjoy working with people.
88. I have never hated anyone.
89. I always try to see the other person's point of view.
90. I want more of everything.
91. I am a leader in my group.
92. I expect to succeed in things I do.
93. I often lose my temper.
94. I would like to learn to scuba dive.
95. I get excited very easily.
96. I am always polite, even to loud-mouthed, obnoxious people.
97. I prefer individual activities (jogging) to team sports (basketball).
98. I wish my life were more predictable.
99. I feel guilty about some of the things I have done.
100. I'm always arguing with people.
101. I have a natural talent for influencing people.
102. I am a very self-confident person.
103. People think I am an introvert.
104. I never worry about my past mistakes.
105. Success is mostly a matter of will power.
106. I want to be an important person in my community.
107. I wish I knew what I wanted out of life.
108. In school I didn't like math.
109. I usually expect to have a nice day.
110. It bothers me when something unexpected interrupts my daily routine.
111. At work I never waste time socializing.
112. At work I never waste time.

113. I doubt whether I would make a good leader.

114. I get nervous when I talk to members of the opposite sex.

115. People pretend to care more about one another than they really do.

116. I get nervous if I think someone is watching me.

117. I would enjoy sky-diving.

118. I would rather stay home and read than go out to a party.

119. I enjoy solving riddles.

120. I would do almost anything on a dare.

121. I don't mind criticizing people, especially when they need it.

122. Being part of a large crowd is exciting.

123. I don't mind talking in front of a group of people.

124. I am uncomfortable entering a room full of people.

125. I prefer that other people don't pay much attention to me.

126. I'm pretty careful in my work.

127. I would like to be a rodeo rider.

128. I think I would enjoy living alone.

129. I would never bet on a horse race.

130. When I deal with cashiers and sales clerks I am all business.

131. I am a good listener.

132. In school I found it very hard to talk before the class.

133. It's okay to brag a little about your accomplishments.

134. I daydream a lot.

135. I try to do my job as well as I possibly can.

136. I want to be the best at everything I do.

137. I would like to know more history.

138. I ought to treat people better than I do.

139. I would like to be in a talent show.

140. I would never cry in public.

141. Most of the time I am proud of myself.

142. I sometimes wish I were somebody else.

143. I have learned to accept failure.

144. I'm known as a wit.

145. I never praise or criticize others.

146. I'm known for coming up with good ideas.

147. I often feel anxious.

148. If I decide I want something, I won't quit until I have it.

149. I am a patient person.

150. I don't like things to be uncertain and unpredictable.

151. I would rather be happy than wealthy.

152. I try to be tactful when dealing with others.

153. I'm not afraid to be the first person to try something.

154. When people are nice to me I wonder what they want.

155. I never know what I will do tomorrow.

156. I enjoy reading poetry.

157. I am known for my jokes and funny stories.

158. I am seldom tense or anxious.

159. I find it hard to express my feelings.

160. I have never taken advantage of anyone.

161. I am easy to get along with.

162. I want people to look up to me.

163. Everyone has some good qualities about them.

164. I rarely spend time alone.

165. I plan my work very carefully in advance.

166. Many people would say that I am shy.

167. I don't let little things bother me.

168. I would like to go mountain climbing.

169. I can't do anything well.

170. When someone gives me a job to do I finish it no matter what.

171. I often say things I regret.

172. I enjoy showing off a little now and then.

173. I have a strong desire to be a success in the world.

174. I like to try new, exotic foods.

175. I would rather not be responsible for other people.

176. I always look for ways to improve myself.

177. I enjoy helping people.

178. In a group I never attract attention to myself.

179. When people do nice things for me I often wonder what they are up to.

180. In school I memorized facts quickly.

181. I won't start a project unless I have a pretty good idea how it will turn out.

182. I am bothered by my failures.

183. Most people are interesting if you listen to them.

184. I would like a job that requires traveling.

185. I like large, noisy parties.

186. I read at least ten books a year.

187. I like to talk to people.

188. I never met a person I didn't like.

189. As a child, school was easy for me.

190. I enjoy working crossword puzzles.

191. At parties, I am often the last to leave.

192. I find something interesting in everyone I meet.

193. In a group I like to take charge of things.

194. I was a slow learner in school.

195. I prefer to work alone.

196. I like to gamble.

197. I'm uncertain about what to do with my life.

198. I have a tendency to give up when I meet difficult problems.

199. I get annoyed by others' bad manners.

200. I like to do things on the spur of the moment.

201. I have a good imagination.

202. I sometimes do things just so other people will notice me.

203. I frequently praise others.

204. I have a large vocabulary.

205. I set high standards for myself.

206. People are always nice to me.

207. I like parties and socials.

208. I get bored easily.

209. I can find something funny even in the worst situations.

210. It is more important to get the job done than to worry about peoples' feelings.

211. It is always best to stick with a plan that works.

212. I like a lot of variety in my life.

213. I don't think much about the future.

214. I think I would enjoy having authority over people.

215. I find it hard to work under strict rules and regulations.

216. I don't care for large, noisy crowds.

217. I would rather read than watch TV.

218. In school I am/was usually in the upper part of my class.

219. Sometimes I am hard to get along with.

220. I never go out of my way to help others.

221. I am a quick-witted person.

222. I am a follower, not a leader.

223. I worry a lot.

224. I always notice when people are upset.

225. I work better alone than with other people.

226. I enjoy giving parties.

227. I am often the life of the party.

228. I am a good listener no matter whom I talk to.

229. People can depend on me.

230. I generally trust people until they prove me wrong.

231. In groups I like to help make the decisions.

232. I don't interrupt others when they are talking.

233. I don't mind asking people to do things.

234. I like to be the center of attention.

235. The best part of my day is the time I spend alone.

236. When things go wrong I feel like giving up right away.

237. I have taken things apart just to see how they work.

238. I am a high-strung person.

239. I can do long division in my head.

240. Planning things in advance takes the fun out of life.

241. I would like to be a racecar driver.

242. My successes mean little to me.

243. In a group, I usually take the responsibility for getting people introduced.

244. I like to hear lectures on world affairs.

245. I'm only interested in a few things.

246. I frequently feel guilty.

247. I get tired of doing things the same old way.

248. If something is worth doing it is worth doing well.

249. People usually follow my suggestions.

250. I expect too much of myself.

251. I usually notice when I'm boring people.

252. I find it hard to act naturally when I am with new people.

253. People can usually tell what I'm feeling.

254. I am not very inventive.

255. I'm a humble person.

256. I get bored listening to other people talk.

257. I have a hard time making choices and decisions.

258. When I'm in a bad mood I let other people know it.

259. If it were legal, I might experiment once with heroin.

260. In school math was easy for me.

261. I would rather take orders than give them.

262. I would like to be a deep-sea diver.

263. I find greek mythology interesting.

264. I can get along with just about anybody.

265. I would go to a party every night if I could.

266. I like what I do for a living.

267. I have little self-confidence.

268. I would volunteer for an army drug experiment.

269. I enjoy the excitement of the unknown.

270. I like doing two things at once.

271. I belong to several clubs or organizations.

272. I have a lot of friends.

273. I keep calm in a crisis.

274. I'm often asked for my opinion about things.

275. I am a forgiving person.

276. I am often irritated by faults in others.

277. I'm cautious by nature.

278. I am an ambitious person.

279. I am good at most of the things I do.

280. I don't trust people unless I know them very well.

281. I love the hustle and bustle of city crowds.

282. I have let a lot of people down.

283. I am a fast reader.

284. I often forget to thank people.

285. I often say things without thinking.

286. I am smarter than most people think.

287. I hate opera singing.

288. I can make up stories quickly.

289. When I'm mad I seldom show it.

290. I am known as a hard and steady worker.

291. I like to play chess.

292. I frequently do things on impulse.

293. I am interested in science.

294. I can multiply large numbers quickly.

295. I don't show my emotions to others.

296. I like not knowing what tomorrow will bring.

297. I am good at inventing games, stories, or rhymes.

298. My parents are/were highly intelligent people.

299. I often feel that I chose the wrong occupation.

300. I rarely get angry with others.

301. Basically I am a cooperative person.

302. Most people are nice once you get to know them.

303. I believe people are basically honest.

304. I won't start a job unless I know I can finish it.

305. I like to work on several projects at the same time.

306. I like detective stories.

307. I often compliment people on their appearance.

308. I work well with other people.

309. I always try to do a little better than what is expected of me.

310. I don't mind going out of my way to do someone a favor.

311. I enjoy just being with other people.

312. I rarely make a promise that I don't keep.

313. I always work hard, even when I'm not feeling well.

314. I rarely get anxious about my problems.

315. There are a lot of things I would like to change about my past.

316. I am a happy person.

317. I like to give orders and get things moving.

318. I am a strong-willed person.

319. People seem to underestimate my intelligence.

320. I get involved in other people's problems.

321. I am usually calm.

322. I don't mind taking orders and being told what to do.

323. I am a sociable person.

324. I often start things I never finish.

325. I like doing things that no one else has done.

326. I am sometimes cross and grouchy without any good reason.

327. I don't hate anyone.

328. I usually win arguments.

329. I have a good memory.

330. I find a number of people hard to get along with.

331. People usually expect me to take charge.

332. I enjoy meeting new people.

333. I like to have a schedule and stick to it.

PART III DIRECTIONS

Questionnaire Completion Instructions

"THIS IS NOT A TEST"

There are no "right" or "wrong" responses to any of the questions which follow. It is your own honest opinion that we want.

"WORK RAPIDLY BUT ANSWER ALL STATEMENTS"

The questionnaire has been designed so that it is easy to complete. It employs a series of statements about various aspects of your job. Please read each statement carefully and decide how you feel about it. Work at a fairly high speed through this questionnaire. Do not worry or puzzle over individual items. It is your first impressions, the immedicate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your *true* impressions.

If you cannot decide exactly how you feel about a statement, mark the answer you feel is *most like your opinion* and go on to the next statement. Some of the statements may not be worded exactly the way you would like them to be. However, answer them the best way you can. Some of the items may seem similar to you. Do not try to remember how you checked similar items earlier in the questionnaire. Make each item a separate and independent judgment.

Please be sure to answer every statement.

INSTRUCTIONS

In performing a job there are certain aspects about that job that are appealing and provide a sense of satisfaction to the person doing that job. On the other hand there may be aspects about the job about which the person may be very dissatisfied. In this section you are asked to indicate your feelings about various aspects of your job as an industrial salesperson.

Some of the items in the inventory may appear to be similar to you. Do not try to remember how you checked similar items earlier in this section. *Make each item a separate and independent judgment.*

For example:

A. Suppose you feel in no uncertain terms that your sales territory is too small; you would answer on the separate answer sheet and mark 5 for the following statement.

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
My sales territory is too small.	5	4	3	2	1

B. Suppose you feel, although not strongly, that you would rather work in a small town than a large city; you would answer on the separate answer sheet and mark 2 for the following statement.

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
I would rather work in a large city than a small town.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
1.	My supervisor is tactful.	5	4	3	2	1
2.	Management keeps us in the dark about things we ought to know.	5	4	3	2	1
3.	My pay is high in comparison with what others get for similar work in other companies.	5	4	3	2	1
4.	My supervisor is up-to-date.	5	4	3	2	1
5.	Management is progressive.	5	4	3	2	1
6.	My work is creative.	5	4	3	2	1
7.	My customers respect my judgment.	5	4	3	2	1
8.	My customers are intelligent.	5	4	3	2	1
9.	My customers are interested in what I have to say.	5	4	3	2	1
10.	The company has an unfair promotion policy.	5	4	3	2	1
11.	My work gives a sense of accomplishment.	5	4	3	2	1
12.	The people I work with get along well together.	5	4	3	2	1
13.	My opportunities for advancement are limited.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
14.	My boss has taught me a lot about sales.	5	4	3	2	1
15.	My customers live up to their promises.	5	4	3	2	1
16.	My work is valuable.	5	4	3	2	1
17.	Our sales goals are set by the higher-ups without considering market conditions.	5	4	3	2	1
18.	My customers are trustworthy.	5	4	3	2	1
19.	Management really knows its job.	5	4	3	2	1
20.	My fellow workers are stimulating.	5	4	3	2	1
21.	My pay doesn't given me much incentive to increase my sales.	5	4	3	2	1
22.	My sales manager really tries to get our ideas about things.	5	4	3	2	1
23.	This company operates efficiently and smoothly.	5	4	3	2	1
24.	My fellow workers are selfish.	5	4	3	2	1
25.	My sales manager has the work well organized.	5	4	3	2	1
26.	My boss does a good job of helping sales representatives develop their own potential.	5	4	3	2	1
27.	My customers are fair.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
28.	There are plenty of good jobs here for those who want to get ahead.	5	4	3	2	1
29.	My pay is low in comparison with what others get for similar work in other companies.	5	4	3	2	1
30.	My sales manager has always been fair in his dealings with me.	5	4	3	2	1
31.	Our home office isn't always cooperative in servicing our customers.	5	4	3	2	1
32.	My boss doesn't seem to try very hard to get our problems across to management.	5	4	3	2	1
33.	I'm satisfied with the way employee benefits are handled here.	5	4	3	2	1
34.	We have a real competitive advantage in selling because of the quality of our products.	5	4	3	2	1
35.	The people I work with help each other out when someone falls behind or gets in a tight spot.	5	4	3	2	1
36.	This is a dead-end job.	5	4	3	2	1
37.	Sometimes when I learn of management's plans, I wonder if they know the territory situation at all.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
38.	My fellow workers are boring.	5	4	3	2	1
39.	The company sales training is not carried out in a well-planned program.	5	4	3	2	1
40.	In my opinion the pay here is lower than in other companies.	5	4	3	2	1
41.	My customers expect too much from me.	5	4	3	2	1
42.	Management is weak.	5	4	3	2	1
43.	My job is often dull and monotonous.	5	4	3	2	1
44.	I am highly paid.	5	4	3	2	1
45.	I have confidence in the fairness and honesty of management.	5	4	3	2	1
46.	My fellow workers are sociable.	5	4	3	2	1
47.	My job is exciting.	5	4	3	2	1
48.	My boss really takes the lead in stimulating sales effort.	5	4	3	2	1
49.	My supervisor is intelligent.	5	4	3	2	1
50.	My work is satisfying.	5	4	3	2	1
51.	I seldom know who really makes the purchase decisions in the companies I call upon.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
52.	Management here is really interested in the welfare of employees.	5	4	3	2	1
53.	I'm really doing something worthwhile in my job.	5	4	3	2	1
54.	The company has satisfactory profit sharing.	5	4	3	2	1
55.	My sales manager is too interested in his own success to care about the needs of employees.	5	4	3	2	1
56.	Compared with other companies employee benefits here are good.	5	4	3	2	1
57.	My fellow workers are pleasant.	5	4	3	2	1
58.	My fellow workers are obstructive.	5	4	3	2	1
59.	My income provides for luxuries.	5	4	3	2	1
60.	The people I work with are very friendly.	5	4	3	2	1
61.	My fellow workers are loyal.	5	4	3	2	1
62.	Promotion here is based on ability.	5	4	3	2	1
63.	I feel that the company is highly aggressive in its sales promotion efforts.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
64.	My sales manager gets the sales personnel to work together as a team.	5	4	3	2	1
65.	My fellow workers are intelligent.	5	4	3	2	1
66.	My sales manager gives us credit and praise for work well done.	5	4	3	2	1
67.	I am unproductive in my work.	5	4	3	2	1
68.	My selling ability largely determines my earnings in this company.	5	4	3	2	1
69.	Sales representatives in this company receive good support from the home office.	5	4	3	2	1
70.	My customers are inaccessible.	5	4	3	2	1
71.	My work is challenging.	5	4	3	2	1
72.	Regular promotions are the rule in this company.	5	4	3	2	1
73.	Management here sees to it that there is cooperation between departments.	5	4	3	2	1
74.	My sales manager lives up to his promises.	5	4	3	2	1
75.	My sales manager sees that we have the things we need to do our jobs.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
76.	My customers are well organized.	5	4	3	2	1
77.	I'm paid fairly compared with other employees in this company.	5	4	3	2	1
78.	My customers blame me for problems that I have no control over.	5	4	3	2	1
79.	My job is routine.	5	4	3	2	1
80.	My sales manager knows very little about his job.	5	4	3	2	1
81.	My opportunities for advancement are reasonable.	5	4	3	2	1
82.	My work is useless.	5	4	3	2	1
83.	My customers are unreasonable.	5	4	3	2	1
84.	My fellow workers are responsible.	5	4	3	2	1
85.	My income is adequate for normal expenses.	5	4	3	2	1
86.	My customers are friendly.	5	4	3	2	1
87.	I am very much underpaid for the work that I do.	5	4	3	2	1
88.	I can barely live on my income.	5	4	3	2	1
89.	There isn't enough training for sales representatives who have been on the job for a while.	5	4	3	2	1

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
90.	Management ignores our suggestions and complaints.	5	4	3	2	1
91.	My customers are loyal.	5	4	3	2	1
92.	My customers are understanding.	5	4	3	2	1
93.	I have a good chance for promotion.	5	4	3	2	1
94.	Management fails to give clear-cut orders and instructions.	5	4	3	2	1
95.	My job is interesting.	5	4	3	2	1
96.	This company recognizes the importance of the professional salesman.	5	4	3	2	1
97.	The perceived image of our company is high.	5	4	3	2	1

BEFORE PROCEEDING PLEASE MAKE SURE YOU HAVE CHECKED A RESPONSE TO EACH STATEMENT IN THIS SECTION; THANK YOU.

PART IV EXPECTATIONS OF OTHERS

The industrial salesperson often must satisfy many people when performing a job. In particular, the company, the sales manager, the customers, and the spouse and family may expect the salesperson to perform a variety of activities and they may not all be in agreement as to what these activities should be or how they can best be performed. This part of the inventory attempts to secure your impressions of what you feel each of these people expects of you in performing your job.

The statements are organized into the basic sections of company, sales manager, "average" customer, and family. Some of the statements will be similar for each of these people. Do not try to remember how you checked similar items earlier in the questionnaire as these people may not necessarily agree on what they expect from you. Make each item a separate and independent judgment.

COMPANY

MY COMPANY EXPECTS ME:

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
1.	To supervise the installation of equipment for my customers	5	4	3	2	1
2.	To "stretch the truth" to make a sale	5	4	3	2	1
3.	To "hold firm" on our normal delivery dates	5	4	3	2	1
4.	To be a technical "troubleshooter"	5	4	3	2	1
5.	To expedite orders for my customers	5	4	3	2	1
6.	To train customers in the use of our equipment	5	4	3	2	1
7.	To be completely honest with my customers	5	4	3	2	1
8.	To follow the "hard sell" approach	5	4	3	2	1
9.	To handle back charges and adjustments for my customers	5	4	3	2	1
10.	To tailor delivery schedules to my customer's needs	5	4	3	2	1
11.	To negotiate on price	5	4	3	2	1
12.	To do product design work for my customers	5	4	3	2	1

COMPANY:

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
13.	To show my customers how our products can be coordinated with those of our competitors	5	4	3	2	1
14.	To tailor credit terms to fit the needs of customers	5	4	3	2	1
15.	To perform field tests on newly installed equipment	5	4	3	2	1
16.	To do system design work for my customers	5	4	3	2	1

SALES MANAGER

MY SALES MANAGER EXPECTS ME:

17.	To perform engineering services for my customers	5	4	3	2	1
18.	To "stretch the truth" to make a sale	5	4	3	2	1
19.	To call on customers even when they are unlikely to place an order	5	4	3	2	1
20.	To train customers in the use of our equipment	5	4	3	2	1
21.	To expedite orders for my customers	5	4	3	2	1
22.	To supervise the installation of equipment for my customers	5	4	3	2	1
23.	To be gone overnight much of the time	5	4	3	2	1
24.	To work on weekends	5	4	3	2	1

SALES MANAGER:	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
25. To be a company salesman 24 hours a day	5	4	3	2	1
26. To be a technical "troubleshooter"	5	4	3	2	1
27. To "hold firm" on our normal delivery dates	5	4	3	2	1
28. To be available to my customers at all times	5	4	3	2	1
29. To work in the evenings	5	4	3	2	1
30. To be completely honest with my customers	5	4	3	2	1
31. To tailor delivery schedules to my customer's needs	5	4	3	2	1
32. To do product design work for my customers	5	4	3	2	1
33. To leave my job behind when I go home from work	5	4	3	2	1
34. To include my spouse when entertaining my customers	5	4	3	2	1
35. To tailor credit terms to fit the need of my customers	5	4	3	2	1
36. To be available for customer telephone calls at any hour of the day or night	5	4	3	2	1
37. To show my customers how our products can be coordinated with our competitors' products	5	4	3	2	1

SALES MANAGER:

		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
38.	To negotiate on price	5	4	3	2	1
39.	To drink with my customers	5	4	3	2	1
40.	To develop close personal relationships with my customers	5	4	3	2	1
41.	To perform field tests on newly installed equipment	5	4	3	2	1
42.	To spend little or no time socializing with customers	5	4	3	2	1
43.	To do system design work for my customers	5	4	3	2	1
44.	To be liberal with my expense account in entertaining customers	5	4	3	2	1

CUSTOMERS

MY "AVERAGE" CUSTOMER EXPECTS ME:

45.	To follow the "hard sell" approach	5	4	3	2	1
46.	To "hold firm" on our normal delivery dates	5	4	3	2	1
47.	To be completely honest with them	5	4	3	2	1
48.	To supervise the installation of equipment for them	5	4	3	2	1
49.	To perform engineering services for them	5	4	3	2	1
50.	To work on weekends	5	4	3	2	1
51.	To expedite orders for them	5	4	3	2	1
52.	To train them in the use of our equipment	5	4	3	2	1

	CUSTOMERS:	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
53.	To work in the evenings	5	4	3	2	1
54.	To "stretch the truth" to make a sale	5	4	3	2	1
55.	To be available to them at all times	5	4	3	2	1
56.	To call upon them even when they are unlikely to place an order	5	4	3	2	1
57.	To handle back charges and adjustments for them	5	4	3	2	1
58.	To spend little or no time socializing with them	5	4	3	2	1
59.	To develop close personal relationships with them	5	4	3	2	1
60.	To perform field tests on newly installed equipment	5	4	3	2	1
61.	To drink with them	5	4	3	2	1
62.	To be available for customer telephone calls at any hour of the day or night	5	4	3	2	1
63.	To tailor delivery schedules to them	5	4	3	2	1
64.	To show them how our products can be coordinated with the products of our competitors	5	4	3	2	1
65.	To negotiate on price	5	4	3	2	1
66.	To tailor credit terms to fit their needs	5	4	3	2	1

CUSTOMERS:	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
67. To be liberal with my expense account in entertaining them	5	4	3	2	1
68. To do system design work for them	5	4	3	2	1

FAMILY

MY FAMILY EXPECTS ME:

69. To be available to my customers at all times	5	4	3	2	1
70. To work in the evenings	5	4	3	2	1
71. To work on weekends	5	4	3	2	1
72. To be gone overnight much of the time	5	4	3	2	1
73. To be a salesman 24 hours a day	5	4	3	2	1
74. To drink with my customers	5	4	3	2	1
75. To spend little or no time socializing with my customers	5	4	3	2	1
76. To include them when entertaining my customers	5	4	3	2	1
77. To develop close personal relationships with my customers	5	4	3	2	1
78. To leave my job behind when I come home from work	5	4	3	2	1
79. To be available for customers' telephone calls at any hour of the day or night	5	4	3	2	1

PART V EXPECTATIONS OF OTHERS

In his role as salesman, an individual is not always clear as to what his company, sales manager, customers, and family expect of him. He is more certain about some things than he is others. Very few people are equally certain about all aspects of their job.

You are asked to indicate your degree of certainty about the various aspects of your job by checking the category that best describes your feelings. Again, we ask that you make each item a separate and independent judgment and that you work at a fairly high speed. It is again your first impressions, your immediate "feelings" about the items, that we want.

I AM:

	ABSOLUTELY CERTAIN	VERY CERTAIN	MODERATELY CERTAIN	MODERATELY UNCERTAIN	VERY UNCERTAIN	ABSOLUTELY UNCERTAIN
How satisfied my customers are with my performance in my job	6	5	4	3	2	1
To what extent I can extend more liberal credit terms than normal	6	5	4	3	2	1
How my sales manager expects me to allocate my time among accounts	6	5	4	3	2	1
To what extent I should be a technical trouble-shooter	6	5	4	3	2	1
How much time my sales manager feels I should spend on the job	6	5	4	3	2	1
What activities in my job are most important to my family	6	5	4	3	2	1
About what activities in my job are least important to my customers	6	5	4	3	2	1
To what extent I should train customers in the use of our equipment	6	5	4	3	2	1
What is the best way to close a sale	6	5	4	3	2	1

I AM:

	ABSOLUTELY CERTAIN	VERY CERTAIN	MODERATELY CERTAIN	MODERATELY UNCERTAIN	VERY UNCERTAIN	ABSOLUTELY UNCERTAIN
How much time I should spend socializing with customers	6	5	4	3	2	1
About what activities in my job are most important to my sales manager	6	5	4	3	2	1
About the frequency with which I should call upon customers	6	5	4	3	2	1
About what activities in my job are least important to my family	6	5	4	3	2	1
About the limits of my authority	6	5	4	3	2	1
About our company rules and regulations	6	5	4	3	2	1
How satisfied my family is with my performance in my job	6	5	4	3	2	1
About what my sales manager expects of me in performing my job	6	5	4	3	2	1
How satisfied my sales manager is with my performance on my job	6	5	4	3	2	1

I AM:

	ABSOLUTELY CERTAIN	VERY CERTAIN	MODERATELY CERTAIN	MODERATELY UNCERTAIN	VERY UNCERTAIN	ABSOLUTELY UNCERTAIN
About what activities in my job are most important to my customers	6	5	4	3	2	1
How to handle back charges and adjustments for my customers	6	5	4	3	2	1
About the rules and procedures my customers expect me to follow in dealing with them	6	5	4	3	2	1
How much time my family feels I should spend on the job	6	5	4	3	2	1
To what extent I should do product design work for my customers	6	5	4	3	2	1
What my family expects of me in performing my job	6	5	4	3	2	1
To what extent I can modify normal delivery schedules for customers	6	5	4	3	2	1
What is the best way to sell	6	5	4	3	2	1
How to develop close personal relationships with my customers	6	5	4	3	2	1

I AM:

	ABSOLUTELY CERTAIN	VERY CERTAIN	MODERATELY CERTAIN	MODERATELY UNCERTAIN	VERY UNCERTAIN	ABSOLUTELY UNCERTAIN
How I should perform my job in order to satisfy my customers	6	5	4	3	2	1
What my customers expect of me in performing my job	6	5	4	3	2	1
About where to go to get assistance to do my job	6	5	4	3	2	1
About what activities in my job are least important to my sales manager	6	5	4	3	2	1
How I should perform my job in order to satisfy my sales manager	6	5	4	3	2	1
About how I can best use my expense account in entertaining customers	6	5	4	3	2	1
About what kinds of engineering services I can offer my customers	6	5	4	3	2	1
About how to handle unusual problems or situations	6	5	4	3	2	1
How I should perform my job in order to satisfy my family	6	5	4	3	2	1

I AM:

	ABSOLUTELY CERTAIN	VERY CERTAIN	MODERATELY CERTAIN	MODERATELY UNCERTAIN	VERY UNCERTAIN	ABSOLUTELY UNCERTAIN
To what extent I should supervise the installation of equipment for my customers	6	5	4	3	2	1
To what extent I should do systems design work for my customers	6	5	4	3	2	1
About how frequently my customers expect me to call on them	6	5	4	3	2	1
About how my sales manager feels I should allocate my time on the job	6	5	4	3	2	1
To what extent I can negotiate on price	6	5	4	3	2	1

Appendix C

MANAGERIAL RATING SCALES

SALES MANAGER'S PERFORMANCE RATING SCALE:

EVALUATION OF SALESPERSON PERFORMANCE

Overview:

On the following pages you are requested to evaluate the salespeople under your authority on a number of criteria:

(1) their efforts in working with other personnel in your firm;

(2) the extent of their technical knowledge and how they use it;

(3) their efforts to control company expenses;

(4) their ability to produce sales;

(5) their work in promoting customer goodwill for the company;

(6) their efforts in providing different types of information to the firm;

(7) their skill in giving sales presentations and in dealing with customers during the sales call; and

(8) their ability to manage their time and territory.

Instructions

At the top of each page a brief description of the performance criteria on which the salespeople are to be rated is given. Please read the description carefully.

After reading the criteria description, rate *each* salesperson under your authority as they compare with *all other salespeople you have known or worked with in a similar selling situation.*

To do this, a vertical percentage scale is provided below each performance criteria description. To rate a salesperson simply print their social security number in the space provided to the right of the scale and draw an arrow to the position on the scale that best represents the salesperson's performance on the criteria stated at the top of the page.

REMEMBER: The information provided by you in this questionnaire will remain confidential, no individual will be singled out, and an *individual's performance ratings will not* be reported to your company.

To clarify and illustrate the rating procedure a simplified example is given on the following page.

Sample Rating Criteria and Scale

For simplicity, assume that a sales manager supervising five salespeople was asked to rate the physical height of each of their salespeople on the rating scale. First, the sales manager would consider each of their salespeople with respect to the criteria, height. Let's assume that salesperson B. Holder was clearly one of the tallest salespersons the sales manager had come in contact with and was almost 7' tall. Next salesperson C. Dimly was comparatively short, only about 5' tall. Also, the sales manager thinks that salesperson A. Ford and salesperson Z. Shore are both about 5'11", and salesperson P. Resident is about 6'3" tall. Given these impressions of the salespeople, and what the sales manager knows about other salespeople in similar selling situations, the sales manager's completed scale on the height criteria might look something like the following:

RATING SCALE		SOCIAL SECURITY NUMBERS
Top	10%	
	90%	
	80%	
	70%	
	60%	
Average	50%	
	40%	
	30%	
	20%	
	10%	
Bottom	10%	

PLEASE REMEMBER:

a. To rate each salesperson on every scale (for example, if you have eight salespeople there should be eight social security numbers printed beside each scale).

b. That every salesperson has his strengths and weaknesses with respect to different aspects of the job; please read the criteria descriptions carefully and rate each person with respect to *that* criteria only.

1. Job Performance Criteria: The overall effectiveness and efficiency of a company is a result of the cooperative and supportive attitudes and actions of all the people in the company. Salespeople are no exception. They are responsible for carrying out company programs and policies, and cooperating with other company departments and personnel. Similarly, they must understand the company organization and departmental responsibilities and work within that structure. In addition, the salesperson's attitude and efforts in promoting teamwork influences the company's operation.

   Considering issues such as those noted above, please rate *each* salesperson on their contribution to *cooperating and working with others in your company.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

2. Job Performance Criteria: In an industrial selling situation it is important for the salesperson to develop expertise in the technical and operating aspects of their company's products. In addition to this basic product knowledge, their expertise should encompass a familiarity with competitor's products (specifications and applications), an understanding of customer operations and product needs, and knowing about technological developments within their own company. The salesperson's technical knowledge in combination with their ability to use it can in many circumstances enhance their overall selling ability.

Considering issues such as those noted above, please rate *each* salesperson on their *technical knowledge in combination with their effective use of this knowledge.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

3. Job Performance Criteria: Salespeople help to generate revenues for the company, but there are also expenses in supporting a salesforce. Salespeople must make judicious use of expense accounts for travel. Similarly, they frequently allocate promotional and gift allowances. In addition, the salesperson may keep costs down in other areas of the company by considering order preparation, delivery costs, and the like when writing sales orders. Clearly there are many other areas of salesperson related expenses, and many of these are necessary and desirable. However, some salespeople do not work at controlling unnecessary or excessive expenses.

Considering issues such as those noted above, please rate *each* salesperson on their efforts at *controlling unnecessary or excessive company expenses*.

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

4. Job Performance Criteria: Every salesperson in the company is responsible for meeting various *sales* objectives. Such sales objectives may include total dollar sales, number and level of sales to new accounts, sales of products with high profit margins, sales or contracts with long term potential, and the like.

Considering issues such as those noted above, please rate *each* salesperson in their overall contribution to *producing quantity and quality sales for your company.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

5. Job Performance Criteria: In addition to their actual selling activities, salespeople represent the company and must work to maintain and promote positive company relations, goodwill, and satisfaction with customers and prospects. Such activities as following up after the sale, resolving customer problems, participating in industry associations, building good personal relationships with decision makers important to the firm, and developing customer confidence in the company all create an atmosphere conducive to a continuing and profitable company-customer relationship.

Considering issues such as those noted above, please rate *each* salesperson on their contribution to *creating, maintaining, and improving customer relations, customer satisfaction, and goodwill for your company.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

6. Job Performance Criteria: Salespeople provide important information inputs to the company. Sometimes this simply involves routine reporting of expenses, visits to customers, orders taken and the like. In addition, however, salespeople are sometimes asked to provide special information (estimates of future sales, annual budget expectations, etc.). Some salespeople go beyond what they are specifically asked to do and are continually aware of company information needs. These salespeople use their own initiative and good judgment in providing the company with valuable information from the field (for example, information about competitors, customer needs, and the like), even if it has not specifically been solicited by management. Yet, not all salespeople are equally good about providing the company with accurate, timely, and complete information.

Considering issues such as those noted above, please rate *each* salesperson on the *quality of the information that they provide your company.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

7. Job Performance Criteria: In addition to knowing their product well and how their customers can best use their products to reduce costs and increase profits, the salesperson must be able to present these ideas to customers in an interesting, clear, and organized manner. It is to the salesperson's advantage to convince the customer of their technical expertise and their understanding of customer operations and problems to establish the trust and respect of the customer. Furthermore, in order to achieve the desired results with the sales presentation, the salesperson should know who the key purchasing decision makers are, know what the purchasing process is, and design an effective approach and presentation for each customer. This may require that the salesperson consider solutions to possible customer objections beforehand, be able to negotiate successfully, and know how and when to close a sale with a specific customer.

Considering issues such as those noted above, please rate *each* salesperson on their overall ability to *deal with customers and make good sales presentations in the sales call situation.*

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

8. Job Performance Criteria: The management of a salesperson's time and territory is very important in effective selling. The use of one's time is really an allocation problem: the objective is to allocate a limited resource, time, in the most efficient manner in order to maximixe productivity (face to face selling). Among some of the allocation problems are how to apportion time between new calls and service; how to balance office work with field work; how much time to give the overly demanding prospect or customer. Planning and organizing one's day efficiently can lead to more customer contacts, more presentations, and potentially more opportunities for closes. Proper time and territory management can lead to a successful year in sales.

Considering issues such as those noted above, please rate *each* salesperson on their overall ability to deal *with time and territory management*.

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPERSON ON THIS CRITERIA; THANK YOU.

9. Overall Job Performance Criteria: Over the previous pages you have rated the performance of each of your salespeople on different aspects of their job. Now, would you please rate *each* salesperson *on their* overall *performance, taking all things into* consideration. Keep in mind that your ratings should be in comparison to the performance of all other salespeople you have known or worked with in similar selling situations.

RATING SCALE	SOCIAL SECURITY NUMBERS
Top 10%	
90%	
80%	
70%	
60%	
AVERAGE - 50%	
40%	
30%	
20%	
10%	
Bottom 10%	

BEFORE PROCEEDING PLEASE CHECK TO MAKE SURE YOU HAVE RATED ALL OF YOUR SALESPEOPLE ON THIS CRITERIA; THANK YOU.

In this section, you have rated each of your salespeople on a number of different aspects of how they do their job. Clearly, however, not all of these are equally important. Therefore, we would like you to give us an idea of how important you consider each of these areas to the overall job performance of your salespeople.

First, please read through the list of eight job performance areas below. Then, in the space provided at the right of each area, assign a number indicating the importance of that criteria in evaluating the overall performance of your salespeople. It is convenient to think of the number as representing your general impression of the "percentage" *importance* of performance in that particular area in relation to the salesperson's *total* performance. The sum of the numbers you assign should be 100%.

RELATIVE IMPORTANCE OF DIFFERENT ASPECTS OF SALESPERSON'S JOB ON OVERALL PERFORMANCE:

1. Working with other personnel within the firm ..... _____%
2. Obtaining and using technical knowledge ..... _____%
3. Controlling unnecessary company expenses ..... _____%
4. Selling (quantity and quality of sales produced) ..... _____%
5. Promoting customer relations, satisfaction, and goodwill..... _____%
6. Providing information to the firm ..... _____%
7. Skill in giving sales presentations and dealing with customers ..... _____%
8. Skill in time and territory management..... _____%

Total ..... 100 %

How would you weight the objective and subjective measures? _____%
Objective _____% Subjective

Appendix D

CORRELATIONS

CORRELATION MATRIX FOR LOCUS OF CONTROL (L)

	L 1	L 2	L 3	L 4	L 5	L 6	L 7	L 8	L 9	L 10	L 11	L 12	L 13	L 14	L 15	L 16	L 17	L 18	L 19	L 20	L 21	L 22	L 23	L 24	L 25	L 26	L 27	L 28	L 29
L 1	100																												
L 2	-6	100																											
L 3	7	-6	100																										
L 4	15	4	5	100																									
L 5	23	4	6	32	100																								
L 6	-2	-11	8	15	4	100																							
L 7	-1	-9	10	22	8	25	100																						
L 8	7	-3	17	-5	18	2	-3	100																					
L 9	12	1	2	-1	18	7	8	14	100																				
L 10	17	-8	4	13	9	6	1	-10	-1	100																			
L 11	25	7	9	17	23	18	9	9	13	-5	100	100																	
L 12	14	4	15	12	8	11	16	14	18	13	17	100																	
L 13	23	-16	-9	14	18	2	-3	-6	16	16	3	21	100																
L 14	1	-1	-1	13	0	5	13	22	1	-2	-2	9	2	100															
L 15	16	-2	8	20	21	4	19	1	5	17	21	23	24	23	100														
L 16	7	-3	2	16	19	13	12	1	3	15	32	16	-4	21	26	100													
L 17	7	-10	23	5	6	13	13	17	14	19	17	36	-1	12	11	20	100												
L 18	24	1	13	21	24	1	2	2	15	11	30	17	9	-7	15	17	32	100											
L 19	-5	3	-9	7	-3	3	0	-11	-14	2	6	-14	3	-13	-12	8	-1	1	100										
L 20	-1	-9	16	15	9	19	37	2	4	0	14	5	3	7	5	9	20	19	7	100									
L 21	23	-3	16	2	10	4	6	-2	4	-2	29	-1	-6	-18	2	19	12	31	1	7	100								
L 22	12	1	20	4	7	15	5	11	7	13	15	32	3	-14	14	8	28	29	7	8	13	100							
L 23	14	10	3	1	5	10	5	7	19	10	15	9	-8	3	15	12	7	2	-17	1	6	5	100						
L 24	-1	1	-3	-16	1	5	4	9	-11	-7	3	10	-10	-8	6	-1	2	-13	-8	-18	1	8	7	100					
L 25	16	1	8	33	15	23	20	-4	15	9	36	23	3	7	18	23	26	32	7	18	26	17	18	-10	100				
L 26	5	1	12	12	-1	10	11	-6	-6	10	7	17	10	9	11	6	6	3	5	16	13	17	7	-4	13	100			
L 27	7	28	4	1	21	-3	12	22	4	-3	5	20	-6	17	10	5	14	11	-11	9	-5	17	13	5	6	17	100		
L 28	11	-9	5	21	1	31	18	-1	5	2	24	16	7	10	23	24	14	8	-7	12	16	14	19	6	20	22	6	100	
L 29	-4	-1	-3	-2	2	10	4	1	6	5	5	18	-5	-2	2	15	23	14	-13	-1	-6	29	15	15	13	-4	25	9	100

CORRELATION MATRIX FOR PLANFULNESS (P)

		P 30	P 31	P 32	P 33	P 34	P 35	P 36	P 37	P 38	P 39	P 40	P 41	P 42	P 43	P 44	P 45	P 46
P	30	100																
P	31	18	100															
P	32	7	25	100														
P	33	30	10	13	100													
P	34	31	17	28	33	100												
P	35	17	20	30	21	26	100											
P	36	20	13	18	22	17	25	100										
P	37	15	32	20	7	32	18	12	100									
P	38	10	15	28	22	37	23	17	9	100								
P	39	14	39	14	10	16	16	18	32	15	100							
P	40	28	9	16	25	26	19	21	14	37	16	100						
P	41	9	22	9	10	12	9	-4	0	23	13	16	100					
P	42	13	14	17	18	50	27	15	5	9	15	16	12	100				
P	43	10	2	9	26	11	-2	25	-4	4	-6	2	1	7	100			
P	44	-1	28	20	-3	4	8	4	13	5	10	-9	26	15	10	100		
P	45	15	21	33	19	17	11	15	9	12	18	8	10	10	20	7	100	
P	46	-8	-4	-4	-2	-8	-12	-17	-12	7	-12	-11	-7	-9	-8	-5	-5	100

CORRELATION MATRIX FOR TENACITY (T)

	T 47	T 48	T 49	T 50	T 51	T 52	T 53	T 54
T 47	100							
T 48	10	100						
T 49	29	5	100					
T 50	-7	-1	-1	100				
T 51	12	-14	16	-3	100			
T 52	21	-6	1	4	20	100		
T 53	17	-2	11	-4	12	5	100	
T 54	1	-9	12	11	16	1	11	100

CORRELATION MATRIX FOR PERFORMANCE (PE)

	PE 55	PE 56	PE 57	PE 58	PE 59	PE 60	PE 61	PE 62	PE 63	PE 64	PE 65	PE 66
PE 55	100											
PE 56	59	100										
PE 57	23	15	100									
PE 58	49	63	16	100								
PE 59	66	62	28	72	100							
PE 60	54	61	19	57	64	100						
PE 61	60	71	12	70	76	73	100					
PE 62	56	59	23	67	74	71	76	100				
PE 63	63	72	17	81	79	71	83	83	100			
PE 64	32	44	5	56	43	36	42	38	53	100		
PE 65	20	17	5	14	16	12	16	19	19	11	100	
PE 66	-14	-5	-2	-5	-12	-4	-8	-6	-10	-1	15	100

Appendix E

CONFIRMATORY FACTOR ANALYSIS (FULL MODEL)

LOCUS OF CONTROL	VARIABLES 1-29
PLANFULNESS	VARIABLES 30-46
TENACITY	VARIABLES 47-54
PERFORMANCE	VARIABLES 55-66

FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IS THE DIAGONAL

[illegible]

SIMILARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.109	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.022	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.504	-0.155	0.051	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.578	-0.005	0.176	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.665	0.000	0.380	0.380	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.367	-0.217	0.380	0.396	0.454	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.412	-0.045	0.552	0.593	0.421	0.600	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.148	0.170	0.266	0.021	0.212	0.133	0.156	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.436	0.002	0.456	0.562	0.578	0.429	0.371	0.319	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.493	-0.257	0.362	0.445	0.496	0.312	0.327	0.109	0.306	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.727	-0.027	0.442	0.739	0.700	0.692	0.593	0.185	0.458	0.469	0.362	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.660	-0.137	0.597	0.576	0.678	0.590	0.595	0.326	0.657	0.564	0.591	0.255	0.000	0.000	0.000	0.000	0.000	0.000
13	0.475	-0.146	0.234	0.563	0.455	0.301	0.320	-0.027	0.420	0.462	0.438	0.414	0.010	0.000	0.000	0.000	0.000	0.000
14	-0.053	-0.078	0.092	0.318	0.290	0.291	0.210	0.104	0.111	0.281	0.185	0.303	0.135	0.016	0.000	0.000	0.000	0.000
15	0.633	-0.009	0.428	0.738	0.619	0.596	0.625	0.152	0.554	0.558	0.669	0.753	0.511	0.357	0.191	0.000	0.000	0.000
16	0.508	-0.071	0.186	0.315	0.645	0.642	0.590	0.176	0.506	0.606	0.712	0.666	0.399	0.467	0.719	0.167	0.000	0.000
17	0.596	-0.125	0.603	0.626	0.627	0.659	0.620	0.335	0.598	0.510	0.727	0.016	0.627	0.177	0.678	0.661	0.239	0.000
18	0.745	-0.146	0.639	0.646	0.726	0.559	0.571	0.222	0.640	0.540	0.605	0.759	0.671	0.097	0.640	0.652	-0.756	0.211
19	0.054	-0.061	0.063	-0.033	-0.107	-0.196	-0.049	-0.340	-0.094	0.050	-0.184	-0.197	-0.019	-0.453	-0.205	-0.352	-0.184	0.000
20	0.315	-0.125	0.482	0.710	0.407	0.656	0.587	-0.016	0.453	0.301	0.562	0.551	0.375	0.244	0.562	0.578	0.606	0.537
21	0.515	-0.054	0.490	0.451	0.436	0.447	0.392	0.178	0.368	0.307	0.667	0.466	0.125	-0.054	0.491	0.415	0.497	0.630
22	0.539	-0.055	0.626	0.517	0.538	0.510	0.570	0.255	0.537	0.412	0.622	0.550	0.350	0.053	0.592	0.537	0.033	0.703
23	0.425	0.049	0.257	0.473	0.499	0.533	0.393	0.204	0.472	0.230	0.635	0.560	0.311	0.320	0.513	0.664	0.694	0.463
24	0.019	0.284	0.034	-0.003	-0.099	-0.047	-0.047	0.068	0.024	-0.133	0.011	0.036	-0.222	-0.066	-0.035	0.052	-0.006	-0.076
25	0.642	-0.160	0.577	0.726	0.665	0.710	0.692	0.189	0.593	0.540	0.819	0.720	0.637	0.208	0.732	0.760	0.760	0.829
26	0.665	-0.057	0.507	0.562	0.611	0.676	0.566	0.163	0.342	0.630	0.685	0.577	0.260	0.190	0.577	0.694	0.541	0.534
27	0.606	0.047	0.544	0.310	0.357	0.213	0.365	0.175	0.499	0.313	0.417	0.628	0.178	0.157	0.645	0.363	0.530	0.641
28	0.535	-0.129	0.515	0.712	0.541	0.715	0.708	0.104	0.686	0.625	0.755	0.707	0.660	0.296	0.734	0.698	0.703	0.646
29	0.510	0.187	0.441	0.303	0.518	0.335	0.328	0.012	0.528	0.349	0.556	0.611	0.166	0.585	0.482	0.533	0.616	0.574
30	-0.257	-0.166	-0.081	-0.184	-0.162	-0.203	-0.181	0.341	-0.178	-0.067	-0.281	-0.217	-0.346	0.175	-0.212	-0.136	-0.121	-0.243
31	-0.690	0.036	-0.293	-0.453	-0.188	-0.320	-0.376	0.075	-0.504	-0.445	-0.483	-0.403	-0.551	0.192	-0.466	-0.216	-0.416	-0.517
32	-0.651	0.012	-0.333	-0.571	-0.376	-0.411	-0.469	0.102	-0.364	-0.214	-0.502	-0.460	-0.464	0.002	-0.408	-0.335	-0.461	-0.445
33	-0.275	0.007	-0.137	-0.406	-0.182	-0.146	-0.297	0.063	-0.154	0.034	-0.254	-0.173	-0.281	0.127	-0.246	-0.152	-0.126	-0.210
34	-0.472	-0.157	-0.309	-0.534	-0.337	-0.308	-0.391	0.179	-0.163	-0.111	-0.515	-0.432	-0.361	0.141	-0.381	-0.363	-0.393	-0.452
35	-0.649	-0.110	-0.269	-0.532	-0.310	-0.293	-0.389	0.085	-0.296	-0.164	-0.483	-0.346	-0.442	0.090	-0.354	-0.307	-0.354	-0.386
36	-0.606	-0.086	-0.402	-0.295	-0.239	-0.116	-0.389	0.054	-0.273	-0.195	-0.252	-0.385	-0.239	0.247	-0.316	-0.083	-0.369	-0.328
37	-0.599	0.029	-0.260	-0.518	-0.455	-0.421	-0.371	0.038	-0.552	-0.464	-0.538	-0.463	-0.564	0.018	-0.525	-0.301	-0.467	-0.490
38	-0.590	0.016	-0.479	-0.546	-0.509	-0.464	-0.410	0.011	-0.431	-0.264	-0.609	-0.531	-0.461	0.057	-0.487	-0.441	-0.532	-0.556
39	-0.676	-0.123	-0.317	-0.572	-0.505	-0.411	-0.388	-0.024	-0.587	-0.359	-0.629	-0.543	-0.535	0.003	-0.543	-0.406	-0.559	-0.546
40	-0.405	-0.136	-0.171	-0.538	-0.367	-0.315	-0.322	0.044	-0.335	-0.136	-0.488	-0.357	-0.303	0.032	-0.389	-0.383	-0.316	-0.390
41	-0.620	0.015	-0.225	-0.438	-0.382	-0.447	-0.399	0.051	-0.407	-0.172	-0.525	-0.483	-0.467	0.025	-0.456	-0.358	-0.462	-0.453
42	-0.243	-0.135	-0.176	-0.428	-0.218	-0.395	-0.354	0.194	-0.250	0.046	-0.459	-0.320	-0.267	0.055	-0.306	-0.297	-0.365	-0.361
43	0.066	-0.060	-0.059	-0.193	0.146	-0.038	-0.197	0.194	0.016	0.126	-0.008	0.007	-0.133	-0.064	-0.138	-0.009	-0.010	0.009
44	-0.298	0.221	-0.201	-0.555	-0.238	-0.543	-0.348	0.125	-0.261	-0.216	-0.678	-0.407	-0.650	-0.157	-0.546	-0.375	-0.845	-0.379
45	-0.636	-0.155	-0.253	-0.327	-0.260	-0.185	-0.344	0.067	-0.278	0.017	-0.351	-0.290	-0.358	0.197	-0.285	-0.187	-0.273	-0.158
46	0.290	0.125	0.174	0.370	0.258	0.270	0.220	-0.081	0.227	0.166	0.312	0.387	0.281	0.135	0.314	0.309	0.303	0.281
47	-0.146	0.216	-0.426	-0.370	-0.093	-0.430	-0.492	-0.017	-0.278	-0.155	-0.313	-0.367	-0.236	0.011	-0.278	-0.281	-0.461	-0.388
48	-0.240	-0.023	-0.167	-0.125	-0.205	-0.180	-0.179	-0.307	-0.358	-0.199	-0.313	-0.224	-0.029	-0.190	-0.227	-0.190	-0.256	-0.255
49	-0.241	0.026	-0.421	-0.604	-0.381	-0.596	-0.472	-0.149	-0.347	-0.379	-0.370	-0.476	-0.341	-0.341	-0.479	-0.025	-0.495	-0.466
50	-0.075	-0.143	-0.034	-0.123	-0.025	-0.166	-0.043	0.185	-0.064	-0.051	-0.220	-0.073	-0.220	-0.021	-0.213	-0.088	0.003	-0.138
51	-0.311	0.118	-0.237	-0.604	-0.362	-0.405	-0.517	-0.000	-0.262	-0.062	-0.347	-0.501	-0.441	-0.261	-0.603	-0.372	-0.495	-0.395
52	0.093	0.047	-0.202	-0.103	0.025	-0.197	-0.208	0.014	0.121	0.127	-0.066	-0.179	-0.006	-0.113	-0.090	-0.185	-0.175	-0.123
53	0.085	0.186	-0.090	-0.235	-0.005	-0.331	-0.385	0.190	-0.084	-0.164	-0.183	-0.176	-0.247	-0.282	-0.291	-0.229	-0.224	-0.097
54	-0.255	0.243	-0.296	-0.491	-0.245	-0.229	-0.410	0.028	-0.126	-0.414	-0.227	-0.336	-0.432	-0.159	-0.423	-0.281	-0.334	-0.329
55	-0.092	0.139	-0.159	0.119	0.111	0.283	0.066	-0.118	0.060	-0.221	0.256	0.002	0.093	0.256	0.172	0.146	0.066	0.055
56	-0.066	0.206	-0.169	0.297	0.121	0.279	0.074	-0.115	0.067	-0.209	0.239	0.065	0.064	0.215	0.193	0.387	0.044	0.022
57	-0.111	0.042	-0.238	0.043	-0.056	0.146	-0.057	-0.042	-0.053	-0.159	-0.060	-0.133	0.026	0.275	-0.027	0.183	-0.029	-0.128
58	-0.030	0.124	-0.116	0.192	0.107	0.241	0.153	-0.089	0.139	-0.124	0.330	0.137	0.146	0.289	0.210	0.502	0.156	0.123
59	-0.152	0.115	-0.209	0.292	0.115	0.272	0.039	-0.091	0.013	-0.176	0.216	0.050	0.087	0.302	0.160	0.419	0.040	0.021
60	-0.041	0.105	-0.153	0.385	0.101	0.329	0.105	-0.073	0.142	-0.164	0.301	0.133	0.164	0.315	0.227	0.441	0.116	0.100
61	-0.077	0.135	-0.140	0.367	0.138	0.312	0.116	-0.101	0.084	-0.174	0.278	0.092	0.105	0.292	0.193	0.455	0.095	0.075
62	-0.090	0.118	-0.194	0.352	0.142	0.311	0.075	-0.092	0.101	-0.181	0.260	0.070	0.127	0.301	0.193	0.456	0.071	0.052
63	-0.090	0.123	-0.159	0.332	0.135	0.293	0.093	-0.099	0.086	-0.197	0.266	0.076	0.099	0.276	0.182	0.454	0.080	0.061
64	0.065	0.065	-0.020	0.412	0.221	0.302	0.175	-0.139	0.146	-0.111	0.337	0.184	0.140	0.138	0.213	0.427	0.190	0.211
65	-0.041	0.156	-0.522	-0.196	-0.125	-0.268	-0.431	-0.177	-0.344	-0.471	-0.296	-0.417	-0.291	0.108	-0.308	-0.170	-0.468	-0.041
66	-0.108	0.067	0.066	-0.173	-0.268	-0.316	-0.052	-0.009	-0.216	-0.184	-0.249	-0.208	-0.266	-0.254	-0.040	-0.334	-0.174	-0.176

	19	20	21	22	23	24	25	26	27	28	29
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	-0.087	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.005	0.010	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	-0.061	0.555	0.375	0.187	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	-0.345	0.311	0.371	0.465	0.069	0.000	0.000	0.000	0.000	0.000	0.000
24	-0.166	-0.059	0.028	0.148	0.121	0.001	0.000	0.000	0.000	0.000	0.000
25	-0.036	0.669	0.639	0.729	0.484	-0.116	0.301	0.000	0.000	0.000	0.000
26	0.045	0.505	0.166	0.574	0.349	-0.050	0.642	0.071	0.000	0.000	0.000
27	-0.156	0.261	0.254	0.519	0.024	0.162	0.543	0.304	0.000	0.000	0.000
28	-0.168	0.741	0.172	0.574	0.500	0.250	0.546	0.110	0.474	0.463	0.000
29	-0.111	-0.343	-0.172	-0.574	-0.500	-0.250	-0.546	-0.110	-0.474	-0.463	0.000
30	-0.164	-0.335	-0.138	-0.224	-0.300	-0.226	-0.141	-0.116	-0.141	-0.122	-0.102
31	-0.275	-0.311	-0.288	-0.449	-0.292	0.052	-0.434	-0.246	-0.273	-0.444	-0.285
32	-0.067	-0.502	-0.268	-0.557	-0.317	-0.104	-0.413	-0.351	-0.311	-0.613	-0.287
33	-0.171	-0.427	-0.169	-0.223	-0.230	-0.103	-0.200	-0.121	-0.050	-0.379	-0.101
34	-0.057	-0.535	-0.341	-0.464	-0.481	-0.337	-0.371	-0.334	-0.234	-0.550	-0.174
35	-0.064	-0.421	-0.250	-0.384	-0.430	-0.226	-0.320	-0.340	-0.247	-0.532	-0.297
36	-0.106	-0.344	-0.256	-0.426	-0.194	-0.099	-0.290	-0.421	-0.410	-0.379	-0.343
37	0.012	-0.346	-0.131	-0.380	-0.482	0.011	-0.442	-0.266	-0.311	-0.469	-0.416
38	0.006	-0.552	-0.509	-0.561	-0.411	-0.323	-0.474	-0.385	-0.296	-0.643	-0.606
39	-0.021	-0.457	-0.317	-0.532	-0.567	-0.121	-0.529	-0.345	-0.365	-0.575	-0.504
40	0.108	-0.451	-0.223	-0.382	-0.537	-0.346	-0.305	-0.330	-0.221	-0.660	-0.349
41	-0.082	-0.434	-0.253	-0.427	-0.410	-0.170	-0.481	-0.325	-0.288	-0.585	-0.348
42	0.066	-0.519	-0.250	-0.365	-0.471	-0.292	-0.300	-0.316	-0.184	-0.499	-0.344
43	0.061	-0.289	0.049	-0.027	-0.054	-0.196	-0.011	-0.264	-0.019	-0.263	-0.019
44	0.047	-0.490	-0.158	-0.396	-0.335	0.162	-0.460	-0.300	-0.176	-0.596	-0.219
45	0.021	-0.281	-0.136	-0.421	-0.331	-0.131	-0.230	-0.211	-0.209	-0.391	-0.251
46	-0.144	0.177	0.006	0.117	0.470	0.117	0.218	0.203	0.373	0.301	0.216
47	-0.196	-0.016	-0.334	-0.530	-0.127	0.089	-0.461	-0.476	-0.215	-0.512	-0.238
48	0.295	-0.226	-0.238	-0.290	-0.329	-0.019	-0.356	-0.080	-0.146	-0.116	-0.222
49	0.038	-0.557	-0.240	-0.610	-0.122	0.345	-0.609	-0.385	-0.197	-0.549	-0.252
50	-0.075	-0.109	-0.016	-0.044	-0.126	0.012	-0.111	-0.032	0.026	-0.211	-0.114
51	0.004	-0.587	-0.138	-0.417	-0.116	0.241	-0.419	-0.475	-0.168	-0.578	-0.205
52	0.179	-0.609	-0.078	-0.277	-0.027	-0.101	-0.110	-0.313	-0.095	-0.266	-0.100
53	-0.049	-0.412	0.101	-0.191	-0.052	0.239	-0.260	-0.459	0.064	-0.297	-0.067
54	-0.163	-0.345	-0.129	-0.290	-0.019	0.230	-0.454	-0.367	-0.113	-0.332	-0.096
55	-0.483	0.321	0.049	0.003	0.415	0.320	0.062	0.074	-0.108	0.334	0.111
56	-0.239	0.318	0.017	-0.006	0.057	0.110	0.044	0.069	-0.075	0.204	0.122
57	-0.264	0.168	-0.169	-0.134	0.093	0.127	-0.125	-0.105	-0.252	0.108	-0.085
58	-0.405	0.602	0.067	0.044	0.497	0.250	0.152	0.126	-0.062	0.377	0.174
59	-0.439	0.318	-0.004	-0.045	0.400	0.235	0.040	0.041	-0.142	0.204	0.060
60	-0.426	0.381	0.040	0.018	0.496	0.258	0.128	0.075	-0.085	0.374	0.131
61	-0.395	0.378	0.054	0.007	0.452	0.252	0.105	0.099	-0.106	0.366	0.120
62	-0.420	0.351	0.022	-0.030	0.436	0.228	0.096	0.043	-0.131	0.327	0.092
63	-0.427	0.353	0.056	-0.009	0.452	0.261	0.090	0.067	-0.119	0.321	0.111
64	-0.250	0.430	0.164	0.158	0.446	0.313	0.193	0.196	-0.016	0.390	0.167
65	-0.236	-0.162	-0.259	-0.454	-0.073	0.194	-0.422	-0.297	-0.369	-0.278	-0.353
66	0.261	-0.042	-0.169	-0.222	-0.205	-0.074	-0.219	-0.104	0.081	-0.246	-0.161

	30	31	32	33	34	35	36
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.468	0.264	0.000	0.000	0.000	0.000	0.000
31	0.621	0.674	0.250	0.000	0.000	0.000	0.000
32	0.782	0.419	0.710	0.209	0.000	0.000	0.000
33	0.795	0.525	0.725	0.774	0.342	0.000	0.000
34	0.654	0.550	0.772	0.677	0.822	0.196	0.000
35	0.517	0.597	0.569	0.549	0.577	0.570	0.148
36	0.570	0.689	0.591	0.611	0.549	0.610	0.511
37	0.615	0.550	0.727	0.652	0.781	0.773	0.492
38	0.592	0.736	0.689	0.469	0.690	0.716	0.544
39	0.757	0.360	0.638	0.733	0.640	0.764	0.452
40	0.479	0.535	0.642	0.490	0.635	0.604	0.487
41	0.713	0.343	0.665	0.728	0.615	0.745	0.496
42	0.591	0.617	0.698	0.638	0.696	0.637	0.599
43	0.034	0.074	0.410	0.511	0.500	0.394	0.314
44	0.231	0.484	0.556	0.316	0.605	0.679	0.208
45	0.591	0.617	0.698	0.638	0.696	0.637	0.599
46	0.211	0.117	0.505	0.347	0.221	0.348	0.181
47	0.198	0.067	-0.132	-0.137	-0.038	-0.137	-0.075
48	0.144	0.261	0.252	0.067	0.032	0.029	0.069
49	0.209	0.272	0.260	0.168	0.227	0.217	0.052
50	0.251	0.359	0.500	0.360	0.326	0.405	0.291
51	0.229	-0.084	0.364	0.393	0.344	0.319	0.126
52	0.054	0.112	0.217	0.278	0.136	0.184	0.044
53	0.078	0.278	0.240	0.122	0.122	0.100	0.119
54	0.111	0.341	0.190	-0.284	-0.376	-0.477	-0.372
55							
56	-0.032	0.172	-0.287	-0.046	-0.534	-0.421	0.099
57	0.088	0.304	-0.084	-0.024	-0.040	-0.104	0.180
58	0.175	0.132	-0.293	-0.402	-0.511	-0.610	0.130
59	0.129	0.129	-0.320	-0.421	-0.500	-0.422	0.119
60	0.170	0.167	-0.280	-0.411	-0.498	-0.385	0.135
61	0.082	0.173	-0.289	-0.362	-0.451	-0.370	0.201
62	0.111	0.345	0.201	-0.264	-0.391	-0.480	-0.363	0.164
63	0.167	-0.526	0.059	-0.417	-0.564	-0.662	-0.519	-0.042
64	0.279	0.500	0.216	-0.096	0.004	0.064	0.367
65	0.051	0.105	0.270	0.187	0.199	0.195	-0.061
66							

SIMILIARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.108	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.667	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.742	0.654	0.158	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.580	0.749	0.420	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.563	0.638	0.639	0.557	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.517	0.676	0.547	0.771	0.615	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43	0.116	0.249	0.167	0.172	0.312	0.504	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.659	0.443	0.523	0.329	0.556	0.436	0.233	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.577	0.618	0.595	0.603	0.589	0.597	0.341	0.411	0.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	-0.166	-0.114	-0.193	-0.198	-0.512	-0.531	-0.200	-0.525	-0.186	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.158	0.158	0.192	0.198	0.182	0.114	0.121	0.122	0.216	-0.166	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	0.012	-0.017	0.146	-0.066	-0.066	-0.041	-0.046	0.090	-0.016	-0.090	0.174	0.006	0.000	0.000	0.000	0.000	0.000	0.000
49	0.168	0.227	0.165	-0.033	0.254	0.010	0.091	0.443	0.045	-0.098	0.521	0.259	0.212	0.000	0.000	0.000	0.000	0.000
50	0.175	0.230	0.134	0.092	0.291	0.271	0.258	0.361	0.242	-0.123	-0.002	-0.079	0.102	0.000	0.000	0.000	0.000	0.000
51	0.444	0.454	0.302	0.326	0.331	0.245	0.273	0.466	0.268	-0.306	0.488	-0.023	0.496	0.152	0.121	0.000	0.000	0.000
52	-0.087	0.374	0.002	0.363	0.290	0.431	0.381	0.261	0.247	-0.268	0.438	-0.221	0.213	0.116	0.316	0.069	0.000	0.000
53	0.181	0.072	0.112	0.035	0.260	0.239	0.373	0.399	0.087	-0.199	0.447	-0.018	0.444	0.235	0.073	0.305	0.078	0.000
54	0.187	0.174	0.128	0.012	0.115	-0.041	0.180	0.284	0.126	-0.058	0.282	0.018	0.310	-0.015	0.942	0.139	0.283	0.959
55	-0.104	-0.373	-0.138	-0.551	-0.356	-0.573	-0.400	-0.268	-0.181	0.312	-0.116	0.019	0.041	-0.218	-0.151	-0.422	-0.151	0.000
56	-0.167	-0.357	-0.188	-0.622	-0.362	-0.642	-0.395	-0.236	-0.208	0.011	-0.072	0.039	0.131	-0.192	-0.115	-0.388	-0.167	0.135
57	0.088	-0.034	0.078	-0.129	-0.179	-0.209	-0.169	-0.199	0.078	0.126	-0.075	0.011	-0.084	-0.044	-0.104	-0.339	-0.235	0.185
58	-0.189	-0.193	-0.224	-0.599	-0.370	-0.626	-0.358	-0.304	-0.182	0.167	-0.124	-0.009	0.016	-0.186	-0.187	-0.394	-0.207	0.065
59	-0.096	-0.291	-0.098	-0.513	-0.263	-0.516	-0.384	-0.262	-0.107	0.132	-0.065	0.016	0.042	-0.186	-0.150	-0.386	-0.176	0.115
60	-0.203	-0.394	-0.211	-0.592	-0.370	-0.619	-0.361	-0.321	-0.220	0.191	-0.110	-0.000	-0.019	-0.191	-0.188	-0.372	-0.205	0.042
61	-0.144	-0.357	-0.167	-0.570	-0.338	-0.615	-0.359	-0.278	-0.174	0.360	-0.115	0.008	0.030	-0.190	-0.167	-0.397	-0.222	0.099
62	-0.148	-0.125	-0.167	-0.523	-0.336	-0.561	-0.357	-0.304	-0.157	0.344	-0.068	-0.000	0.008	-0.218	-0.168	-0.354	-0.224	0.081
63	-0.120	-0.348	-0.149	-0.558	-0.324	-0.590	-0.378	-0.255	-0.168	0.316	-0.096	-0.002	0.041	-0.165	-0.138	-0.391	-0.180	0.092
64	-0.248	-0.553	-0.282	-0.704	-0.426	-0.702	-0.447	-0.284	-0.301	0.396	-0.216	0.056	0.029	-0.139	-0.227	-0.441	-0.187	-0.024
65	0.309	0.163	0.321	-0.071	0.167	-0.116	-0.155	0.195	0.102	-0.058	0.250	0.126	0.361	-0.076	0.167	-0.292	0.041	0.215
66	0.177	0.261	0.151	0.206	0.191	0.239	0.113	0.355	0.004	-0.072	-0.041	0.109	0.182	0.269	0.196	0.062	0.079	0.081

	55	56	57	58	59	60	61	62	63	64	65	66
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	0.641	0.620	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	0.957	0.971	0.645	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	0.968	0.969	0.716	0.974	0.743	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	0.958	0.962	0.657	0.971	0.971	0.598	0.000	0.000	0.000	0.000	0.000	0.000
60	0.966	0.975	0.649	0.980	0.962	0.942	0.750	0.000	0.000	0.000	0.000	0.000
61	0.962	0.961	0.686	0.969	0.980	0.984	0.981	0.716	0.000	0.000	0.000	0.000
62	0.972	0.976	0.655	0.986	0.986	0.981	0.991	0.983	0.870	0.000	0.000	0.000
63	0.896	0.908	0.591	0.909	0.873	0.894	0.906	0.877	0.911	0.268	0.000	0.000
64	0.544	0.561	0.430	0.504	0.549	0.518	0.511	0.558	0.541	0.438	0.052	0.000
65	-0.416	-0.350	-0.298	-0.001	-0.438	-0.409	-0.398	-0.425	-0.009	-0.377	-0.128	0.005

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 0.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	0.109	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	-0.071	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	-0.009	-0.064	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.028	0.033	-0.016	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.112	0.036	-0.026	0.201	0.149	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	-0.135	-0.127	0.011	0.037	-0.004	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	-0.124	-0.104	0.032	0.109	-0.054	0.162	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.022	-0.031	0.138	-0.115	0.132	-0.026	-0.001	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.051	0.005	-0.033	-0.095	0.110	0.003	0.012	0.116	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.121	-0.092	0.001	0.066	0.017	-0.002	-0.055	-0.128	-0.049	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.095	0.061	-0.036	-0.019	0.061	0.038	-0.094	0.007	0.024	-0.178	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	-0.033	0.026	0.037	-0.002	-0.139	-0.050	-0.001	0.017	0.078	0.038	-0.173	0.235	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.200	-0.104	-0.121	0.096	0.161	-0.018	-0.074	-0.076	0.140	0.137	-0.039	0.160	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	-0.038	-0.010	-0.038	0.092	-0.057	0.010	0.091	0.200	-0.023	-0.043	-0.098	0.034	0.002	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.022	-0.012	-0.019	0.050	0.046	-0.115	0.052	-0.067	-0.051	0.103	-0.012	0.014	-0.204	0.206	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	-0.074	-0.051	-0.079	0.013	0.045	0.011	-0.015	-0.059	-0.071	0.077	0.144	-0.063	-0.115	0.178	0.184	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	-0.111	-0.134	0.146	-0.164	-0.163	-0.021	-0.031	0.115	0.035	0.120	-0.105	0.145	-0.005	0.061	-0.128	0.001	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.105	-0.002	0.026	0.045	-0.077	-0.155	-0.158	-0.056	0.063	0.028	0.090	-0.077	0.035	-0.149	-0.066	-0.019	0.128	0.213	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	-0.092	0.031	-0.114	0.015	-0.004	-0.000	-0.042	-0.133	-0.173	0.005	0.004	-0.226	0.015	-0.146	-0.189	-0.157	-0.073	-0.050	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	-0.111	-0.106	0.105	0.044	-0.028	0.112	0.102	-0.022	-0.026	-0.056	-0.000	-0.117	-0.011	0.036	-0.092	-0.020	0.067	0.047	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.162	-0.037	0.116	-0.075	0.005	-0.040	-0.023	-0.057	-0.010	-0.071	0.202	-0.159	-0.099	-0.217	-0.189	0.181	0.004	0.232	-0.019	-0.002	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	-0.023	-0.007	0.118	-0.146	-0.117	0.016	-0.110	0.056	-0.029	0.055	-0.091	0.132	-0.061	-0.223	-0.064	-0.115	0.090	0.116	0.028	-0.053	0.027	0.107	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.056	0.100	-0.028	-0.099	-0.054	0.025	-0.060	0.035	0.118	0.049	0.010	-0.051	-0.122	-0.000	0.036	0.010	-0.075	-0.117	-0.207	-0.065	-0.010	-0.073	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	-0.027	0.007	-0.038	-0.187	-0.007	0.042	0.038	0.082	-0.119	-0.077	0.017	0.100	-0.102	-0.088	0.056	0.000	0.000	0.000	0.000	-0.197	0.000	-0.075	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	-0.026	-0.003	-0.059	0.157	-0.076	0.072	0.022	-0.151	0.037	-0.014	0.106	-0.078	-0.055	0.001	-0.081	0.005	-0.011	0.006	0.013	0.033	0.156	-0.092	0.046	-0.138	0.301	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	-0.041	0.005	0.059	0.022	-0.130	0.017	0.023	-0.118	-0.126	0.049	-0.002	0.039	0.064	0.056	-0.006	-0.032	0.065	-0.105	0.020	0.087	0.067	0.067	0.000	-0.045	-0.021	0.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	-0.036	0.202	-0.029	-0.115	0.103	-0.115	0.029	0.106	-0.031	-0.097	-0.136	0.053	-0.104	0.116	-0.043	-0.093	-0.012	-0.039	-0.157	-0.003	-0.135	0.046	0.055	0.019	-0.167	0.096	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	-0.026	-0.116	-0.050	0.034	-0.171	0.214	0.052	-0.085	-0.047	-0.061	0.044	-0.063	0.017	0.050	0.063	0.090	-0.090	-0.139	-0.126	0.007	0.072	-0.048	0.099	0.046	-0.031	0.126	-0.070	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.117	0.018	-0.078	0.300	-0.067	0.013	0.025	-0.021	0.012	0.037	-0.073	0.082	-0.075	-0.003	-0.078	0.078	0.184	0.043	0.152	0.075	-0.120	0.221	0.105	0.152	-0.010	-0.107	0.202	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	-0.241	0.052	-0.047	-0.272	-0.172	-0.060	-0.165	-0.011	-0.197	-0.001	-0.204	-0.230	-0.064	0.061	-0.251	-0.139	-0.231	-0.178	-0.197	-0.159	-0.084	-0.283	-0.204	-0.083	-0.234	-0.241	-0.097	-0.165	-0.119	0.159	0.000	0.000	0.000	0.000	0.000	0.000
31	-0.463	0.040	-0.153	-0.298	-0.352	-0.261	-0.220	0.057	-0.216	-0.180	-0.604	-0.449	-0.194	-0.006	-0.561	-0.169	-0.569	-0.500	-0.104	-0.238	-0.157	-0.340	-0.289	0.071	-0.561	-0.101	-0.220	-0.407	-0.118	-0.033	0.264	0.000	0.000	0.000	0.000	0.000
32	-0.320	-0.031	-0.326	-0.546	-0.323	-0.324	-0.335	-0.096	-0.158	-0.050	-0.454	-0.500	-0.124	-0.072	-0.324	-0.212	-0.435	-0.612	-0.048	-0.315	-0.105	-0.346	-0.155	0.024	-0.594	-0.221	-0.235	-0.552	-0.142	-0.168	-0.012	0.250	0.000	0.000	0.000	0.000
33	-0.251	-0.004	-0.121	-0.366	-0.093	-0.113	-0.260	0.015	-0.160	0.003	-0.322	-0.278	-0.175	-0.030	-0.239	-0.156	-0.159	-0.368	-0.096	-0.345	-0.116	-0.107	-0.078	-0.041	-0.405	-0.189	-0.109	-0.372	-0.000	0.104	-0.181	-0.111	0.209	0.000	0.000	0.000
34	-0.481	-0.041	-0.219	-0.420	-0.339	-0.254	-0.337	-0.059	-0.205	-0.092	-0.655	-0.616	-0.166	0.050	-0.659	-0.334	-0.578	-0.557	-0.144	-0.241	-0.306	-0.523	-0.185	-0.141	-0.603	-0.275	-0.272	-0.369	-0.229	0.104	-0.193	-0.016	0.000	0.000	0.000	0.000
35	-0.290	-0.081	-0.096	-0.276	-0.295	-0.230	-0.252	0.143	-0.093	-0.096	-0.432	-0.360	-0.083	0.035	-0.360	-0.295	-0.504	-0.384	-0.014	-0.289	-0.136	-0.283	-0.099	0.003	-0.261	-0.129	-0.296	-0.381	-0.103	-0.008	-0.042	0.101	0.007	-0.001	0.196	0.000
36	-0.237	-0.089	-0.324	-0.159	-0.096	-0.050	-0.281	-0.032	-0.035	-0.162	-0.291	-0.254	-0.068	-0.035	-0.352	-0.200	-0.230	-0.324	-0.011	-0.166	-0.187	-0.352	-0.252	-0.113	-0.257	-0.230	-0.356	-0.236	-0.057	0.034	-0.070	-0.026	0.054	-0.071	0.097	0.146
37	-0.212	0.054	-0.072	-0.249	-0.101	-0.166	-0.076	-0.020	-0.146	-0.194	-0.231	-0.318	-0.259	-0.089	-0.203	-0.300	-0.375	-0.252	-0.075	-0.102	-0.002	-0.240	-0.272	0.033	-0.186	-0.101	-0.134	-0.177	-0.160	0.026	0.167	0.036	-0.093	0.023	0.036	-0.007
38	-0.290	0.093	-0.119	-0.355	-0.411	-0.218	-0.295	-0.153	-0.119	-0.115	-0.627	-0.473	-0.191	0.026	-0.346	-0.288	-0.522	-0.544	-0.090	-0.229	-0.230	-0.457	-0.144	-0.129	-0.485	-0.092	-0.114	-0.005	-0.147	-0.095	-0.116	0.042	0.004	0.002	0.030	-0.010
39	-0.366	0.010	-0.031	-0.261	-0.294	-0.292	-0.271	-0.066	-0.267	-0.194	-0.603	-0.545	-0.187	0.029	-0.228	-0.307	-0.604	-0.366	-0.089	-0.131	-0.070	-0.219	-0.344	-0.075	-0.415	-0.099	-0.302	-0.326	-0.166	-0.015	0.235	-0.069	-0.100	-0.102	-0.019	0.026
40	-0.266	-0.116	-0.132	-0.334	-0.413	-0.111	-0.173	-0.043	-0.161	-0.060	-0.307	-0.320	-0.131	-0.017	-0.213	-0.200	-0.323	-0.197	-0.125	-0.199	-0.140	-0.296	-0.284	-0.157	-0.333	-0.158	-0.267	-0.350	-0.171	0.142	-0.185	-0.050	0.075	0.027	0.015	0.068
41	-0.179	-0.105	-0.062	-0.205	-0.004	-0.147	-0.117	-0.136	-0.138	-0.038	-0.278	-0.194	-0.134	-0.036	-0.306	-0.116	-0.300	-0.172	-0.083	-0.156	-0.110	-0.355	-0.203	-0.034	-0.167	-0.077	-0.061	-0.297	-0.096	-0.020	0.094	-0.054	-0.027	-0.041	-0.060	-0.166
42	-0.228	-0.134	-0.240	-0.188	-0.075	-0.194	-0.333	0.023	-0.237	0.013	-0.340	-0.384	-0.043	0.102	-0.198	-0.222	-0.280	-0.201	-0.038	-0.313	-0.171	-0.321	-0.203	-0.090	-0.352	-0.132	-0.230	-0.282	-0.171	-0.035	-0.085	-0.040	-0.008	0.151	0.102	-0.003
43	0.019	0.066	-0.058	-0.039	0.088	0.032	-0.177	0.087	0.006	0.032	0.099	-0.157	-0.025	-0.055	-0.222	-0.149	0.011	-0.021	0.060	-0.144	-0.039	-0.126	-0.061	0.039	-0.115	-0.076	-0.073	-0.114	-0.083	0.034	-0.066	0.004	0.202	0.006	-0.115	0.205
44	-0.016	-0.102	-0.008	-0.148	-0.125	-0.275	-0.216	-0.001	-0.045	-0.055	-0.256	-0.154	-0.222	-0.021	-0.287	-0.153	-0.208	-0.152	-0.069	-0.261	-0.049	-0.201	-0.056	0.019	-0.298	-0.041	-0.090	-0.236	-0.081	-0.112	0.198	0.105	0.148	-0.118	-0.026	-0.052
45	-0.243	-0.011	-0.195	-0.192	-0.157	-0.172	0.046	-0.140	-0.208	-0.047	-0.327	-0.289	-0.111	-0.001	-0.157	-0.066	-0.214	-0.265	-0.126	-0.168	-0.151	-0.173	-0.116	-0.032	-0.294	-0.144	-0.326	-0.302	-0.225	-0.005	0.016	0.180	0.020	-0.076	-0.071	0.009
46	-0.064	0.109	-0.019	0.041	-0.043	-0.159	0.001	0.039	0.096	0.028	-0.081	-0.129	0.126	-0.071	0.001	-0.086	0.013	-0.050	0.010	0.015	-0.066	0.006	-0.068	-0.066	-0.118	0.019	0.043	-0.063	0.100	-0.165	-0.033	-0.151	-0.109	-0.224	-0.221	0.231
47	-0.183	0.097	-0.188	-0.252	-0.304	-0.335	-0.261	-0.118	-0.091	-0.162	-0.360	-0.363	-0.110	-0.005	-0.295	-0.228	-0.492	-0.516	-0.134	-0.425	-0.253	-0.571	-0.168	-0.006	-0.725	-0.199	-0.276	-0.456	-0.182	-0.254	-0.004	-0.016	-0.120	-0.181	-0.118	-0.135
48	-0.013	0.053	-0.079	0.001	-0.004	-0.073	0.050	-0.040	-0.111	0.001	-0.060	-0.124	-0.049	-0.061	-0.075	-0.116	-0.069	-0.251	0.005	-0.011	-0.066	0.020	-0.060	0.112	-0.140	-0.032	-0.129	-0.019	-0.004	-0.097	0.007	-0.238	-0.041	-0.133	-0.140	-0.002
49	-0.111	0.065	-0.203	-0.144	-0.133	-0.314	-0.313	-0.119	-0.288	-0.147	-0.638	-0.367	-0.223	-0.101	-0.511	-0.316	-0.621	-0.602	0.012	-0.333	-0.102	-0.621	-0.121	0.056	-0.578	-0.111	-0.127	-0.395	-0.141	-0.145	-0.153	-0.106	-0.210	-0.556	-0.169	-0.279
50	0.021	-0.045	0.051	-0.000	0.041	0.047	-0.092	0.051	0.043	0.034	0.020	0.047	0.040	0.046	-0.135	-0.005	-0.048	-0.022	-0.014	0.099	-0.073	-0.083	0.038	-0.001	-0.094	0.044	0.057	0.076	0.049	-0.016	0.155	0.114	-0.022	0.025	-0.046	0.071
51	-0.161	0.067	-0.127	-0.319	-0.212	-0.038	-0.109	0.032	-0.108	-0.231	-0.197	-0.335	-0.267	-0.221	-0.356	-0.042	-0.382	-0.261	-0.065	-0.226	0.060	-0.233	-0.035	0.138	-0.138	-0.199	-0.103	-0.307	0.005	-0.149	-0.213	-0.027	-0.066	-0.236	-0.049	-0.108
52	-0.026	-0.030	-0.080	-0.067	-0.127	-0.037	-0.119	-0.095	-0.011	0.006	-0.112	-0.216	0.016	0.021	-0.131	-0.058	-0.302	-0.146	-0.092	-0.153	-0.088	-0.220	0.054	-0.071	-0.111	-0.117	-0.220	-0.272	-0.029	-0.135	-0.265	0.051	-0.097	-0.126	-0.018	-0.076
53	-0.048	0.091	-0.037	-0.200	0.062	-0.126	-0.132	0.009	-0.040	-0.063	-0.178	-0.209	-0.097	-0.045	-0.229	-0.118	-0.311	-0.106	-0.042	-0.264	-0.027	-0.134	0.005	0.034	-0.243	-0.039	-0.103	-0.276	-0.004	0.023	-0.137	-0.145	-0.147	-0.151	-0.197	-0.092
54	-0.051	0.026	-0.004	-0.171	-0.239	-0.131	-0.002	0.076	-0.127	-0.105	-0.132	-0.304	-0.040	-0.149	-0.267	-0.174	-0.204	-0.252	-0.007	-0.211	0.013	-0.272	-0.001	0.120	-0.290	-0.201	-0.061	-0.164	-0.041	0.055	-0.060	-0.013	0.020	-0.180	-0.255	-0.162
55	-0.389	-0.024	-0.176	-0.344	-0.325	-0.194	-0.369	-0.168	-0.133	-0.164	-0.524	-0.614	-0.164	-0.100	-0.155	-0.246	-0.562	-0.544	-0.225	-0.205	-0.199	-0.346	-0.100	0.080	-0.563	-0.216	-0.347	-0.272	-0.171	-0.553	-0.041	-0.678	-0.659	-0.001	-0.652	-0.256
56	-0.526	0.176	-0.382	-0.318	-0.515	-0.315	-0.415	-0.167	-0.205	-0.354	-0.476	-0.769	-0.167	-0.099	-0.562	-0.391	-0.734	-0.748	-0.172	-0.314	-0.167	-0.637	-0.071	0.047	-0.895	-0.369	-0.366	-0.545	-0.206	-0.084	-0.502	-0.725	-0.006	-1.133	-0.729	-0.464
57	-0.188	-0.005	-0.180	-0.161	-0.138	0.034	-0.185	0.021	-0.050	-0.109	-0.146	-0.097	0.062	-0.065	-0.223	-0.136	-0.007	-0.222	-0.178	0.014	-0.074	-0.114	-0.103	-0.150	-0.249	-0.078	-0.118	-0.076	-0.160	0.028	-0.001	-0.103	0.003	0.018	-0.219	-0.005
58	-0.597	-0.012	-0.440	-0.494	-0.469	-0.257	-0.436	-0.129	-0.221	-0.253	-0.648	-0.707	-0.166	-0.070	-0.521	-0.328	-0.870	-0.610	-0.239	-0.067	-0.307	-0.785	0.023	0.042	-0.810	-0.355	-0.514	-0.615	-0.241	-0.695	-0.699	-1.036	-0.858	-1.649	-1.006	-0.503
59	-0.041	-0.026	-0.538	-0.517	-0.582	-0.444	-0.478	-0.135	-0.416	-0.603	-0.979	-1.001	-0.065	-0.018	-0.726	-0.475	-0.971	-0.949	-0.391	-0.378	-0.170	-0.862	-0.230	0.002	-1.182	-0.425	-0.833	-0.651	-0.421	-0.571	-0.881	-0.694	-0.727	-0.944	-0.787	-1.220
60	-0.611	-0.010	-0.340	-0.264	-0.543	-0.243	-0.419	-0.095	-0.411	-0.006	-0.112	-0.216	0.016	0.021	-0.131	-0.058	-0.302	-0.146	-0.092	-0.153	-0.088	-0.220	0.054	-0.071	-0.111	-0.117	-0.220	-0.272	-0.029	-0.135	-0.265	0.051	-0.097	-0.126	-0.018	-0.076
61	-0.700	-0.071	-0.399	-0.105	-0.781	-0.002	-0.592	-0.241	-0.441	-0.421	-0.835	-1.038	-0.221	-0.004	-0.766	-0.573	-0.874	-0.846	-0.399	-0.257	-0.422	-0.842	-0.242	0.098	-1.048	-0.257	-0.619	-0.615	-0.461	-0.837	-0.721	-1.098	-0.971	-1.516	-0.932	-0.345
62	-0.617	0.026	-0.524	-0.349	-0.612	-0.306	-0.616	-0.296	-0.361	-0.461	-0.649	-0.953	-0.135	0.143	-0.712	-0.363	-0.860	-0.818	-0.388	-0.317	-0.442	-0.917	-0.309	-0.065	-1.010	-0.542	-0.710	-0.508	-0.343	-0.813	-0.721	-1.098	-0.971	-1.516	-0.932	-0.345
63	-1.029	-0.124	-0.171	-0.047	-1.046	-0.642	-0.905	-0.535	-0.537	-0.650	-1.370	-1.573	-0.198	0.000	-1.177	-0.815	-1.579	-1.164	-0.591	-0.434	-0.601	-1.397	-0.558	0.183	-1.752	-0.743	-1.103	-0.879	-0.500	-1.386	-1.196	-1.736	-1.760	-2.472	-1.596	-0.838
64	-0.229	-0.026	-0.029	-0.131	-0.135	-0.202	-0.163	-0.150	-0.162	-0.095	-0.088	-0.291	-0.042	-0.174	-0.300	-0.130	-0.200	-0.197	-0.050	0.030	-0.075	-0.174	-0.163	0.056	-0.424	-0.183	-0.249	-0.216	0.015	-0.491	-0.356	-0.504	-0.597	-0.844	-0.351	-0.246
65	-0.055	0.047	-0.166	-0.187	-0.156	-0.269	-0.115	-0.035	-0.073	-0.163	-0.124	-0.121	-0.036	-0.028	-0.252	-0.101	-0.281	-0.191	-0.069	-0.198	-0.077	-0.292	-0.159	-0.027	-0.337	-0.043	-0.133	-0.191	-0.154	-0.225	-0.108	-0.172	-0.181	-0.118	-0.071	0.062
66	-0.042	0.053	-0.003	0.001	-0.136	-0.036	-0.069	0.055	0.028	-0.017	-0.003	-0.104	-0.158	0.031	-0.191	-0.046	-0.024	-0.128	0.017	0.028	0.007	0.013	0.023	-0.051	-0.024	0.036	-0.000	-0.164	-0.035	-0.100	0.000	-0.003	-0.076	0.033	-0.056	-0.066

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.108	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	-0.074	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.224	-0.019	0.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.009	0.223	-0.005	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	-0.110	0.125	0.028	0.058	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	-0.093	-0.119	-0.012	-0.012	0.009	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43	-0.102	-0.047	-0.147	-0.057	-0.043	-0.008	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.042	-0.055	0.016	-0.197	0.212	0.078	0.059	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	-0.041	-0.071	0.033	-0.046	-0.006	-0.043	0.150	-0.016	0.145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	0.182	-0.015	-0.207	-0.203	-0.127	-0.181	-0.118	-0.046	-0.120	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	-0.253	-0.230	-0.242	-0.185	-0.045	-0.154	0.031	-0.047	-0.037	-0.109	0.247	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	0.006	-0.085	-0.046	-0.099	0.074	0.021	0.038	-0.094	-0.038	0.027	0.067	0.006	0.000	0.000	0.000	0.000	0.000	0.000
49	-0.092	-0.256	-0.260	-0.286	-0.189	-0.269	0.020	0.101	-0.150	-0.017	0.063	0.021	0.212	0.000	0.000	0.000	0.000	0.000
50	-0.050	-0.077	0.125	-0.067	0.146	0.002	0.104	0.251	0.075	-0.047	-0.087	-0.009	-0.016	0.000	0.000	0.000	0.000	0.000
51	-0.129	-0.055	-0.082	-0.099	0.050	-0.126	0.009	0.037	-0.221	-0.133	-0.087	-0.179	0.000	-0.032	0.121	0.000	0.000	0.000
52	-0.237	-0.042	-0.120	-0.207	-0.094	-0.084	0.065	-0.056	-0.066	0.007	0.081	-0.048	-0.126	0.043	0.121	0.069	0.000	0.000
53	-0.073	-0.117	-0.114	-0.221	-0.076	-0.079	0.016	0.009	-0.170	-0.151	0.032	-0.042	-0.087	-0.041	0.026	-0.029	0.070	0.000
54	-0.048	-0.176	-0.181	-0.099	-0.173	-0.145	-0.017	-0.030	-0.073	0.126	-0.144	-0.111	0.011	0.116	0.081	-0.055	0.041	0.099
55	-0.223	-0.337	-0.343	-0.656	-0.316	-0.613	-0.272	-0.340	-0.525	-0.190	-0.616	-0.072	-0.580	-0.102	-0.220	-0.475	-0.227	-0.266
56	-0.459	-0.763	-0.645	-0.921	-0.490	-1.011	-0.171	-0.357	-0.557	-0.095	-0.719	-0.077	-0.378	-0.067	-0.471	-0.665	-0.382	-0.211
57	-0.080	-0.210	-0.010	-0.043	-0.082	-0.145	0.004	-0.244	-0.040	0.070	-0.244	0.044	-0.111	-0.011	-0.193	-0.123	-0.077	0.014
58	-0.568	-0.902	-0.767	-0.907	-0.598	-0.977	-0.357	-0.414	-0.517	-0.105	-0.925	-0.162	-0.600	-0.048	-0.609	-0.903	-0.470	-0.316
59	-0.682	-1.101	-0.677	-0.956	-0.536	-1.076	-0.445	-0.534	-0.676	-0.122	-1.111	-0.125	-0.743	-0.045	-0.625	-0.597	-0.624	-0.411
60	-0.562	-0.792	-0.681	-0.879	-0.671	-0.755	-0.375	-0.367	-0.641	-0.088	-0.842	-0.136	-0.751	-0.061	-0.521	-0.349	-0.458	-0.226
61	-0.664	-0.970	-0.831	-1.179	-0.657	-1.239	-0.440	-0.476	-0.712	-0.110	-1.210	-0.197	-0.925	-0.031	-0.664	-0.601	-0.679	-0.384
62	-0.666	-0.864	-0.791	-0.937	-0.557	-1.135	-0.385	-0.655	-0.606	-0.150	-0.957	-0.080	-0.940	-0.117	-0.624	-0.536	-0.521	-0.292
63	-0.897	-1.658	-1.197	-1.188	-0.917	-1.649	-0.864	-0.787	-1.159	-0.136	-1.667	-0.380	-1.125	-0.133	-0.946	-0.977	-0.863	-0.569
64	-0.217	-0.950	-0.284	-0.635	-0.184	-0.554	-0.195	-0.021	-0.359	-0.119	-0.646	0.021	-0.311	-0.000	-0.311	-0.373	-0.114	-0.194
65	0.132	-0.909	-0.045	0.008	-0.067	-0.010	-0.172	0.063	-0.034	-0.142	-0.114	0.041	0.030	-0.011	-0.049	-0.160	-0.125	-0.028
66	-0.042	0.015	-0.138	-0.052	0.012	-0.025	-0.011	0.009	0.057	-0.043	-0.164	-0.001	0.010	0.051	-0.022	-0.031	-0.041	0.100

	55	56	57	58	59	60	61	62	63	64	65	66
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	0.116	0.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	0.104	-0.015	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	0.162	0.011	-0.032	0.661	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	0.188	-0.150	0.176	0.050	0.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	0.022	0.011	0.038	-0.148	-0.072	0.598	0.000	0.000	0.000	0.000	0.000	0.000
60	-0.083	0.118	-0.151	-0.011	0.061	0.208	0.750	0.000	0.000	0.000	0.000	0.000
61	-0.080	-0.199	0.071	-0.044	0.033	0.178	0.101	0.716	0.000	0.000	0.000	0.000
62	-0.081	-0.040	-0.162	0.261	-0.067	-0.069	0.186	0.173	0.679	0.000	0.000	0.000
63	-0.045	0.044	-0.075	0.269	-0.029	-0.072	-0.062	-0.128	0.161	0.266	0.000	0.000
64	0.056	-0.006	0.000	-0.071	-0.069	-0.093	-0.088	0.002	-0.065	-0.008	0.052	0.000
65	-0.262	-0.168	-0.090	-0.151	-0.126	-0.198	-0.200	-0.116	-0.170	-0.021	0.111	0.005

Appendix F

CONFIRMATORY FACTOR ANALYSIS (NEW MODEL)

LOCUS OF CONTROL	VARIABLES 1-29
PLANFULNESS	VARIABLES 30-46
TENACITY	VARIALBES 47-54
PERFORMANCE	VARIALBES 55-66

FACTOR INTERCORRELATIONS AND LOADING MATRIX

COMMUNALITY IN THE DIAGONAL

	1	3	4	5	6	7	9	11	12	15	16	17	18	20	21	22	23	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	45	47	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	2	8	10	13	14	19	24	43	44	46	48	50	501	502	503	504	505
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4	15	5	12	32	15	22	-1	17	12	20	16	5	21	15	2	4	1	33	12	1	21	-2	-9	-4	-21	-11	-11	-4	1	-10	-12	-6	-12	-8	0	-2	0	-11	-15	2	-8	-4	1	10	-4	3	0	13	14	14	7	9	-8	3	4	-5	13	14	13	7	-16	3	-5	10	3	-7	35	-19	-18	9	26
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56	-6	-6	16	0	3	0	4	3	-3	2	9	-2	-6	9	-4	-3	16	-3	4	2	0	1	-21	13	-1	-10	-23	-7	3	-2	-7	-7	-22	-8	-26	-3	3	14	-1	-8	-1	6	59	60	15	63	62	61	71	59	72	44	17	-5	13	1	-8	1	4	-8	8	-9	-5	13	1	-4	4	-21	6	78	10
57	-10	-4	-6	-4	10	-10	0	0	3	-10	-3	4	-9	8	-2	-1	-4	-6	-1	-4	2	-8	11	8	2	10	15	-9	8	-1	-9	8	5	-2	-4	3	-8	1	-10	-6	-1	7	23	15	5	18	28	19	12	23	17	5	5	-2	-6	6	-6	9	-3	-14	-15	4	-10	11	0	-1	-7	0	-8	22	-21
58	-6	-7	3	3	11	2	3	9	5	0	16	5	6	20	3	-4	21	5	2	-3	11	2	-9	5	-7	-4	-15	-7	0	-4	-9	-9	-20	-11	-18	3	-2	6	-5	-7	-4	2	49	63	16	66	72	57	70	67	81	36	14	-5	2	-7	1	1	6	-5	5	-6	-7	0	-2	-3	15	-16	-4	81	-4
59	-12	-7	8	6	5	-5	-2	1	0	5	13	-1	-1	8	-2	-2	11	-1	2	-4	3	-1	1	14	-2	1	-11	-6	10	-4	-10	3	-10	-2	-14	1	-1	6	0	-7	-6	1	66	62	28	72	74	64	76	74	79	43	16	-12	1	-4	-4	0	10	-10	3	-7	-7	9	0	-2	3	-5	-3	86	-2
60	3	-4	13	3	9	0	5	16	1	4	14	2	-1	4	-5	-5	10	2	-8	-5	9	4	-6	8	-10	-16	-11	-12	4	-9	-10	-9	-20	-8	-13	-6	-4	-7	-5	-1	-7	5	54	61	19	57	64	59	73	71	71	36	12	-4	1	0	-3	2	10	-10	2	-10	-6	0	-3	-4	9	-20	-9	77	-16
61	-4	0	14	-3	8	0	-3	8	-1	3	9	4	1	12	1	1	11	4	6	-3	7	-4	-5	13	-4	-12	-20	-13	6	-3	-3	-4	-19	-8	-21	0	-5	-1	-1	-6	-8	3	60	71	12	70	76	73	73	76	83	42	16	-8	-1	-4	-5	1	9	-10	0	-7	-4	9	-3	-1	9	-16	-9	87	-8
62	-3	-8	14	3	11	-4	0	14	-1	3	17	1	0	3	-3	-7	6	2	-5	-9	10	0	-7	10	-8	-7	-16	-7	16	-6	-2	-5	-11	-5	-20	-7	2	-6	-2	-3	-3	5	56	59	21	67	74	71	76	72	83	30	19	-6	4	-3	-7	4	18	-11	-1	-5	-15	7	2	-7	5	-11	-4	85	-11
63	-3	-5	7	3	7	1	2	7	0	4	12	-2	7	12	3	-3	13	1	0	-7	10	3	-7	13	-5	-12	-15	-8	9	1	-8	-1	-19	-5	-20	-2	1	2	1	-8	-3	4	63	72	17	81	79	71	83	83	88	53	19	-10	-2	-4	-5	-1	12	-10	9	-13	-5	5	-5	-4	9	-11	-1	94	-10
64	-1	9	9	9	-1	4	-1	5	5	0	11	4	9	20	6	9	2	-2	-1	-12	4	12	-10	1	-11	-22	-20	-4	1	-1	-10	-2	-29	-1	-22	-9	-5	0	-7	-17	3	-4	32	44	9	36	41	36	42	38	53	27	11	-1	-1	-5	2	3	-8	1	7	-1	10	-1	6	0	13	-27	-13	52	5
65	2	-11	-8	-5	-10	-3	-2	-3	1	-12	0	-11	-6	-11	-2	-16	-9	-15	2	-5	-8	-10	-11	3	-3	-5	4	4	14	20	10	3	9	2	0	6	3	13	3	-11	-5	3	28	17	3	14	16	12	16	19	19	11	[illegible]	15	5	0	-11	0	8	-4	-2	-12	9	-10	6	-1	-19	11	3	23	-16
66	-4	-7	3	-9	-7	-4	4	-4	-5	-14	-1	1	-8	5	2	4	6	2	5	2	-10	-2	-6	4	-4	-4	7	-2	-5	-2	4	-10	-2	3	1	8	-10	6	0	-1	-2	12	-16	-5	-8	-5	-11	-4	-8	-6	-10	-1	15	0	6	6	0	-15	4	2	-5	0	10	-3	0	5	-5	-1	1	-7	0
2	-6	-6	4	4	-11	-9	1	7	4	-2	-3	-10	1	-9	-3	1	10	1	1	28	-8	-1	-4	6	-1	1	-2	-6	0	6	10	2	-9	-9	-11	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-2	-1	5	6	0	-3	-8	-10	-1	3	1	5	-9	11	6	-4	-1	-3	16	3	-7
8	7	17	-5	10	2	-3	14	9	14	1	1	17	2	2	-2	11	7	-4	-6	22	-1	1	7	13	-1	0	4	19	3	3	-4	0	2	-9	8	-7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-4	-5	0	8	-3	4	-10	-6	22	-11	9	11	1	6	-7	3	16	0	7	-1	10
10	17	4	13	9	6	1	-1	-5	13	17	15	19	11	0	-2	13	10	9	10	-3	2	3	-1	-6	3	8	4	8	-8	-12	-2	-10	2	2	9	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-5	2	-11	0	-6	-10	2	16	-2	3	-7	6	-1	6	9	3	20	-1	-8	-6	13
13	23	-9	14	10	2	-3	16	3	21	25	-5	-1	9	3	-6	2	-8	3	10	-4	7	-5	-2	-27	-4	-9	-6	-2	-1	-20	-11	-12	-7	-9	2	-3	-2	-10	-20	5	-4	-1	-8	1	0	1	0	3	1	0	-1	3	0	-15	-10	-6	16	1	2	3	-10	0	-19	15	-8	4	14	-19	-17	1	-9
14	1	-1	13	0	5	13	1	-2	9	23	21	12	-7	7	-10	-14	3	7	9	17	10	-2	12	6	0	3	12	9	2	-4	0	8	3	-8	10	-3	-8	-6	-16	8	-3	-11	2	6	-3	6	10	10	0	10	12	-8	0	6	-1	22	-2	2	0	-13	-8	-3	1	-3	-1	5	13	13	-10	9	-6
19	-5	-9	7	-3	3	0	-14	6	-14	-12	-6	-1	1	7	1	7	-17	7	5	-11	-7	-13	-10	-3	1	-3	-5	2	3	-3	-3	-4	-7	-5	-2	-7	-5	6	-2	-6	-3	-4	-9	-2	-14	-5	-10	-18	-10	-11	-10	1	-4	2	3	-11	3	3	-13	1	-8	0	-4	3	1	-1	-9	-9	-8	-12	-12
24	-1	-3	-16	1	5	4	-11	3	10	6	-1	2	-13	-10	1	0	7	-10	-4	5	6	15	-6	8	4	-2	-10	2	-8	4	-10	-6	-13	-2	-7	-2	1	6	11	-6	4	12	0	0	-15	2	3	2	-1	-1	9	7	-2	-5	1	9	-7	-10	-8	-8	1	6	3	-6	11	0	0	-8	14	4	-8
43	0	-2	3	15	8	-11	4	17	-4	-12	-6	15	4	-9	1	-4	-1	0	-3	-1	-5	-4	10	2	9	26	11	-2	25	-4	0	-4	2	1	7	20	11	10	7	11	6	8	-1	-8	6	-4	-7	-10	-7	-5	-13	-7	-12	0	5	11	6	0	-1	8	4	30	10	-8	3	11	2	10	23	-11	46
44	4	4	-5	-3	-19	-13	-1	-10	-2	-16	-5	-7	-3	-10	1	-8	1	-12	2	3	-12	-3	-1	20	20	-3	4	8	4	13	3	10	-9	26	15	7	8	19	11	1	15	3	-9	-5	-10	-7	-7	-4	-4	-15	-5	10	9	10	-9	3	-1	-19	1	-6	3	10	0	-5	-3	25	-15	21	26	-6	0
46	0	2	10	3	-10	6	13	2	-2	8	-1	10	3	6	-2	0	-8	0	6	10	1	13	-8	6	-4	-2	-8	-12	-17	-12	7	-12	-11	-7	-9	-5	0	6	-6	5	-10	16	-2	13	11	0	9	0	7	3	5	-8	-10	-8	11	6	6	15	-5	3	-6	-8	-9	2	0	-5	10	-16	6	7	14
48	-1	-6	3	-4	-5	-3	-15	-1	-7	-3	-9	-2	-19	1	-5	3	-4	-7	0	-10	1	-3	-6	3	-17	0	-6	-9	3	3	-6	-1	-6	9	5	-1	10	5	-14	-6	-2	-9	2	-1	0	-2	0	-3	-5	[illegible]	-5	6	6	0	6	-7	9	-8	-3	1	11	5	-3	4	2	-1	-12	-4	-7	2	13
50	2	5	-7	4	5	-9	4	2	4	-12	0	-4	-2	10	-7	-7	4	-8	6	5	7	5	-1	13	10	-2	2	-6	3	-3	-7	12	-6	14	0	7	-1	-1	-3	4	-4	11	-7	-4	-1	-3	-8	-4	-1	-7	-4	0	-1	3	-6	3	3	4	5	-1	0	11	25	-5	-1	22	1	7	0	-4	40
501	30	25	35	35	31	34	22	32	46	39	41	47	49	32	30	42	26	57	25	26	43	22	-5	-20	-20	-2	-22	-15	-13	-15	-21	-26	-16	-16	-15	-6	-16	-21	-13	-4	-3	-10	5	4	-7	13	3	9	9	5	9	13	-19	-5	-1	16	20	14	13	-9	0	2	-15	10	-12	1	100	-36	-33	6	30
502	-24	-9	-19	-9	-6	-11	-13	-21	-15	-13	-2	-16	-17	-11	-4	-18	-15	-8	-6	-12	-21	-9	41	47	47	44	60	48	38	35	45	43	46	25	40	35	10	-4	14	0	0	2	-13	-21	8	-16	-5	-20	-16	-13	-17	-27	11	-1	-3	0	-1	-19	13	-9	0	18	21	-16	-4	7	-36	100	12	-17	5
503	10	-7	-18	-7	-9	-11	-7	0	-16	-21	-12	-30	-14	-10	9	-26	16	-28	-17	-10	-31	3	0	0	25	21	2	-3	5	-1	4	0	-3	8	7	-8	49	40	46	26	30	22	-9	6	-8	-4	-3	-9	-9	-4	-1	-13	3	1	16	7	-8	-17	-10	-8	14	23	26	6	-7	0	-33	12	100	-6	30
504	-7	-6	9	2	7	-3	1	8	0	0	15	1	-1	12	0	-3	13	-2	1	-7	7	0	-12	13	-8	-12	-17	-11	11	0	-11	-4	-21	-6	-22	-2	-4	4	-3	-13	-4	6	69	78	22	81	86	77	87	85	94	52	23	-7	3	-1	-6	1	9	-12	4	-11	-6	7	2	-4	6	-17	-6	100	-12
505	37	-1	26	46	-6	-20	9	23	35	17	-1	30	-6	-13	-31	16	6	-11	28	44	1	5	-11	30	17	20	0	2	9	-23	-4	-14	-45	8	24	10	22	29	-25	0	10	21	-16	10	-21	-4	-2	-16	-4	-11	-10	5	-16	0	-7	10	13	-9	-4	-12	-8	44	0	14	13	40	30	5	30	-12	100

SIMILARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	1	3	4	5	6	7	9	11	12	15	16	17	18	20	21	22	23	25	26	27	28	29
1	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.504	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.575	0.376	0.124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.657	0.380	0.369	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.366	0.381	0.595	0.454	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.412	0.554	0.593	0.521	0.604	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.635	0.457	0.563	0.565	0.429	0.372	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.725	0.483	0.739	0.702	0.693	0.593	0.650	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.658	0.597	0.376	0.673	0.599	0.599	0.653	0.691	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.627	0.427	0.733	0.611	0.599	0.625	0.557	0.664	0.746	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.680	0.384	0.714	0.601	0.642	0.591	0.506	0.713	0.666	0.713	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.599	0.602	0.628	0.636	0.656	0.620	0.597	0.727	0.806	0.679	0.660	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.745	0.642	0.647	0.725	0.557	0.570	0.633	0.604	0.795	0.668	0.651	0.757	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.315	0.484	0.711	0.607	0.662	0.599	0.453	0.563	0.555	0.564	0.579	0.609	0.562	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.510	0.500	0.651	0.617	0.607	0.393	0.169	0.676	0.669	0.613	0.621	0.690	0.653	0.412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.537	0.629	0.516	0.532	0.516	0.579	0.497	0.627	0.733	0.590	0.517	0.631	0.705	0.556	0.577	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.623	0.258	0.674	0.499	0.533	0.399	0.473	0.635	0.561	0.509	0.666	0.695	0.661	0.371	0.373	0.462	0.000	0.000	0.000	0.000	0.000	0.000
25	0.641	0.576	0.726	0.664	0.712	0.694	0.596	0.822	0.719	0.731	0.761	0.760	0.633	0.671	0.649	0.728	0.464	0.000	0.000	0.000	0.000	0.000
26	0.465	0.500	0.560	0.436	0.475	0.586	0.343	0.485	0.571	0.573	0.693	0.561	0.533	0.567	0.378	0.572	0.348	0.642	0.063	0.000	0.000	0.000
27	0.602	0.561	0.311	0.364	0.275	0.361	0.499	0.417	0.619	0.461	0.361	0.534	0.460	0.266	0.253	0.510	0.420	0.522	0.375	0.070	0.000	0.000
28	0.534	0.515	0.112	0.562	0.739	0.711	0.406	0.754	0.700	0.711	0.700	0.703	0.644	0.396	0.454	0.627	0.537	0.771	0.598	0.346	0.182	0.000
29	0.511	0.400	0.305	0.417	0.313	0.426	0.528	0.396	0.610	0.494	0.628	0.615	0.476	0.346	0.171	0.538	0.589	0.461	0.375	0.343	0.465	0.000
30	-0.257	-0.079	-0.262	-0.161	-0.072	-0.160	-0.179	-0.181	-0.219	-0.212	-0.115	-0.121	-0.248	-0.336	-0.135	-0.224	-0.300	-0.165	-0.215	-0.164	-0.320	-0.101
31	-0.684	-0.295	-0.455	-0.387	-0.320	-0.379	-0.505	-0.580	-0.665	-0.656	-0.215	-0.415	-0.514	-0.312	-0.289	-0.452	-0.289	-0.435	-0.288	-0.274	-0.464	-0.285
32	-0.450	-0.331	-0.570	-0.375	-0.410	-0.469	-0.365	-0.503	-0.464	-0.492	-0.330	-0.462	-0.445	-0.503	-0.269	-0.458	-0.310	-0.353	-0.312	-0.611	-0.283	-0.422
33	-0.275	-0.131	-0.404	-0.189	-0.168	-0.297	-0.153	-0.254	-0.176	-0.267	-0.154	-0.131	-0.211	-0.428	-0.169	-0.276	-0.232	-0.199	-0.323	-0.053	-0.379	-0.105
34	-0.671	-0.309	-0.534	-0.337	-0.387	-0.391	-0.362	-0.519	-0.632	-0.380	-0.361	-0.391	-0.452	-0.533	-0.344	-0.468	-0.479	-0.372	-0.334	-0.233	-0.346	-0.375
35	-0.449	-0.266	-0.530	-0.310	-0.293	-0.389	-0.293	-0.483	-0.367	-0.353	-0.287	-0.356	-0.387	-0.476	-0.258	-0.382	-0.426	-0.334	-0.358	-0.267	-0.337	-0.295
36	-0.983	-0.404	-0.296	-0.243	-0.114	-0.389	-0.273	-0.252	-0.389	-0.333	-0.083	-0.350	-0.328	-0.344	-0.258	-0.415	-0.193	-0.289	-0.420	-0.403	-0.378	-0.348
37	-0.590	-0.259	-0.537	-0.454	-0.421	-0.389	-0.553	-0.537	-0.484	-0.526	-0.302	-0.467	-0.498	-0.387	-0.125	-0.389	-0.404	-0.437	-0.266	-0.312	-0.407	-0.417
38	-0.590	-0.438	-0.566	-0.506	-0.464	-0.411	-0.411	-0.609	-0.537	-0.488	-0.447	-0.530	-0.560	-0.553	-0.411	-0.566	-0.472	-0.476	-0.387	-0.299	-0.646	-0.609
39	-0.675	-0.311	-0.571	-0.505	-0.414	-0.391	-0.591	-0.634	-0.564	-0.565	-0.401	-0.560	-0.567	-0.455	-0.371	-0.531	-0.571	-0.526	-0.343	-0.364	-0.575	-0.506
40	-0.605	-0.171	-0.533	-0.370	-0.312	-0.321	-0.335	-0.485	-0.553	-0.389	-0.383	-0.316	-0.392	-0.450	-0.224	-0.382	-0.504	-0.303	-0.338	-0.221	-0.482	-0.351
41	-0.419	-0.225	-0.437	-0.390	-0.447	-0.398	-0.406	-0.526	-0.487	-0.450	-0.359	-0.459	-0.452	-0.438	-0.254	-0.423	-0.408	-0.478	-0.326	-0.291	-0.505	-0.343
42	-0.293	-0.177	-0.427	-0.222	-0.395	-0.355	-0.258	-0.459	-0.319	-0.509	-0.297	-0.345	-0.339	-0.520	-0.251	-0.365	-0.411	-0.307	-0.317	-0.182	-0.499	-0.344
45	-0.435	-0.253	-0.328	-0.263	-0.185	-0.367	-0.276	-0.151	-0.292	-0.292	-0.110	-0.276	-0.350	-0.203	-0.157	-0.424	-0.332	-0.239	-0.211	-0.194	-0.459	-0.249
47	-0.151	-0.435	-0.379	-0.092	-0.412	-0.501	-0.284	-0.121	-0.380	-0.292	-0.291	-0.464	-0.393	-0.620	-0.338	-0.527	-0.130	-0.663	-0.466	-0.214	-0.517	-0.243
49	-0.251	-0.422	-0.461	-0.370	-0.596	-0.472	-0.339	-0.371	-0.483	-0.475	-0.425	-0.496	-0.470	-0.550	-0.243	-0.415	-0.125	-0.610	-0.399	-0.205	-0.550	-0.256
51	-0.309	-0.238	-0.604	-0.359	-0.384	-0.582	-0.259	-0.317	-0.500	-0.692	-0.386	-0.497	-0.392	-0.587	-0.109	-0.613	-0.106	-0.419	-0.677	-0.178	-0.570	-0.184
52	0.091	-0.202	-0.184	0.026	-0.197	-0.201	0.121	-0.085	-0.178	-0.091	-0.185	-0.172	-0.123	-0.418	-0.071	-0.276	-0.028	-0.106	-0.313	-0.009	-0.268	-0.100
53	0.085	-0.095	-0.235	-0.009	-0.331	-0.384	-0.082	-0.105	-0.176	-0.238	-0.228	-0.222	-0.094	-0.420	0.104	-0.191	-0.049	-0.268	-0.957	0.064	-0.302	-0.060
54	-0.258	-0.296	-0.490	-0.218	-0.229	-0.418	-0.122	-0.227	-0.328	-0.416	-0.288	-0.333	-0.329	-0.346	-0.126	-0.288	-0.021	-0.454	-0.362	-0.113	-0.332	-0.096
55	-0.091	-0.159	0.320	0.131	0.283	0.060	0.059	0.256	0.000	0.171	0.416	0.066	0.054	0.321	0.050	0.003	0.415	0.042	0.076	-0.104	0.334	0.111
56	-0.088	-0.109	0.297	0.121	0.229	0.073	0.067	0.239	0.066	0.164	0.387	0.044	0.021	0.319	0.014	-0.006	0.457	0.061	0.069	-0.075	0.283	0.122
57	-0.309	-0.238	0.044	-0.053	0.146	-0.054	-0.053	-0.068	-0.136	-0.022	0.183	-0.030	-0.126	0.169	-0.169	-0.134	0.093	-0.127	-0.105	-0.251	0.109	-0.065
58	-0.029	-0.196	0.392	0.188	0.343	0.151	0.139	0.130	0.117	0.210	0.502	0.156	0.123	0.403	0.067	0.064	0.497	0.152	0.126	-0.082	0.317	0.174
59	-0.132	-0.210	0.292	0.114	0.272	0.039	0.037	0.216	0.050	0.160	0.419	0.049	0.021	0.318	-0.005	-0.093	0.400	0.044	0.041	-0.142	0.283	0.000
60	-0.043	-0.153	0.365	0.181	0.329	0.104	0.102	0.303	0.114	0.228	0.461	0.117	0.099	0.381	0.047	0.019	0.494	0.128	0.076	-0.000	0.374	0.133
61	-0.077	-0.140	0.346	0.139	0.318	0.114	0.084	0.278	0.093	0.194	0.455	0.095	0.075	0.378	0.054	0.007	0.452	0.105	0.099	-0.046	0.346	0.127
62	-0.090	-0.199	0.352	0.142	0.311	0.075	0.105	0.280	0.071	0.175	0.451	0.071	0.052	0.351	0.021	-0.038	0.448	0.096	0.064	-0.130	0.327	0.092
63	-0.090	-0.159	0.333	0.136	0.293	0.093	0.000	0.260	0.076	0.183	0.459	0.080	0.064	0.354	0.057	-0.009	0.452	0.090	0.067	-0.110	0.321	0.091
64	0.065	-0.019	0.412	0.220	0.201	0.175	0.164	0.337	0.105	0.214	0.427	0.199	0.212	0.432	0.165	0.156	0.446	0.191	0.197	-0.014	0.390	0.167
65	-0.041	-0.521	-0.195	-0.329	-0.260	-0.431	-0.344	-0.295	-0.662	-0.266	-0.370	-0.447	-0.441	-0.165	-0.248	-0.434	-0.073	-0.421	-0.290	-0.369	-0.275	-0.353
66	-0.107	0.064	-0.374	-0.236	-0.316	-0.054	-0.216	-0.249	-0.205	-0.432	-0.334	-0.176	-0.177	-0.290	-0.167	-0.223	-0.205	-0.217	-0.106	0.000	0.248	-0.101
2	0.025	-0.157	-0.006	0.006	-0.010	-0.060	0.002	-0.026	-0.141	-0.004	-0.071	-0.123	-0.145	-0.129	-0.056	-0.055	0.009	-0.150	-0.057	0.053	-0.132	0.107

	30	31	32	33	34	35	36	37	38	39	40	41	42	45
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.215	0.179	0.175	0.166	0.195	0.246	0.187	0.117	0.191	0.187	0.215	0.219	0.219	0.156
49	-0.140	0.274	0.243	0.065	0.034	0.031	0.094	0.187	0.233	0.167	-0.032	0.262	0.012	0.081
51	0.246	0.355	0.508	0.363	0.320	0.410	0.289	0.434	0.455	0.306	0.325	0.343	0.243	0.257
52	0.220	-0.079	0.359	0.396	0.344	0.321	0.125	-0.090	0.176	0.002	0.356	0.290	0.431	0.246
53	0.063	0.111	0.217	0.278	0.137	0.178	0.046	0.181	0.071	0.112	0.027	0.260	0.230	0.047
54	0.674	0.266	0.237	0.116	0.322	0.096	0.121	0.187	0.176	0.126	0.012	0.171	-0.040	0.125
55	-0.141	0.198	-0.384	-0.376	-0.436	-0.172	0.185	-0.105	-0.373	-0.137	-0.552	-0.357	-0.573	-0.180
56	-0.432	0.171	-0.288	-0.347	-0.336	-0.419	0.099	-0.147	-0.357	-0.188	-0.622	-0.362	-0.641	-0.208
57	0.090	0.302	-0.009	-0.027	-0.065	-0.107	0.380	0.009	-0.033	0.080	-0.125	-0.179	-0.299	0.017
58	-0.375	0.133	-0.299	-0.401	-0.510	-0.408	0.129	-0.189	-0.393	-0.225	-0.599	-0.370	-0.626	-0.184
59	-0.280	0.239	-0.221	-0.325	-0.410	-0.326	0.225	-0.096	-0.292	-0.097	-0.511	-0.203	-0.536	-0.108
60	-0.373	0.126	-0.330	-0.421	-0.507	-0.421	0.119	-0.203	-0.394	-0.211	-0.592	-0.370	-0.619	-0.220
61	-0.369	0.107	-0.289	-0.412	-0.497	-0.364	0.135	-0.146	-0.357	-0.161	-0.549	-0.338	-0.615	-0.175
62	-0.304	0.122	-0.290	-0.362	-0.450	-0.369	0.203	-0.148	-0.325	-0.167	-0.521	-0.336	-0.561	-0.157
63	-0.345	0.241	-0.243	-0.353	-0.479	-0.362	0.164	-0.120	-0.346	-0.189	-0.550	-0.324	-0.590	-0.169
64	-0.514	0.060	-0.438	-0.564	-0.662	-0.536	-0.042	-0.246	-0.553	-0.201	-0.707	-0.427	-0.702	-0.301
65	-0.047	0.507	0.210	-0.095	0.004	0.005	0.346	0.112	0.162	0.321	-0.065	0.167	-0.116	0.101
66	0.049	0.101	0.273	0.109	0.200	0.192	-0.001	0.176	0.261	0.165	0.203	0.190	0.240	0.080
2	-0.107	0.032	0.012	0.009	-0.150	-0.113	-0.006	0.031	0.015	-0.122	-0.140	0.017	-0.135	-0.156

	8	10	13	14	19	24	31	33	34	35	36	37	38	39	40	41	42	45
8	0.196	0.274	0.024	0.204	0.133	0.154	0.323	0.187	0.322	0.153	0.176	0.335	0.222	-0.015	0.176	0.256	0.295	0.184
10	0.404	0.361	0.440	0.492	0.310	0.327	0.306	0.478	0.558	0.546	0.517	0.549	0.543	0.302	0.306	0.508	0.270	0.345
13	0.066	0.236	0.540	0.448	0.201	0.320	0.417	0.438	0.604	0.526	0.400	0.329	0.473	0.376	0.123	0.150	0.312	0.435
14	-0.053	0.092	0.314	0.300	0.290	0.217	0.170	0.185	0.290	0.362	0.443	0.172	0.096	0.248	-0.059	0.058	0.320	0.206
19	0.056	0.040	-0.034	-0.106	-0.196	-0.069	0.096	-0.167	-0.189	-0.199	-0.353	-0.146	0.009	-0.025	0.005	-0.062	-0.306	-0.036
24	-0.019	0.033	-0.002	-0.100	-0.046	-0.046	0.022	0.032	0.030	-0.040	0.052	-0.007	-0.002	-0.046	-0.167	0.142	0.324	-0.120
31	0.118	-0.062	-0.159	0.188	0.010	-0.231	0.039	0.066	-0.010	-0.166	-0.035	0.064	0.034	-0.296	0.082	-0.010	-0.034	-0.066
33	-0.297	-0.094	-0.553	-0.237	-0.330	-0.442	-0.362	-0.473	-0.449	-0.534	-0.373	-0.442	-0.377	-0.483	-0.150	-0.394	-0.336	-0.055
34	0.291	0.174	0.167	0.258	0.272	0.220	0.275	0.312	0.330	0.311	0.330	0.300	0.281	0.377	0.003	0.315	0.079	0.216
35	-0.040	-0.171	-0.123	-0.205	-0.162	-0.100	-0.364	-0.315	-0.228	-0.227	-0.192	-0.257	-0.267	-0.225	-0.162	-0.290	-0.152	-0.358
36	-0.060	-0.002	-0.162	-0.009	-0.132	-0.099	-0.035	-0.196	-0.054	-0.236	-0.001	-0.010	-0.132	-0.133	-0.053	-0.069	-0.099	-0.130

SIMILARITY COEFFICIENTS FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

	47	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.236	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.492	0.162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	0.494	0.502	0.207	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.397	0.215	0.362	0.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.441	0.441	0.467	0.306	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.281	0.385	0.314	0.130	0.181	0.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	-0.119	0.082	0.167	-0.422	-0.151	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	-0.075	0.120	-0.113	-0.388	-0.167	0.135	0.955	0.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	-0.070	-0.006	-0.115	-0.339	-0.234	0.183	0.661	0.620	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	-0.126	0.016	-0.166	-0.394	-0.207	0.065	0.951	0.971	0.645	0.661	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	-0.066	0.041	-0.167	-0.286	-0.174	0.115	0.968	0.949	0.718	0.974	0.743	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	-0.111	-0.017	-0.167	-0.372	-0.206	0.092	0.958	0.962	0.657	0.971	0.971	0.590	0.000	0.000	0.000	0.000	0.000	0.000
61	-0.137	0.031	-0.164	-0.397	-0.223	0.098	0.966	0.975	0.669	0.968	0.982	0.962	0.750	0.000	0.000	0.000	0.000	0.000
62	-0.070	0.010	-0.165	-0.354	-0.226	0.081	0.967	0.963	0.686	0.969	0.980	0.984	0.981	0.716	0.000	0.000	0.000	0.000
63	-0.090	0.043	-0.135	-0.391	-0.179	0.092	0.972	0.974	0.655	0.966	0.986	0.981	0.991	0.983	0.879	0.000	0.000	0.000
64	-0.218	0.020	-0.227	-0.441	-0.185	-0.026	0.896	0.900	0.491	0.909	0.873	0.894	0.906	0.877	0.911	0.246	0.000	0.000
65	0.253	0.377	0.168	-0.291	0.001	0.219	0.544	0.541	0.430	0.504	0.549	0.516	0.531	0.550	0.561	0.430	0.052	0.000
66	-0.029	0.180	0.199	0.082	0.070	0.077	0.516	0.350	0.290	0.401	-0.130	0.409	0.199	0.485	0.440	0.377	0.120	0.005
2	0.200	0.625	0.150	0.047	0.191	0.243	0.139	0.200	0.041	0.126	0.115	0.105	0.133	0.118	0.121	0.065	0.155	0.047

	2	6	10	13	14	19	24	31	34	36	48	50
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
61	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
63	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
64	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.010	-0.149	0.015	0.013	0.193	0.020	-0.117	-0.115	-0.001	-0.000	-0.001	-0.075	-0.104	-0.092	-0.100	-0.140	-0.177	-0.007	0.164	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	-0.158	-0.184	-0.053	0.125	-0.163	-0.012	-0.221	-0.200	-0.150	-0.184	-0.176	-0.184	-0.176	-0.183	-0.194	-0.116	-0.068	-0.184	-0.255	0.109	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	-0.239	-0.134	-0.594	-0.007	-0.267	-0.033	0.093	0.060	0.025	0.146	0.064	0.164	0.107	0.127	0.099	0.140	-0.291	-0.264	-0.145	-0.078	0.455	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.004	-0.242	-0.276	-0.114	-0.251	-0.153	0.256	0.236	0.278	0.289	0.301	0.314	0.291	0.302	0.275	0.139	0.100	-0.255	-0.074	0.105	0.376	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.144	0.013	0.000	0.139	-0.050	-0.142	-0.003	-0.329	-0.265	-0.005	-0.030	-0.027	-0.305	-0.021	-0.027	-0.050	-0.035	0.261	-0.060	-0.341	0.049	-0.010	-0.049	0.014	0.000	0.000	0.000	0.000	0.000	0.000
24	0.090	0.346	0.250	-0.144	0.240	0.229	0.320	0.310	0.125	0.250	0.235	0.250	0.253	0.220	0.261	0.111	0.154	-0.075	0.249	0.091	-0.131	-0.271	-0.064	-0.162	0.067	0.000	0.000	0.000	0.000	0.000
31	0.367	0.129	0.283	0.410	0.300	0.177	-0.372	-0.311	-0.126	-0.330	-0.319	-0.359	-0.350	-0.327	-0.359	-0.417	-0.203	0.120	-0.004	0.244	0.153	-0.119	-0.073	0.109	-0.161	0.302	0.000	0.000	0.000	0.000
34	0.161	0.463	0.042	0.261	0.300	0.203	-0.264	-0.237	-0.186	-0.303	-0.261	-0.322	-0.277	-0.300	-0.234	-0.266	0.109	0.324	0.236	-0.123	-0.211	-0.044	-0.150	0.051	0.160	0.246	0.000	0.000	0.000	0.000
36	-0.195	-0.107	-0.300	-0.242	-0.200	-0.050	0.117	0.112	0.124	0.344	0.331	0.293	0.344	0.313	0.336	0.307	-0.036	-0.071	0.121	-0.001	0.144	0.270	0.130	0.145	0.117	-0.231	-0.419	0.020	0.000	0.000
48	0.118	0.250	-0.056	-0.223	-0.019	0.070	0.079	0.039	0.013	-0.010	0.014	-0.001	0.000	0.000	-0.001	0.057	0.120	0.109	-0.020	-0.311	-0.199	-0.029	-0.190	0.295	-0.013	-0.014	0.092	-0.097	0.019	0.000
50	-0.029	0.090	0.110	0.152	0.109	0.033	-0.216	-0.165	-0.046	-0.177	-0.176	-0.104	-0.170	-0.214	-0.170	-0.120	-0.075	0.207	-0.163	0.201	-0.030	-0.104	0.001	-0.070	0.000	0.337	0.419	-0.140	-0.000	0.223

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	1	3	4	5	6	7	9	11	12	15	16	17	18	20	21	22	23	25	26	27	28	29
1	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.009	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.045	-0.081	0.129	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.116	-0.025	0.221	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.126	0.002	0.042	-0.071	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	-0.129	0.019	0.108	-0.046	0.156	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.055	-0.040	-0.092	0.116	0.000	0.005	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.109	-0.052	-0.018	0.062	0.025	-0.109	0.519	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.001	0.036	-0.049	-0.090	-0.041	0.087	0.045	-0.092	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.051	-0.015	0.078	0.044	-0.096	0.042	-0.039	0.019	0.068	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.061	-0.090	0.021	0.042	0.009	-0.031	0.035	0.141	-0.030	0.127	0.166	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	-0.045	0.140	-0.142	-0.127	-0.015	-0.013	0.037	-0.091	0.181	-0.082	0.011	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.112	0.006	0.041	0.087	-0.169	-0.103	0.054	0.069	-0.046	-0.048	-0.034	0.124	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.112	0.092	0.036	-0.024	0.102	0.290	-0.035	-0.030	-0.115	-0.047	-0.043	0.057	0.042	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.152	0.057	-0.043	-0.006	-0.061	-0.043	-0.025	0.169	-0.173	-0.113	0.076	-0.019	0.200	-0.038	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	-0.006	0.109	-0.129	-0.091	0.016	-0.115	-0.029	-0.089	0.158	-0.031	-0.111	0.105	0.109	-0.065	0.001	0.179	0.000	0.000	0.000	0.000	0.000	0.000
23	0.061	-0.014	-0.093	-0.062	0.024	-0.064	0.137	0.016	-0.038	0.050	0.010	-0.066	-0.128	-0.075	-0.026	-0.076	0.078	0.000	0.000	0.000	0.000	0.000
25	0.014	-0.082	0.162	-0.058	0.061	0.001	0.029	0.091	-0.046	-0.052	-0.004	-0.066	0.055	0.005	0.115	-0.093	0.047	0.323	0.000	0.000	0.000	0.000
26	-0.027	0.057	0.013	-0.110	0.021	0.021	-0.124	-0.075	0.061	0.015	-0.045	-0.069	-0.106	0.004	0.056	0.076	0.004	-0.017	0.063	0.000	0.000	0.000
27	0.010	-0.073	-0.087	0.112	-0.118	0.032	-0.021	0.104	0.004	-0.002	-0.069	0.021	-0.020	0.004	-0.138	0.072	0.046	-0.120	0.111	0.070	0.000	0.000
28	0.020	-0.067	0.075	-0.159	0.208	0.014	-0.054	0.029	-0.049	0.079	0.081	-0.080	-0.169	-0.014	0.041	-0.054	0.088	-0.057	0.128	-0.062	0.182	0.000
29	0.111	0.044	-0.109	-0.101	0.129	0.111	0.111	0.111	0.111	0.069	0.071	0.149	0.015	-0.064	-0.138	0.219	0.101	0.001	-0.106	0.207	-0.008	0.000
30	-0.211	0.064	-0.277	-0.259	-0.111	-0.139	-0.111	-0.111	-0.111	-0.210	-0.146	-0.229	-0.208	-0.193	-0.111	-0.287	-0.213	-0.287	-0.240	-0.079	-0.139	-0.129
31	-0.410	-0.168	-0.246	-0.291	-0.217	-0.206	-0.200	-0.550	-0.361	-0.456	-0.146	-0.606	-0.463	-0.233	-0.171	-0.296	-0.266	-0.526	-0.151	-0.173	-0.384	-0.168
32	-0.265	-0.328	-0.652	-0.276	-0.311	-0.231	-0.132	-0.434	-0.336	-0.266	-0.195	-0.392	-0.418	-0.128	-0.129	-0.321	-0.145	-0.186	-0.288	-0.196	-0.545	-0.160
33	-0.225	-0.025	-0.139	-0.041	-0.106	-0.260	-0.155	-0.309	-0.227	-0.192	-0.144	-0.130	-0.344	-0.152	-0.136	-0.167	-0.071	-0.402	-0.171	-0.074	-0.370	-0.009
34	-0.468	-0.266	-0.624	-0.315	-0.266	-0.365	-0.216	-0.683	-0.577	-0.620	-0.348	-0.571	-0.607	-0.279	-0.165	-0.526	-0.191	-0.713	-0.271	-0.219	-0.417	-0.307
35	-0.291	-0.170	-0.262	-0.290	-0.249	-0.283	-0.106	-0.460	-0.350	-0.326	-0.119	-0.411	-0.446	-0.332	-0.181	-0.279	-0.112	-0.309	-0.133	-0.283	-0.421	-0.120
36	-0.219	-0.332	-0.167	-0.077	-0.040	-0.287	-0.035	-0.290	-0.220	-0.316	-0.107	-0.211	-0.137	-0.198	-0.211	-0.341	-0.249	-0.265	-0.220	-0.327	-0.241	-0.041
37	-0.200	-0.087	-0.251	-0.282	-0.176	-0.091	-0.153	-0.249	-0.303	-0.149	-0.112	-0.376	-0.281	-0.203	-0.329	-0.247	-0.280	-0.211	-0.101	-0.121	-0.197	-0.180
38	-0.266	-0.120	-0.136	-0.177	-0.214	-0.100	-0.176	-0.622	-0.423	-0.301	-0.202	-0.691	-0.559	-0.242	-0.258	-0.440	-0.146	-0.691	-0.000	-0.102	-0.411	-0.150
39	-0.167	-0.051	-0.249	-0.290	-0.311	-0.299	-0.242	-0.641	-0.635	-0.212	-0.129	-0.614	-0.433	-0.161	-0.111	-0.254	-0.160	-0.464	-0.101	-0.299	-0.355	-0.183
40	-0.257	-0.161	-0.139	-0.422	-0.114	-0.209	-0.161	-0.357	-0.327	-0.213	-0.315	-0.349	-0.254	-0.241	-0.297	-0.326	-0.309	-0.600	-0.170	-0.244	-0.601	-0.195
41	-0.160	-0.062	-0.187	0.017	-0.139	-0.113	-0.133	-0.264	-0.159	-0.269	-0.107	-0.282	-0.168	-0.157	-0.120	-0.336	-0.195	-0.158	-0.065	-0.039	-0.292	-0.093
42	-0.210	-0.249	-0.167	-0.051	-0.101	-0.341	-0.237	-0.339	-0.349	-0.165	-0.218	-0.261	-0.234	-0.127	-0.188	-0.339	-0.201	-0.368	-0.122	-0.201	-0.290	-0.175
43	-0.217	-0.196	-0.170	-0.126	-0.162	0.048	-0.199	-0.311	-0.241	-0.111	-0.033	-0.184	-0.263	-0.171	-0.167	-0.153	-0.107	-0.285	-0.128	-0.287	-0.296	-0.206
44	-0.139	-0.102	-0.208	-0.243	-0.307	-0.225	-0.078	-0.116	-0.278	-0.101	-0.195	-0.424	-0.393	-0.415	-0.266	-0.516	-0.146	-0.685	-0.359	-0.216	-0.340	-0.132
45	-0.075	-0.195	-0.108	-0.275	-0.288	-0.294	-0.269	-0.386	-0.269	-0.335	-0.300	-0.360	-0.379	-0.323	-0.111	-0.374	-0.101	-0.541	-0.084	-0.060	-0.369	-0.129
51	-0.195	-0.174	-0.377	-0.248	-0.081	-0.164	-0.135	-0.284	-0.383	-0.393	-0.477	-0.651	-0.361	-0.293	0.004	-0.294	-0.070	-0.494	-0.226	-0.213	-0.391	-0.027
52	-0.019	-0.066	-0.080	-0.112	-0.017	-0.196	-0.031	-0.112	-0.193	-0.111	-0.056	-0.290	-0.158	-0.162	-0.106	-0.294	0.054	-0.117	-0.112	-0.202	-0.278	-0.032
53	-0.048	-0.051	-0.205	0.044	-0.139	-0.149	-0.047	-0.107	-0.202	-0.219	-0.151	-0.315	-0.113	-0.286	-0.052	-0.143	-0.002	-0.213	-0.041	-0.094	-0.299	-0.094
54	-0.035	-0.083	-0.154	-0.214	-0.122	-0.077	-0.122	-0.111	-0.267	-0.234	-0.161	-0.180	-0.247	-0.211	0.007	-0.204	0.004	-0.280	-0.188	-0.060	-0.156	-0.018
55	-0.258	-0.400	-0.144	-0.281	-0.198	-0.390	-0.139	-0.533	-0.547	-0.292	-0.247	-0.532	-0.505	-0.318	-0.257	-0.334	-0.100	-0.595	-0.194	-0.293	-0.299	-0.181
56	-0.485	-0.611	-0.294	-0.557	-0.348	-0.481	-0.212	-0.687	-0.662	-0.479	-0.393	-0.695	-0.799	-0.255	-0.445	-0.621	-0.071	-0.898	-0.249	-0.300	-0.576	-0.221
57	-0.180	-0.106	-0.155	-0.126	0.033	-0.191	-0.051	-0.142	-0.082	-0.204	-0.136	-0.080	-0.233	0.007	-0.088	-0.113	-0.103	-0.259	-0.079	-0.104	-0.081	-0.111
58	-0.550	-0.475	-0.665	-0.424	-0.263	-0.466	-0.229	-0.661	-0.613	-0.479	-0.128	-0.636	-0.664	-0.112	-0.391	-0.727	0.022	-0.856	-0.332	-0.435	-0.448	-0.280
59	-0.786	-0.541	-0.882	-0.504	-0.450	-0.215	-0.426	-0.996	-0.882	-0.610	-0.477	-0.918	-0.978	-0.432	-0.537	-0.840	-0.212	-1.242	-0.386	-0.537	-0.711	-0.442
60	-0.178	-0.369	-0.241	-0.381	-0.245	-0.665	-0.197	-0.828	-0.605	-0.516	-0.293	-0.609	-0.691	-0.138	-0.459	-0.650	-0.162	-0.797	-0.435	-0.414	-0.618	-0.209
61	-0.643	-0.442	-0.351	-0.498	-0.488	-0.629	-0.452	-0.851	-0.916	-0.649	-0.576	-0.821	-0.953	-0.314	-0.529	-0.780	-0.243	-1.106	-0.328	-0.541	-0.657	-0.481
62	-0.545	-0.564	-0.317	-0.518	-0.330	-0.651	-0.370	-0.661	-0.841	-0.605	-0.366	-0.811	-0.882	-0.411	-0.562	-0.896	-0.311	-1.045	-0.418	-0.618	-0.946	-0.361
63	-0.961	-0.818	-0.792	-0.919	-0.622	-0.961	-0.552	-1.395	-1.385	-0.995	-0.819	-1.095	-1.268	-0.523	-0.768	-1.362	-0.352	-1.045	-0.698	-0.596	-0.536	-1.045
64	-0.229	-0.041	-0.121	-0.107	-0.205	-0.176	-0.144	-0.296	-0.252	-0.259	-0.113	-0.262	-0.219	0.040	-0.112	-0.167	-0.144	-0.445	-0.115	-0.313	-0.230	0.008
65	-0.040	-0.173	-0.181	-0.144	-0.270	-0.121	-0.075	-0.177	-0.107	-0.233	-0.101	-0.352	-0.202	-0.200	-0.092	-0.286	-0.159	-0.344	-0.039	-0.119	-0.190	-0.161

	30	31	32	33	34	35	36	37	38	39	40	41	42	45
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	-0.174	-0.142	-0.179	-0.070	-0.107	-0.092	-0.217	-0.186	-0.217	-0.181	-0.117	-0.118	-0.225	0.000
52	-0.219	-0.260	0.060	-0.088	-0.130	-0.047	-0.070	-0.241	-0.057	-0.139	-0.227	-0.036	-0.081	-0.056
53	-0.099	0.087	-0.111	-0.146	-0.152	-0.179	-0.227	-0.101	-0.090	-0.126	-0.139	-0.260	-0.075	-0.088
54	-0.156	0.061	0.010	-0.010	0.039	-0.166	-0.253	-0.146	-0.041	-0.157	-0.179	-0.102	-0.158	-0.131
55	-0.299	-0.375	-0.376	-0.637	-0.626	-0.931	-0.702	-0.246	-0.245	-0.121	-0.185	-0.734	-0.288	-0.605
56	-0.249	-0.942	-0.628	-0.675	-0.767	-1.371	-0.791	-0.551	-0.569	-0.263	-0.700	-1.023	-0.456	-1.000
57	-0.079	-0.104	-0.081	-0.111	0.024	-0.027	-0.094	0.002	0.014	-0.232	-0.004	-0.092	-0.214	-0.010
58	-0.332	-0.435	-0.448	-0.280	-0.788	-0.627	-0.848	-0.744	-1.364	-0.895	-0.399	-0.594	-0.879	-0.831
59	-0.386	-0.537	-0.711	-0.442	-0.731	-0.583	-0.967	-0.846	-1.594	-1.091	-0.487	-0.724	-1.073	-0.756
60	-0.435	-0.414	-0.618	-0.209	-0.641	-0.487	-0.830	-0.655	-1.158	-0.869	-0.614	-0.592	-0.772	-0.736
61	-0.328	-0.541	-0.657	-0.481	-0.875	-0.626	-1.028	-1.111	-1.789	-1.238	-0.576	-0.708	-0.962	-0.906
62	-0.418	-0.618	-0.946	-0.361	-0.864	-0.621	-1.031	-0.921	-1.561	-1.012	-0.332	-0.705	-0.839	-0.862
63	-0.698	-0.596	-0.536	-1.045	-1.626	-1.692	-1.555	-1.731	-0.807	-0.961	-1.614	-1.116	-2.001	-0.842
64	-0.115	-0.313	-0.230	0.008	-0.506	-0.112	-0.418	-0.575	-0.864	-0.381	-0.234	-0.231	-0.539	-0.311
65	-0.039	-0.119	-0.190	-0.161	-0.231	-0.064	-0.162	-0.173	-0.125	-0.061	0.061	0.126	-0.006	-0.075

	1	3	4	5	6	7	9	11	12	15	16	17	18	20	21	22	23	25	26	27	28	29
64	-0.059	-0.003	0.003	-0.126	-0.016	-0.071	0.028	-0.069	-0.007	-0.102	-0.046	-0.022	-0.132	0.026	0.001	0.013	0.021	-0.026	0.035	0.001	-0.146	-0.036
7	-0.042	-0.076	0.019	0.021	-0.140	-0.110	-0.004	0.038	0.007	-0.046	-0.060	-0.152	-0.025	-0.121	-0.051	-0.025	0.094	-0.031	-0.005	0.269	-0.136	-0.027
8	0.015	0.126	-0.126	0.124	-0.016	-0.105	0.107	-0.015	0.059	-0.074	-0.076	0.090	-0.003	-0.039	-0.070	0.035	0.025	-0.184	-0.117	0.182	-0.167	-0.031
10	0.140	0.009	0.067	0.041	0.014	-0.041	-0.016	-0.140	0.012	0.131	0.099	0.140	0.050	-0.049	-0.067	0.019	0.062	0.015	0.064	-0.072	-0.042	0.016
11	-0.215	-0.111	0.116	0.160	-0.001	-0.061	0.149	-0.013	0.194	0.224	-0.099	-0.057	0.056	0.001	-0.094	-0.016	-0.109	-0.020	0.077	-0.043	0.035	-0.067
14	-0.006	-0.019	0.125	-0.019	0.017	0.119	-0.004	-0.046	0.043	0.236	0.208	0.107	-0.107	0.060	-0.200	-0.139	0.023	0.056	0.060	0.160	0.088	-0.027
19	-0.091	-0.119	0.034	-0.001	-0.002	-0.047	-0.175	-0.001	-0.217	-0.181	-0.140	-0.073	-0.058	0.036	-0.028	0.026	-0.206	0.004	0.020	-0.151	-0.111	-0.156
20	-0.041	-0.052	-0.204	-0.024	0.026	0.014	-0.138	-0.011	0.014	-0.015	-0.099	-0.020	0.208	-0.377	-0.016	0.052	-0.043	-0.176	0.054	0.027	0.023	0.141
23	-0.139	-0.222	-0.256	-0.090	-0.140	-0.132	-0.117	-0.058	-0.498	-0.438	-0.205	-0.349	-0.377	-0.219	-0.417	-0.210	-0.540	-0.230	-0.231	-0.414	-0.234	-0.213
24	0.041	0.041	-0.057	-0.030	-0.197	-0.137	-0.015	-0.121	-0.072	-0.170	-0.052	-0.060	-0.016	-0.192	0.007	-0.092	0.005	-0.150	0.020	0.031	-0.135	-0.012
26	-0.048	-0.016	0.055	-0.024	-0.149	0.009	0.108	-0.064	-0.100	0.023	-0.072	0.033	-0.048	0.020	-0.066	0.021	-0.079	-0.181	0.018	0.061	-0.052	0.104
28	-0.050	-0.097	-0.020	-0.099	-0.096	0.004	-0.184	-0.099	-0.149	-0.095	-0.165	-0.099	-0.294	-0.034	-0.098	-0.004	-0.127	-0.180	-0.034	-0.140	-0.050	-0.081
30	-0.143	-0.079	-0.291	-0.151	-0.121	-0.299	-0.073	-0.299	-0.222	-0.371	-0.294	-0.335	-0.324	-0.065	-0.251	-0.342	-0.101	-0.476	-0.043	-0.066	-0.164	-0.066

	30	31	32	33	34	35	36	37	38	39	40	41	42	45
64	-0.102	0.004	-0.079	-0.073	0.032	-0.059	-0.087	-0.004	0.016	-0.143	-0.038	0.016	-0.025	0.038
7	-0.269	-0.136	-0.050	-0.022	-0.071	-0.105	-0.022	0.019	0.076	-0.009	-0.141	-0.113	-0.150	-0.024
8	-0.110	0.081	-0.091	0.121	-0.046	-0.017	-0.169	-0.091	-0.071	-0.140	0.004	-0.149	0.000	-0.149
10	-0.017	0.011	-0.059	-0.078	-0.139	-0.180	-0.046	-0.179	-0.048	-0.019	0.016	-0.042	0.000	-0.042
11	-0.016	-0.016	-0.253	-0.004	-0.147	-0.136	-0.065	-0.048	-0.246	-0.165	-0.173	-0.119	-0.118	-0.022
14	-0.213	-0.387	-0.289	-0.016	-0.417	-0.460	0.030	-0.362	-0.337	-0.461	-0.176	-0.192	-0.256	-0.021
19	-0.047	-0.096	-0.151	-0.041	-0.015	-0.081	-0.091	-0.098	-0.139	-0.081	-0.072	-0.124	-0.124	0.000
20	-0.002	-0.063	-0.161	-0.025	-0.113	0.015	-0.151	-0.152	-0.101	-0.190	-0.046	-0.112	-0.049	0.000
23	-0.016	-0.015	-0.266	-0.068	-0.161	-0.180	-0.076	-0.019	-0.115	-0.079	-0.139	-0.060	-0.004	-0.059
24	-0.174	0.111	0.224	-0.032	0.042	0.081	0.019	0.136	0.056	0.112	-0.009	0.267	0.165	0.075
26	-0.154	-0.004	-0.129	-0.080	-0.211	-0.216	-0.242	-0.185	0.001	-0.201	-0.102	-0.116	-0.165	-0.146
28	-0.127	-0.021	-0.266	-0.068	-0.161	-0.180	-0.076	-0.019	-0.115	-0.079	-0.119	0.060	-0.004	-0.059
30	-0.257	-0.109	-0.158	-0.281	-0.370	-0.365	-0.134	-0.255	-0.353	-0.118	-0.352	0.026	-0.232	-0.118

TEST FOR INTERNAL CONSISTENCY FOR THE INDICATORS WITH COMMONALITIES ON THE DIAGONAL

LOCATIONS WITH A 9.999 INDICATES THAT THE COMMONALITY OF THE INDICATOR IS GREATER THAN ONE.

	47	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.122	0.164	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	-0.131	-0.030	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.096	-0.105	0.097	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.024	-0.020	-0.020	-0.035	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.111	0.010	0.071	-0.047	0.043	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	-0.589	-0.000	-0.471	-0.471	-0.272	-0.237	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	-0.627	-0.291	-0.644	-0.461	-0.416	-0.179	0.116	0.661	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	-0.224	-0.094	-0.230	-0.121	-0.063	0.020	0.104	-0.035	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	-0.812	-0.499	-0.809	-0.490	-0.500	-0.279	-0.162	0.011	-0.032	0.661	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	-0.976	-0.610	-0.862	-0.592	-0.671	-0.369	0.188	-0.150	0.116	0.050	0.743	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.744	-0.657	-0.693	-0.345	-0.491	-0.193	0.022	0.031	0.032	-0.148	-0.072	0.590	0.000	0.000	0.000	0.000	0.000	0.000
61	-1.068	-0.794	-0.907	-0.596	-0.727	-0.318	-0.003	0.118	-0.151	-0.011	0.061	0.200	0.750	0.000	0.000	0.000	0.000	0.000
62	-0.832	-0.825	-0.848	-0.537	-0.567	-0.258	-0.060	-0.109	0.071	-0.066	0.031	0.178	0.103	0.716	0.000	0.000	0.000	0.000
63	-1.596	-1.124	-1.340	-0.966	-0.937	-0.494	-0.081	-0.040	-0.102	0.261	-0.087	-0.049	0.104	0.173	0.879	0.000	0.000	0.000
64	-0.397	-0.266	-0.403	-0.371	-0.130	-0.179	-0.045	0.064	-0.075	0.269	-0.029	-0.072	-0.062	-0.128	0.161	0.266	0.000	0.000
65	-0.096	0.043	-0.080	-0.179	-0.132	-0.023	0.056	-0.006	0.000	-0.073	-0.060	-0.093	-0.080	0.002	-0.065	-0.000	0.052	0.000
66	-0.155	0.014	-0.031	-0.030	-0.045	0.109	-0.047	-0.148	-0.050	-0.131	-0.156	-0.190	-0.288	-0.216	-0.228	-0.031	-0.131	0.000
2	0.074	0.048	0.047	-0.049	0.079	0.014	-0.067	0.129	-0.004	-0.044	-0.091	-0.045	-0.138	-0.030	-0.220	-0.049	0.018	0.091
8	-0.126	-0.123	-0.081	-0.105	-0.007	0.069	-0.130	-0.215	0.015	-0.183	-0.399	-0.211	-0.407	-0.159	-0.630	-0.173	-0.044	0.051
10	-0.097	-0.067	-0.239	0.020	-0.052	-0.087	-0.117	-0.290	-0.097	-0.102	-0.316	-0.218	-0.332	-0.339	-0.512	-0.064	-0.150	-0.014
13	-0.073	-0.188	-0.273	0.028	-0.087	-0.026	-0.120	-0.091	0.072	-0.103	0.011	-0.060	-0.162	-0.063	-0.275	-0.015	-0.025	-0.154
14	0.050	-0.058	-0.204	0.044	-0.041	-0.125	-0.010	0.006	-0.045	0.049	0.126	0.160	0.103	0.277	0.226	-0.121	-0.000	0.036
19	-0.127	0.015	-0.065	-0.094	-0.064	-0.045	-0.232	-0.181	-0.172	-0.294	-0.060	-0.423	-0.411	-0.601	-0.610	-0.054	-0.071	0.017
24	-0.011	0.035	0.077	-0.004	0.010	0.110	0.011	0.027	-0.110	-0.027	-0.001	-0.042	0.013	-0.140	0.060	0.029	-0.036	-0.054
43	-0.270	-0.210	-0.302	-0.060	-0.166	-0.140	-0.075	-1.154	-0.123	-1.229	-1.510	-1.162	-1.532	-1.176	-2.595	-0.584	-0.346	-0.052
44	0.089	0.205	0.122	0.004	0.151	0.025	-0.125	-0.042	-0.180	-0.121	-0.152	-0.097	-0.089	-0.296	-0.143	0.109	0.093	0.102
46	-0.018	0.007	-0.145	0.016	-0.140	0.136	-0.170	0.032	0.077	-0.063	-0.071	-0.047	-0.057	-0.101	-0.253	-0.100	-0.135	-0.041
48	0.015	-0.003	-0.231	-0.097	-0.044	-0.123	-0.111	-0.151	0.050	-0.229	-0.230	-0.211	-0.305	-0.179	-0.520	-0.017	0.027	-0.005
50	-0.391	-0.253	-0.311	-0.093	-0.217	0.015	-0.623	-0.729	-0.134	-0.796	-0.994	-0.710	-0.957	-1.000	-1.585	-0.123	-0.137	0.021

	2	8	10	13	14	19	24	43	44	46	48	50
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
61	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
63	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
64	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.015	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.095	-0.125	0.619	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	-0.105	-0.076	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	-0.000	0.211	-0.025	0.015	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.026	-0.139	0.010	0.029	-0.135	0.014	0.000	0.000	0.000	0.000	0.000	0.000
19	0.002	0.072	-0.002	-0.105	-0.008	-0.090	0.007	0.000	0.000	0.000	0.000	0.000
24	0.011	-0.006	-0.026	-0.071	-0.073	0.006	-0.006	0.182	0.000	0.000	0.000	0.000
43	-0.003	0.013	-0.012	-0.186	0.007	-0.041	0.026	0.118	0.000	0.000	0.000	0.000
44	0.104	0.039	0.040	0.135	-0.055	0.011	-0.072	-0.220	-0.055	0.020	0.000	0.000
46	-0.007	-0.096	0.076	-0.001	-0.037	-0.002	0.104	-0.045	-0.020	0.021	0.019	0.000
48	-0.007	-0.043	-0.035	-0.002	0.029	-0.070	-0.047	-0.269	0.270	-0.129	-0.004	0.223

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